

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

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-150
	)	
Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102
	)	
Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones	)	WT Docket No. 01-309
	)	

**NOTICE OF PROPOSED RULE MAKING, FOURTH FURTHER NOTICE OF PROPOSED  
 RULE MAKING, AND SECOND FURTHER NOTICE OF PROPOSED RULE MAKING**

**Adopted: August 3, 2006**

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By the Commission: Chairman Martin; and Commissioners Copps, Adelstein, Tate and McDowell  
 issuing separate statements.

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## I. INTRODUCTION

1. In this Notice of Proposed Rulemaking (“Notice”), we seek comment on possible changes to the Part 27 service rules governing wireless licenses in the 698-746, 747-762, and 777-792 MHz bands (herein, the “700 MHz Band”) currently occupied by television (TV) broadcasters and being made available for new services as a result of the digital television (DTV) transition. More than four years have passed since the Commission adopted its initial band plans and service rules governing these licenses.<sup>1</sup> During that time, Congress enacted significant statutory changes to the DTV transition in the Digital Television and Public Safety Act of 2005 (“DTV Act”).<sup>2</sup> The DTV Act could affect the Commission’s existing regulatory approach to the 698-806 MHz Band, which had envisioned “early” recovery of TV Channels 60-69 (“Upper 700 MHz Band”),<sup>3</sup> but had anticipated recovery of TV Channels 52-59 (“Lower 700 MHz Band”) after the DTV transition was complete.<sup>4</sup> In addition, during the past four years, U.S. consumers have been introduced to a variety of innovative wireless services and technologies at the same time that the number of subscribers for mobile telephony services has increased by

<sup>1</sup> See Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, *Memorandum Opinion and Order*, 17 FCC Rcd 11613 (2002) (*Lower 700 MHz MO&O*).

<sup>2</sup> See Deficit Reduction Act of 2005, Pub. L. No. 109-171, 120 Stat. 4 (2006) (“DRA”). Title III of the DRA is the DTV Act.

<sup>3</sup> In the *Lower 700 MHz Notice*, the Commission stated that “[t]he DTV Table also, *inter alia*, facilitates the early recovery of Channels 60-69 by minimizing the use of these channels for DTV purposes.” Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, *Notice of Proposed Rulemaking*, 16 FCC Rcd 7278, 7282-83 ¶ 6 (2001) (*Lower 700 MHz Notice*) (footnote omitted); *accord* Reallocation of Television Channels 60-69, the 746-806 MHz Band, ET Docket No. 97-157, *Notice of Proposed Rulemaking*, 12 FCC Rcd 14141, 14142 ¶ 3 (1997). Thus, the Commission’s DTV channel allocation plan for the simultaneous transmission of digital and analog broadcast signals placed as few channels as possible in the Upper 700 MHz Band. See *Lower 700 MHz Notice*, 16 FCC Rcd at 7282-83 ¶ 6.

<sup>4</sup> For example, prior to enactment of the DTV Act, there was an expectation that the Lower 700 MHz Band would remain encumbered by analog broadcasters for much longer than the Upper 700 MHz Band. See, e.g., Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, *Report and Order*, 17 FCC Rcd 1022, 1025 ¶ 4 (2002) (*Lower 700 MHz Report and Order*). In the *Lower 700 MHz Report and Order*, the Commission stated that “[t]he reclamation of television spectrum has been addressed in two parts, primarily as a result of different statutory requirements applicable to the two bands and differing degrees of incumbency in the two bands.” *Id.* (footnote omitted). The Commission also acknowledged that “[b]oth Congress and the Commission initially expected to license the Lower 700 MHz Band after the auction of the Upper 700 MHz Band.” *Id.* (footnote omitted). The expectation was that the Lower 700 MHz Band would remain a home for significant analog broadcasting for some period of time. Cf. *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1025 ¶ 4 (stating that “[e]arly recovery of additional spectrum beyond the Upper 700 MHz Band was not contemplated in the DTV transition plan”) (footnote omitted).

approximately 50 percent.<sup>5</sup> We therefore are revisiting various of the Commission's earlier decisions regarding these 700 MHz Band licenses.<sup>6</sup>

2. In this Notice, we seek comment on potential changes to several of the Commission's initial determinations applicable to 700 MHz Band licenses. This includes licenses yet to be auctioned in 30 megahertz of spectrum in the Upper 700 MHz Band and in 30 megahertz of spectrum in the Lower 700 MHz Band, as well as licenses that already have been auctioned in 18 megahertz in the Lower 700 MHz Band. We first seek comment on possible revisions to the size of service areas for the unauctioned spectrum in the 700 MHz Band. We ask whether additional licenses should be created over service area sizes other than Economic Area Groupings (EAGs), including over small areas such as the 734 Cellular Market Areas (CMAs) composed of Metropolitan Statistical Areas (MSAs) and Rural Service Areas (RSAs).<sup>7</sup> Second, we consider the possibility of revising the size and pairing of the 20-megahertz spectrum block in the Upper 700 MHz Band,<sup>8</sup> including seeking comment on dividing it into blocks of smaller bandwidth. We also ask whether there should be any changes to the size and location of spectrum blocks in the Lower 700 MHz Band.<sup>9</sup> Third, we seek comment on whether it would be appropriate to add or revise performance requirements and/or rules on spectrum access (*e.g.*, spectrum leasing, partitioning, *etc.*) in the secondary market to potentially promote construction in rural areas, as well as whether these policies should be tailored to promote service on tribal lands. Fourth, we seek comment on whether to amend existing rules, as they apply to these 700 MHz Band licensees, requiring demonstrations of "substantial service" for renewal applicants in comparative hearings.<sup>10</sup> Fifth, we seek comment on possible revisions to the license terms for licensees, including whether to extend 700 MHz Band licenses beyond the 2015 date established previously. Sixth, we seek comment on whether the applicable power limits in these bands should be modified. Finally, in this Notice, as well as the Fourth Further Notice of Proposed Rulemaking and Second Further Notice of Proposed Rulemaking,<sup>11</sup> we seek comment on our

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<sup>5</sup> During the past four years, the number of U.S. subscribers to mobile telephone services has increased from approximately 141.8 million to approximately 208 million. This has produced an increase in nationwide mobile penetration from 49 percent to 69 percent.

<sup>6</sup> This Notice addresses many of the rules applicable to certain spectrum in the "Upper 700 MHz Band" (Television Channels 60-69 in the 746-806 MHz band) and the "Lower 700 MHz Band" (TV Channels 52-59 in the 698-746 MHz band), as specified herein. Rules applicable to spectrum currently occupied by television Channels 63-64 (764-776 MHz band) and 68-69 (794-806 MHz band) are not considered in this Notice because that spectrum has been allocated to public safety (and thus is not included within the term of the "700 MHz Band" as defined in this Notice). Also, the rules applicable to the Guard Band spectrum at 746-747/776-777 MHz and 762-764/792-794 MHz (which also are not included within the definition of the 700 MHz Band) are not considered in this Notice except insofar as it is a Part 27 service to which 911 and enhanced 911 (E911) and hearing aid compatibility rules may potentially be applied. Finally, in this Notice we do not seek comment on the allocation or service rules for broadcasting or other legacy operations in these bands.

<sup>7</sup> CMAs are the smallest geographic service areas that have been licensed by the Commission. See *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services*, WT Docket No. 02-381, 2000 Biennial Regulatory Review *Spectrum Aggregation Limits for Commercial Mobile Radio Services*, WT Docket No. 01-14, *Increasing Flexibility to Promote Access to and the Efficient and Intensive Use of Spectrum and the Widespread Deployment of Wireless Services*, and *to Facilitate Capital Formation*, WT Docket No. 03-202, *Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 19078, 19089 n.60 (2004) (*Rural Report and Order and Rural Further Notice*, respectively).

<sup>8</sup> This is Block D (752-762/782-792 MHz) in the Upper 700 MHz Band.

<sup>9</sup> Although we believe we should retain the current band plan in the Lower 700 MHz Band, we nevertheless seek comment on potential changes to the size of the spectrum blocks in the Lower 700 MHz Band.

<sup>10</sup> See 47 C.F.R. § 27.14(b).

<sup>11</sup> The Fourth Further Notice of Proposed Rule Making is issued in CC Docket No. 94-102. See *Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-

(continued...)

tentative conclusion that services provided in the 700 MHz Band, and in other bands subject to Part 27, including the Advanced Wireless Services in the 1710-1755 MHz and 2110-2155 MHz bands (“AWS-1”),<sup>12</sup> should be subject to requirements concerning 911 and enhanced 911 (collectively, “911/E911”) and hearing aid-compatible handsets to the extent that they meet certain criteria, and on changes to the Commission’s rules or industry standards related to implementing our tentative conclusion.

## II. BACKGROUND

3. *Overview.* As background, we first briefly discuss the DTV transition, which has envisioned since at least 1997 the reclamation of the 698-806 MHz Band (Television Channels 52-69) for new uses, including commercial and public safety services. Then, we separately describe the Upper 700 MHz Band and Lower 700 MHz Band plans and size of service areas for geographic licensing. We next turn to the major technical and service rules in Part 27 that govern operations in both of these bands. We then discuss the Commission’s requirements pertaining to 911/E911 and hearing aid-compatible handsets. Next, we describe recent filings that the Commission has received pertaining to the assignment of unauctioned licenses in the 700 MHz Band.

4. *DTV Transition and Reclamation of the 698-806 MHz Band.* In connection with the transition from analog television broadcasting to DTV, the 698-806 MHz Band will be available on a primary basis for new public safety and other wireless services once it is relinquished by broadcasters on TV Channels 52-69. Because DTV transmissions are more spectrally efficient than analog transmissions, only spectrum occupied currently by Channels 2-51 (*i.e.*, the “core” TV broadcast spectrum) will be needed for broadcast television service after the DTV transition is complete. By the end of the transition, all analog television service will have terminated, and temporary DTV assignments on Channels 52-69 will be relocated into the core TV channels.<sup>13</sup> At the same time, the 698-806 MHz Band will be made available for new uses, including public safety, commercial, and other new radio services.<sup>14</sup> The 698-806 MHz Band is set forth in Table 1 below.

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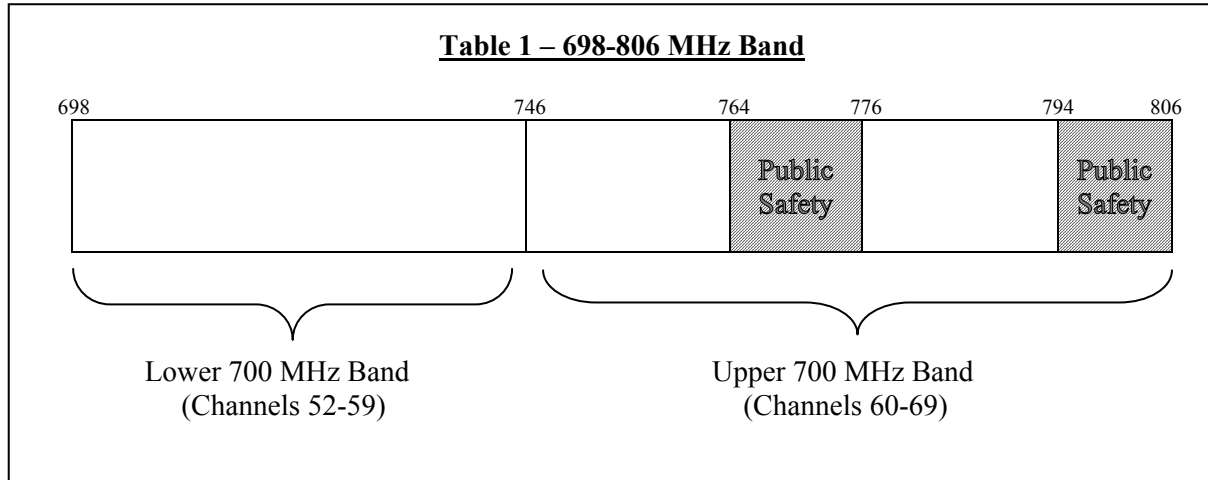
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102, Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements; Petition of the National Telecommunications and Information Administration to Amend Part 25 of the Commission’s Rules to Establish Emissions Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band, IB Docket No. 99-67, *Further Notice of Proposed Rulemaking*, 17 FCC Rcd 25576 (2002) (*E911 Scope NPRM*); Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, RM-8143, *Further Notice of Proposed Rulemaking*, 16 FCC Rcd 11491 (2001); Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 18676 (1996) (*E911 Report and Order and Further Notice*). The Second Further Notice of Proposed Rule Making is issued in WT Docket No. 01-309. *See* Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, *Order on Reconsideration and Further Notice of Proposed Rulemaking*, 20 FCC Rcd 11221 (2005).

<sup>12</sup> *See* 47 C.F.R. § 27.5.

<sup>13</sup> *See* Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order*, 13 FCC Rcd 7418, 7435-36 ¶ 42 (1998) (*DTV MO&O of the Sixth Report and Order*). Channel 37 is not included because it is reserved exclusively for radio astronomy. *See* 47 C.F.R. §§ 2.106, 73.603(c); Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Sixth Report and Order*, 12 FCC Rcd 14588, 14608 n.75 (1997).

<sup>14</sup> This recovery of spectrum from existing, analog broadcast use is an important objective of the DTV transition. *See* Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Sixth Further Notice of Proposed Rule Making*, 11 FCC Rcd 10968, 10977 ¶ 18 (1996).



5. Prior to passage of the DTV Act early this year, the Commission had addressed the reallocation of the 698-806 MHz Band in separate proceedings due to different statutory requirements.<sup>15</sup> With respect to the 60 megahertz of spectrum in the Upper 700 MHz Band (746-806 MHz), the Balanced Budget Act of 1997 (“Balanced Budget Act”) added Section 337 to the Communications Act of 1934, as amended (“Communications Act” or “Act”), requiring the Commission to reallocate this band no later than January 1, 1998.<sup>16</sup> Specifically, the Balanced Budget Act mandated that the Commission allocate 24 megahertz of spectrum for public safety services and the remaining 36 megahertz of spectrum for commercial use to be assigned by competitive bidding.<sup>17</sup> As a result, in late 1997, the Commission allocated the 764-776 MHz (Channels 63 and 64) and 794-806 MHz (Channels 68 and 69) portions of the Upper 700 MHz Band on a primary basis to fixed and mobile public safety radio services, and it allocated the remaining 746-764 MHz (Channels 60-62) and 776-794 MHz (Channels 65-67) portions on a primary basis to fixed, mobile, and broadcast services for new commercial use.<sup>18</sup>

6. In the Balanced Budget Act, Congress recognized that additional spectrum beyond the Upper 700 MHz Band could be recovered from analog TV broadcasters, and it directed the Commission to “reclaim and organize” such spectrum “in a manner consistent with the objectives” of Section 309(j)(3) of the Act.<sup>19</sup> While Congress did not specify the amount of spectrum to be reclaimed beyond the Upper 700 MHz Band, the Commission determined that all broadcasters using digital transmission systems could be accommodated in core TV Channels 2-51. As a result, the 48 megahertz of spectrum in the Lower 700 MHz Band (698-746 MHz) would become available for new services through competitive

<sup>15</sup> See, e.g., *Lower 700 MHz Notice*, 16 FCC Rcd at 7282 ¶ 6; *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1025 ¶ 4.

<sup>16</sup> See Balanced Budget Act of 1997 § 3004 (adding new § 337 of the Communications Act); Reallocation of Television Channels 60-69, the 746-806 MHz Band, ET Docket No. 97-157, *Report and Order*, 12 FCC Rcd 22953, 22955 ¶ 5 (1998), *recon.*, 13 FCC Rcd 21578 (1998) (*Upper 700 MHz Reallocation Order*).

<sup>17</sup> See 47 U.S.C. § 337(a) (enacted by the Balanced Budget Act of 1997, Pub. L. No. 105-33, § 3004, 111 Stat. 251, 266 (adding new Section 337(a) and establishing initial timetable for conducting auctions)).

<sup>18</sup> *Upper 700 MHz Reallocation Order*, 12 FCC Rcd at 22953 ¶ 1. For the 24 megahertz of spectrum in the Upper 700 MHz designated for public safety services, the Commission adopted the following band plan: 12.5 megahertz for General Use; 2.6 megahertz for Interoperability; 2.4 megahertz for State Licenses; 0.3 megahertz for Low Power Operations; 0.2 megahertz for Secondary Trunking; and 6.0 for Reserve. See The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communication Requirements Through the Year 2010, WT Docket No. 96-86, *Fourth Memorandum Opinion and Order*, 17 FCC Rcd 4736, 4763 app. D (2002). The channelization of the public safety spectrum is not addressed in this Notice.

<sup>19</sup> See 47 U.S.C. § 309(j)(14)(C)(i)(II) (2005).

bidding.<sup>20</sup> While the end of the DTV transition was originally targeted for December 31, 2006, the Communications Act required (prior to the DTV Act and Auction Reform Act of 2002<sup>21</sup>) the Commission to auction excess television spectrum by September 30, 2002.<sup>22</sup> As a result, in late 2001, the Commission adopted an order allocating the entire Lower 700 MHz Band (Channels 52-59) on a primary basis to new fixed, mobile, and broadcast services.<sup>23</sup>

7. Under this statutory scheme for the Upper and Lower 700 MHz Bands,<sup>24</sup> new wireless licenses had to be assigned and revenues from competitive bidding reported to Congress prior to September 30, 2002, despite the fact that TV broadcasters could continue to operate on Channels 52-69 until the indefinite end of the DTV transition. Although analog broadcasters were required to cease operation by December 31, 2006, the Commission was required to extend the end of the transition in certain circumstances.<sup>25</sup> Under the Communications Act, the Commission was required to grant extensions at the request of individual broadcast licensees on a market-by-market basis if one or more of the four largest network stations or affiliates were not broadcasting in digital, digital-to-analog converter technology was not generally available, or 15 percent or more of television households were not receiving a digital signal.<sup>26</sup>

8. In 2002, Congress eliminated the September 30, 2002 auction deadline for the Upper and Lower 700 MHz Bands and provided the Commission with a level of discretion on the timing and deadlines for issuing licenses through competitive bidding.<sup>27</sup> The Auction Reform Act of 2002 directed the Commission to delay competitive bidding for the 30 megahertz of remaining Upper 700 MHz Band commercial spectrum,<sup>28</sup> as well as for 30 of the 48 megahertz of Lower 700 MHz Band spectrum. The Auction Reform Act of 2002 mandated, however, that the Commission proceed with competitive bidding for 18 megahertz of spectrum in the Lower 700 MHz Band.<sup>29</sup>

9. In passing the DTV Act early this year, Congress set forth a number of changes to the reclamation of the 108 megahertz of spectrum in the 698-806 MHz Band. Most importantly, its provisions accelerate the DTV transition by providing a date certain for the end of the transition. Specifically, the DTV Act amends Section 309(j)(14) of the Communications Act to eliminate December

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<sup>20</sup> See *DTV MO&O of the Sixth Report and Order*, 13 FCC Rcd at 7435-36 ¶ 42. The Commission stated that expanding the DTV core spectrum would permit recovery of 108 megahertz of spectrum at the end of the DTV transition period. *Id.* at 7436 ¶ 45.

<sup>21</sup> See *infra* para. 8.

<sup>22</sup> Balanced Budget Act of 1997 §§ 3003, 3007; see Auction Reform Act of 2002, *Report to Congress*, 18 FCC Rcd 12556, 12561 ¶ 8 (2003) (*Auction Reform Act Report to Congress*) (explaining requirement to auction excess television spectrum by September 30, 2002).

<sup>23</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1024 ¶ 2.

<sup>24</sup> See *supra* note 22 (auction deadline amendments applied to both Upper and Lower bands).

<sup>25</sup> 47 U.S.C. § 309(j)(14)(A)-(B) (2005).

<sup>26</sup> 47 U.S.C. § 309(j)(14)(B)(i)-(iii) (2005).

<sup>27</sup> 47 U.S.C. § 309(j)(15) (2005), as added by the Auction Reform Act (authorizing the Commission to “take such action under [Section 309(j) of the Communications Act of 1934, as amended], including the timing of, and deadlines for, qualifying for bidding; conducting auctions; collecting, depositing, and reporting revenues; and completing licensing processes and assigning licenses.”).

<sup>28</sup> As explained below, in 2000 and 2001, the Commission assigned Guard Band licenses through competitive bidding for 6 of the 36 megahertz of Upper 700 MHz commercial spectrum. See *infra* note 36.

<sup>29</sup> 47 U.S.C. § 309(j)(15)(C)(iii), as enacted by the Auction Reform Act. The Auction Reform Act also directed the Commission to delay its then-scheduled auction of certain licenses in the Upper 700 MHz band (Auction No. 31).

31, 2006 and establish February 17, 2009 as a new firm deadline for the end of the DTV transition.<sup>30</sup> In so doing, Congress eliminated the provisions authorizing market-specific extensions of the DTV transition.<sup>31</sup> Congress also unified the timing of auctions for the assignment of remaining spectrum from TV Channels 52-69. The Communications Act now requires the Commission to commence the auction of recovered analog broadcast spectrum no later than January 28, 2008<sup>32</sup> and deposit the proceeds of such auction in the Digital Television Transition and Public Safety Fund no later than June 30, 2008.<sup>33</sup> These statutory changes effectively clear the spectrum in the 698-806 MHz Band for the period following the firm deadline of February 17, 2009,<sup>34</sup> and as a result, eliminate uncertainty regarding the timeframe when this spectrum will be fully available for public safety, commercial, and other wireless services.

10. *Upper 700 MHz Band Plan and Service Areas.* Table 2 below depicts the current band plan and service area sizes adopted for the Upper 700 MHz Band in January 2000.<sup>35</sup> The Commission has already held auctions for Guard Band licenses in Blocks A and B.<sup>36</sup> The Auction Reform Act directed the Commission to delay the auction of licenses for the remaining commercial spectrum in the Upper 700 MHz Band.<sup>37</sup>

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<sup>30</sup> DTV Act § 3002.

<sup>31</sup> The DTV Act provides a number of significant changes to the former DTV transition. One is the elimination of provisions that had permitted the extension of the DTV transition based on several factors, including the extent of market penetration of digital broadcast capabilities. *See* DTV Act § 3002(a)(2).

<sup>32</sup> DTV Act § 3003. “Recovered analog spectrum” is defined in the DTV Act to include the frequencies between 698 and 806 MHz “other than . . . the spectrum auctioned prior to the date of the enactment” of the legislation. *See id.* Public safety spectrum required by 47 U.S.C. § 337 also is excluded in the Act. *Id.* Congress also extended the Commission’s auction authority to September 30, 2011. *Id.*

<sup>33</sup> DTV Act §§ 3003(a), 3004 (establishing a Digital Television and Public Safety Fund).

<sup>34</sup> *See* H.R. Conf. Rep. No. 109-362 (2005), *reprinted in* 2006 U.S.C.C.A.N. 3 (conference report for DTV Act).

<sup>35</sup> When this band plan was adopted, the Consolidated Appropriations Act of 2000 required that all proceeds of competitive bidding for such spectrum be deposited prior to September 30, 2000. Consolidated Appropriations Act, 2000, Pub. L. No. 106-113, 113 Stat. 2502, Appendix E, Sec. 213(a)(3), *reprinted in* 47 U.S.C.A. § 337 Note at Sec. 213(a)(3).

<sup>36</sup> These auctions were completed prior to the enactment of the Auction Reform Act. *See* 700 MHz Guard Bands Auction Closes, *Public Notice*, 15 FCC Rcd 18026 (2000) (announcing winning bidders in Auction 33); 700 MHz Guard Bands Auction Closes, *Public Notice*, 16 FCC Rcd 4590 (2001) (announcing winning bidders in Auction 38).

<sup>37</sup> *See Auction Reform Act Report to Congress*, 18 FCC Rcd at 12575 ¶ 50 (2003).

**Table 2 – Upper 700 MHz Band**

747		762			777			792				
A	C	D		B	Public Safety		A	C	D	B	Public Safety	
CH. 60	CH. 61	CH. 62	CH. 63	CH. 64	CH. 65	CH. 66	CH. 67	CH. 68	CH. 69			
746	752	758	764	770	776	782	788	794	800	806		

<u>Block</u>	<u>Frequencies</u>	<u>Bandwidth</u>	<u>Pairing</u>	<u>Area Type</u>	<u>Licenses</u>
A	746-747, 776-777	2 MHz	2 x 1 MHz	MEA	52*
B	762-764, 792-794	4 MHz	2 x 2 MHz	MEA	52*
C	747-752, 777-782	10 MHz	2 x 5 MHz	700 MHz EAG	6
D	752-762, 782-792	20 MHz	2 x 10 MHz	700 MHz EAG	6

**\*Blocks have been auctioned.**

11. In the Upper 700 MHz Band, the Commission divided the 36 megahertz of commercial spectrum between Guard Band spectrum<sup>38</sup> and spectrum available for new fixed, mobile and broadcast services. The 6 megahertz of Guard Band spectrum was established to minimize any interference that might be caused to the 24 megahertz of public safety radio spectrum by commercial operations<sup>39</sup> on the remaining 30 megahertz of Upper 700 MHz Band spectrum. The 30 megahertz portion, in turn, was divided into two blocks: (1) a 10-megahertz paired block consisting of two 5-megahertz segments (Block C); and (2) a 20-megahertz paired block consisting of two 10-megahertz segments (Block D).<sup>40</sup> In establishing the size of these two blocks, the Commission found that Block C’s 5-megahertz segments would accommodate third-generation (3G) technologies, such as wideband code-division multiple access (W-CDMA),<sup>41</sup> but also adopted Block D’s wider, 10-megahertz segments to enable a greater range of broadband services.<sup>42</sup>

12. In determining the size of geographic service areas for Upper 700 MHz Band Blocks C and D, the Commission found that the six EAGs were the most efficiently sized geographic areas for initial licenses. The Commission ruled out nationwide licenses and chose large, regional EAGs after

<sup>38</sup> See Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, WT Docket No. 99-168, *First Report and Order*, 15 FCC Rcd 476 (2000) (“*Upper 700 MHz First Report and Order*”). The service and auction rules for the Guard Band spectrum were established later in 2000. See Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, WT Docket No. 99-168, *Second Report and Order*, 15 FCC Rcd 5299 (2000) (*700 MHz Guard Band Service Rules Order*).

<sup>39</sup> See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 478 ¶¶ 2-3 (adopting new subpart in Part 27 for the Guard Bands).

<sup>40</sup> *Id.* at 491 ¶ 35.

<sup>41</sup> *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 491 ¶ 36. Wideband CDMA is the 3G technology employed by Global System for Mobile Communications (GSM) carriers.

<sup>42</sup> *Id.* at 492 ¶ 38.



considering a number of factors, including: (1) the positions of the majority of commenting parties; (2) the geographic size that it estimated would best facilitate rapid deployment of the likely use or uses of the spectrum; (3) the avoidance of excessive concentration of licenses and the dissemination of licenses among a wide variety of applicants; and (4) the then-applicable statutory deadline to deposit auction proceeds.<sup>43</sup> The Commission acknowledged that an important factor to its decision to assign Blocks C and D on the same geographic basis was its desire to enable the aggregation of spectrum into one 30 megahertz block within any particular geographic area,<sup>44</sup> an amount of spectrum comparable to 25-megahertz Cellular Radiotelephone Service (“cellular”) licenses and 30-megahertz broadband Personal Communications Services (PCS) licenses. The Commission also noted the risks and costs associated with attempting to aggregate service areas at auction, particularly when there are a large number of small geographic areas. It recognized that if EAGs were not the optimally sized initial areas for certain bidders, post-auction partitioning and aggregation in the secondary market would be permitted.<sup>45</sup>

13. *Lower 700 MHz Band Plan and Service Areas.* Table 3 below depicts the current band plan and service area sizes adopted for the Lower 700 MHz Band in December 2001.<sup>46</sup> The Auction Reform Act directed the Commission to delay the auction of licenses for the Lower 700 MHz Band, but it made an exception for the spectrum from 710-722 and 740-746 MHz and specifically required the Commission to proceed with an auction of licenses for the “C-block of licenses” and “the D-block of licenses.”<sup>47</sup>

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<sup>43</sup> *Id.* at 500 ¶ 57. The Commission’s experience also showed that simultaneous multiple round auctions for a larger number of licenses take longer to complete than similar auctions involving fewer licenses. *Id.*

<sup>44</sup> *Id.* at 500 ¶ 56.

<sup>45</sup> *Id.* at 500 ¶ 57.

<sup>46</sup> At that time, Section 309(j)(14)(C)(ii) required that the Commission assign such spectrum and report to Congress the total revenues from competitive bidding for such licenses by September 30, 2002. 47 U.S.C. § 309(j)(14)(C)(ii) (2001).

<sup>47</sup> 47 U.S.C. § 309(j)(15)(C)(iii), as enacted by the *Auction Reform Act*. As a result, a total of 740 licenses in Blocks C (734 licenses) and D (6 licenses) have been made available in auctions beginning in 2002. See Lower 700 MHz Band Auction Closes, *Public Notice*, 17 FCC Rcd 17272 (2002) (announcing winning bids in Auction 44); Lower 700 MHz Band Auction Closes, *Public Notice*, 18 FCC Rcd 11873 (2003) (announcing winning bids in Auction 49); Auction of Lower 700 MHz Band Licenses Closes, *Public Notice*, 2005 WL 1861795 (2005) (announcing winning bids in Auction 60).

**Table 3 – Lower 700 MHz Band**

698	704	710	716	722	728	734	740	746
A	B	C	D	E	A	B	C	
CH. 52	CH. 53	CH. 54	CH. 55	CH. 56	CH. 57	CH. 58	CH. 59	

<u>Block</u>	<u>Frequencies</u>	<u>Bandwidth</u>	<u>Pairing</u>	<u>Area Type</u>	<u>Licenses</u>
A	698-704, 728-734	12 MHz	2 x 6 MHz	700 MHz EAG	6
B	704-710, 734-740	12 MHz	2 x 6 MHz	700 MHz EAG	6
C	710-716, 740-746	12 MHz	2 x 6 MHz	MSA/RSA	734*
D	716-722	6 MHz	unpaired	700 MHz EAG	6*
E	722-728	6 MHz	unpaired	700 MHz EAG	6

\*Blocks have been auctioned.

14. In the Lower 700 MHz Band, the Commission divided the 48 megahertz of spectrum into several blocks of both paired and unpaired spectrum to accommodate a potential range of new fixed, mobile and broadcast services and technologies. Specifically, the spectrum was divided into five blocks based on two different pairing architectures: (1) three 12-megahertz paired blocks consisting of two 6-megahertz segments (Blocks A, B, and C); and (2) two 6-megahertz unpaired blocks consisting of contiguous spectrum (Blocks D and E).<sup>48</sup> Unlike the commercial spectrum in the Upper 700 MHz Band, the Commission established multiple Lower 700 MHz Band blocks based on units of 6 megahertz given the specific support in the record by broadcast interests and time-division-duplex (TDD) advocates,<sup>49</sup> as well as the preference of the majority of commenters for “multiple blocks” based on licenses that aligned with TV Channels 52-59.<sup>50</sup>

15. The Commission determined that the band plan in the Lower 700 MHz Band should include a combination of licenses to be assigned over small geographic areas and large regional areas. In contrast to the Commission’s experience in establishing service area sizes for Blocks C and D in the Upper 700 MHz Band, many commenters in the Lower 700 MHz Band proceeding, including smaller business and rural-based providers, favored small geographic areas, including CMAs.<sup>51</sup> As a result, the Commission decided to assign the 12-megahertz Block C (“25 percent of the . . . Lower 700 MHz Band

<sup>48</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1053-54 ¶ 76.

<sup>49</sup> *Id.* at 1055 ¶ 80. At that time, 6 megahertz blocks aligned with incumbent broadcasters and were intended to minimize incumbency problems that have become moot as a result of the DTV Act.

<sup>50</sup> *Id.* at 1055 ¶¶ 80-81. Many commenters did not specify a particular unit and only stated that they supported “multiple blocks” of sufficient bandwidth to permit a variety of services.

<sup>51</sup> CMAs were found to correspond to the needs of many customers, including customers of small regional and rural providers. *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1061 ¶¶ 95-96.

spectrum<sup>52</sup>) over CMAs. The Commission determined that using CMAs for one out of the three 12-megahertz paired blocks would afford meaningful opportunities to interested parties seeking licenses with smaller initial geographic scope, including small and rural wireless providers.<sup>53</sup> In addition, the Commission declined to adopt nationwide licenses,<sup>54</sup> and it chose to assign the two remaining 12-megahertz paired blocks (and the two 6-megahertz unpaired blocks) over the large, regional EAGs for many of the same reasons cited in its proceeding for the Upper 700 MHz Band.<sup>55</sup> For example, the Commission noted that the advantages of EAGs include: (1) providing optimum opportunity to aggregate spectrum, which may be particularly useful for services that require nationwide footprints; (2) making it easier for providers to take advantage of economies of scale, allowing existing technologies to grow and new technologies to develop; (3) reducing the potential transaction costs to both auction participants seeking adjoining smaller geographic areas and carriers seeking to consolidate such areas post-auction; and (4) helping to address problems due to incumbent TV stations.<sup>56</sup> In adopting EAGs for two of the three paired blocks, the Commission acknowledged that one of its main goals was “making it possible to aggregate 24 megahertz of paired spectrum within the same EAG,”<sup>57</sup> an amount of spectrum comparable to 25-megahertz cellular licenses and 30-megahertz broadband PCS licenses.

16. *700 MHz Band Performance Requirements.* The Commission adopted “substantial service,” specified in Section 27.14(a) of the Commission’s rules, as the only performance requirement for the Upper 700 MHz Band in 2000.<sup>58</sup> Two years later, in 2002, the Commission adopted an identical requirement for the Lower 700 MHz Band.<sup>59</sup> In these bands, substantial service means service that is “sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal.”<sup>60</sup> In addition, the Commission established safe harbors that provide examples of what

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<sup>52</sup> See *Lower 700 MHz MO&O*, 17 FCC Rcd at 11619 ¶ 14 n.32 (noting that one 12 megahertz block of spectrum “is significant” in that it equals 25 percent of the 48 megahertz of spectrum in the Lower 700 MHz Band).

<sup>53</sup> *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1061 ¶ 95. See *Lower 700 MHz MO&O*, 17 FCC Rcd at 11619 ¶ 14. The Commission specified the definition of the service areas with respect to the Gulf of Mexico. See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1059 ¶ 90 & n.258.

<sup>54</sup> *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1060-61 ¶ 94.

<sup>55</sup> *Id.* at 1059-60 ¶¶ 91, 93. The Commission used the definition of EAGs as defined in the Upper 700 MHz Band proceeding, which included a particular definition concerning the division of the Gulf of Mexico between two EAGs. See *id.* at 1059 ¶ 90 & n.257.

<sup>56</sup> Incumbent TV stations in the Lower 700 MHz Band were also considered in determining the size of geographic areas, and EAGs were found to offer licensees significant flexibility to address issues associated with the protection of incumbent TV stations. *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1060 ¶ 92. The Commission did not accept an argument that licensing across large geographic areas might increase interference issues relating to TV broadcasting. *Id.* The Commission stated that any such risk of interference is offset by avoiding the need for complicated agreements that could arise if spectrum were licensed in smaller areas where several geographic service areas could overlap a TV protection zone. *Id.* See also Comments of the National Association of Broadcasters, Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), Docket No. GN 01-74, (May 14, 2001) at 6-7 (commenting on interference risk in connection with very large geographic areas).

<sup>57</sup> *Lower 700 MHz MO&O*, 17 FCC Rcd at 11619 ¶ 15. *Cf. id.* (“[T]he ability to aggregate spectrum may offer important benefits. In order to provide additional opportunities for firms seeking to aggregate paired spectrum within the same EAG, this Commission had to designate either Blocks A and B or Blocks B and C as the EAG blocks. Using Block B for MSA/RSA licenses would result in the two EAG blocks being split, frustrating this objective.”).

<sup>58</sup> *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 505 ¶ 70.

<sup>59</sup> *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1079 ¶ 149.

<sup>60</sup> 47 C.F.R. § 27.14(a). See also, e.g., 47 C.F.R. §§ 22.503(k)(3), 90.685(b), 95.831, 101.527(a), 101.1011(a).

would be considered substantial service in the 700 MHz Band.<sup>61</sup> With one of the available safe harbors, a licensee that chooses to offer fixed, point-to-point services is deemed to be providing substantial service if it has constructed four permanent links per one million people in its licensed service area at the license-renewal mark. With another safe harbor, a licensee that chooses to offer either mobile services or fixed, point-to-multipoint services is considered to be providing substantial service if it can demonstrate coverage for 20 percent of the population of its licensed service area at the license-renewal mark.<sup>62</sup>

17. *700 MHz Band Renewal Criteria.* In addition to the “substantial service” performance requirement specified in Section 27.14(a) of the Commission’s rules, the Commission provided in Section 27.14(b) that a renewal applicant involved in a comparative renewal proceeding must submit a showing explaining why it should receive a renewal expectancy, and that a renewal applicant involved in a comparative renewal would receive a renewal expectancy if its past record for the relevant license period demonstrates that it has “provided ‘substantial’ service during its past license term.”<sup>63</sup> In adopting these provisions for the Lower 700 MHz Band and the Upper 700 MHz Band,<sup>64</sup> however, the Commission did not discuss in detail how these provisions are to be implemented.<sup>65</sup> For both bands, the Commission generally stated only that in the event that a license is partitioned or disaggregated: (1) a partitionee or disaggregatee is permitted “to hold its license for the remainder of the original licensee’s license term and obtain a renewal expectancy on the same basis as other 700 MHz licensees”; and (2) to the extent a licensee meets the substantial service performance requirement (discussed above<sup>66</sup>), it “will be deemed to have met this element of the renewal expectancy requirement regardless of which of the construction options . . . the licensee has chosen.”<sup>67</sup>

18. *700 MHz Band License Terms.* The Communications Act does not impose a time limit on licenses issued by the Commission, other than those for broadcast services, which are limited to an eight-year term.<sup>68</sup> To provide a sufficient duration of time for 700 MHz Band licensees to commence new services while the DTV transition advanced, the Commission generally adopted January 1, 2015 as the expiration date for 700 MHz Band licenses.<sup>69</sup> In its *Upper 700 MHz First Report and Order*, the

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<sup>61</sup> The Commission also established options available to parties to partitioning and disaggregation agreements for complying with the substantial service requirement. See 47 C.F.R. § 27.15; see also *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 507-08 ¶¶ 76-78.

<sup>62</sup> *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 505 ¶ 70; *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1079 ¶ 151.

<sup>63</sup> See 47 C.F.R. § 27.14(b). We note that these provisions setting forth renewal expectancy criteria in comparative hearings under Section 27.14(b) apply only to non-broadcast services. See, e.g., *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1077 ¶ 146.

<sup>64</sup> Compare *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1076-78 ¶¶ 143-46 with *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 503-04 ¶¶ 66-68.

<sup>65</sup> For example, in the Lower 700 MHz proceeding, the Commission provided no more than a statement that “[t]o claim a renewal expectancy, a Lower 700 MHz Band renewal applicant *involved in a comparative renewal proceeding* must demonstrate, at a minimum, the showing required in Section 27.14(b) of the Commission’s rules.” *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1077-78 ¶ 146 (emphasis added); see also *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 504 ¶ 68.

<sup>66</sup> See *supra* para. 16.

<sup>67</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1078 ¶ 146 (footnote omitted); *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 504 ¶ 68; see also *supra* note 61.

<sup>68</sup> See 47 U.S.C. § 307(c)(1); see also 47 C.F.R. § 73.1020(a).

<sup>69</sup> See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 504 ¶ 67 (adopting license terms for 747-762/777-792 MHz) (modified by Errata, 15 FCC Rcd 4560 (WTB 2000) (correcting license termination date from January 1, 2014, to January 1, 2015)); Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, WT Docket No. 99-168, *Second Report and Order*, 15 FCC Rcd 5299, 5331 ¶ 73 (2000) (700

(continued....)

Commission decided that an average of eight years was a reasonable time to comply with the performance requirements for the spectrum,<sup>70</sup> and thus determined that the license term for new commercial licenses should extend eight years beyond the 2006 target date for the DTV transition existing at the time.<sup>71</sup> Because the licenses that would be auctioned in the Upper 700 MHz Band were encumbered by a number of broadcasters, the Commission determined that the use of a definite termination date, e.g., January 1, 2015, was preferable to a discrete term of years following the end of the DTV transition, which at that time was subject to extension based on a number of circumstances.<sup>72</sup> The Commission also directed that a licensee commencing broadcast operations on or before January 1, 2006, would be required to seek renewal of its license at the end of the eight-year term following commencement of such broadcast operations.<sup>73</sup> The Commission applied the same license terms that were adopted in the *Upper 700 MHz First Report and Order* to licenses in the Lower 700 MHz Band.<sup>74</sup>

19. *700 MHz Band Power Limits and Related Requirements.* For the Upper 700 MHz Band, the Commission adopted a power limit for base and fixed stations in all services of 1 kilowatt (kW) effective radiated power (ERP).<sup>75</sup> For the Lower 700 MHz Band, the Commission adopted a power limit of 50 kW ERP subject to specific requirements regarding non-interference.<sup>76</sup> Specifically, for those licenses operating base or fixed stations at power levels greater than 1 kW ERP in the Lower 700 MHz Band, the Commission required a power flux density (“PFD”) limit of 3 milliwatts/m<sup>2</sup> at all locations on the ground within one kilometer of the stations as a way to address potential adjacent channel interference.<sup>77</sup> To facilitate licensees’ use of spectrum and prevent harmful interference, in the *Lower 700 MHz Report and Order* the Commission amended the rules to also require Lower 700 MHz Band licensees intending to operate base or fixed stations in excess of 1 kW ERP to file notifications with the Commission and provide notifications to all Part 27 licensees authorized on adjacent blocks in their area of operation.<sup>78</sup> This notification requirement was not applied to Lower 700 MHz Band licensees operating at or below 1 kW ERP.

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*MHz Guard Band Service Rules Order*) (adopting license terms for 746-747/776-777 and 762-764/792-794 MHz); *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1077 ¶ 145 (adopting license terms for 698-746 MHz); see also 47 C.F.R. § 27.13(b).

<sup>70</sup> Construction requirements for the 700 MHz Band require licensees to make a showing of “substantial service” within the prescribe license term. 47 C.F.R. § 27.14(a).

<sup>71</sup> See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 504 ¶ 67.

<sup>72</sup> *Id.* at 504 ¶ 67 n.161, *on recon.* Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, WT Docket No. 99-168, *Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 20845, 20862-63 ¶ 45 (2000) (*Upper 700 MHz MO&O and FNPRM*); see also 47 U.S.C. 309(j)(14)(B)(i)-(iii) (2005).

<sup>73</sup> See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 504 ¶ 67; see also 47 C.F.R. § 27.13(b).

<sup>74</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1077 ¶ 145; *700 MHz Guard Band Service Rules Order*, 15 FCC Rcd at 5331 ¶ 73.

<sup>75</sup> See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 521-22 ¶ 111; see also *Upper 700 MHz MO&O and FNPRM*, 15 FCC Rcd at 20851 at ¶ 10. The Commission also adopted limits of 30 watts ERP for control and mobile transmitters and 3 watts ERP for portable or hand-held devices. See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 521-22 ¶ 111; 47 C.F.R. § 27.50(b)(2),(3).

<sup>76</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1063-64 ¶ 102. As with the rules for the Upper 700 MHz Band, the Commission adopted for the Lower 700 MHz Band a maximum power limit of 30 watts ERP for mobile and control stations, and 3 watts ERP for portable (hand-held) devices. *Id.*; 47 C.F.R. § 27.50(c)(2),(3).

<sup>77</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1064 ¶ 104.

<sup>78</sup> *Id.* at 1077 ¶ 110; 47 C.F.R. § 27.50(c)(5) (applying advanced notice requirement to stations transmitting in the 698-746 MHz band).

20. *911/E911 and Hearing Aid-Compatibility Requirements.* The Commission has adopted rules to ensure that wireless carriers provide basic 911 and E911 services to 911 call centers, or Public Safety Answering Points (PSAPs).<sup>79</sup> In 2003, the Commission developed and applied criteria for assessing whether services and devices are subject to the E911 requirements.<sup>80</sup> Under those criteria, the service is analyzed based on whether: (1) it offers real-time, two-way voice service that is interconnected to the public switched network on either a stand-alone basis or packaged with other telecommunications services; (2) the customers using the service or device have a reasonable expectation of access to 911 and E911 services; (3) the service competes with traditional Commercial Mobile Radio Services (CMRS) or wireline local exchange service; and (4) it is technically and operationally feasible for the service or device to support E911.<sup>81</sup>

21. The Commission also has required digital wireless handset manufacturers and digital wireless service providers to take the steps necessary to increase the number of hearing aid-compatible handset models available to their customers. In addition to adopting technical standards for digital wireless phones' compatibility with hearing aids,<sup>82</sup> the Commission established phased-in deployment benchmark dates for digital wireless handset manufacturers and service providers to offer hearing aid-compatible digital wireless handsets,<sup>83</sup> and adopted certain labeling requirements for hearing aid

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<sup>79</sup> See 47 C.F.R. § 20.18; *E911 Report and Order and Further Notice*, 11 FCC Rcd 18676. The Commission's E911 requirements, which require wireless carriers to provide PSAPs with specific information (including location) relating to a 911 call, consist of two phases. Pursuant to E911 Phase I rules, wireless carriers are required to provide a callback number for the handset placing the 911 call and report the location of the cell tower that received the call. The Phase I rules require compliance within six months of a PSAP request. See 47 C.F.R. § 20.18(d). Under the E911 Phase II rules, wireless carriers are required to provide the location of the 911 caller, by latitude and longitude, beginning within six months of a PSAP request. See 47 C.F.R. §§ 20.18(f), (g).

<sup>80</sup> See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Report and Order and Second Further Notice of Proposed Rulemaking*, 18 FCC Rcd 25340, 25346 ¶ 15 (2003) (*E911 Scope Order* and *Second FNPRM*, respectively).

<sup>81</sup> *E911 Scope Order*, 18 FCC Rcd at 25347 ¶ 18. The Commission also may use other factors in making its determination. *Id.* at 25347 ¶ 19.

<sup>82</sup> A handset is deemed hearing aid-compatible if it is certified as U3-rated under the ANSI C63.19 standard. Section 20.19(b)(1) of the Commission's rules provides that a wireless handset is deemed hearing aid-compatible if, at minimum, it receives a U3 rating "as set forth in the standard document ANSI C63.19-2001[,] 'American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.'" 47 C.F.R. § 20.19(b)(1). ANSI-C63.19-2001 established uniform methods of measurement and parametric requirements for the electromagnetic and operational compatibility and accessibility of hearing aids used with wireless communications devices, including cordless, cellular, and Personal Communications Service (PCS) phones, operating in the range of 800 MHz to 3 GHz. Focused on existing services which were in common use, ANSI C63.19-2001 provides tests for services in the 800-950 MHz and 1.6-2.0 GHz bands. On April 25, 2005, the Commission's Office of Engineering and Technology (OET) announced that it also would certify handsets as hearing aid-compatible based on the revised draft version of the standard, ANSI C63.19-2005. See OET Clarifies Use of Revised Wireless Phone Hearing Aid Compatibility Standard Measurement Procedures and Rating Nomenclature, *Public Notice*, 20 FCC Rcd 8188 (OET 2005). On June 6, 2006, moreover, OET and the Wireless Telecommunications Bureau announced that applicants also may certify handsets as hearing aid-compatible based on version 3.12 of that standard (ANSI C63.19-2006), reflecting further revisions adopted and released in 2006. See Wireless Telecommunications Bureau and Office of Engineering and Technology Clarify Use of Revised Wireless Phone Hearing Aid Compatibility Standard, *Public Notice*, 2006 WL 1541044 (WTB/OET 2006). ANSI C63.19-2006 provides tests for services in the 800-950 MHz and 1.6-2.5 GHz bands. Thus, while applicants for certification may rely on the 2001, 2005 or 2006 version of the ANSI C63.19 standard, none of these versions of the ANSI standard presently address services provided in the 700 MHz Band.

<sup>83</sup> See Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, *Report and Order*, 18 FCC Rcd 16753, 16780 ¶ 65 (2003) (*Hearing Aid Compatibility Report and Order*); 47 C.F.R. § 20.19(c).

compatible phones.<sup>84</sup> The Commission required each of these classes of entities that do not fall within the *de minimis* exception<sup>85</sup> to begin to offer hearing aid-compatible digital wireless handset models by September 16, 2005.<sup>86</sup> The Commission's Part 20 rules presently specify the scope of the 911/E911 and hearing aid compatibility requirements as being applicable to service providers within certain enumerated radio services.<sup>87</sup>

22. *Recent Filings Seeking Assignment of Additional 700 MHz Band Licenses over Smaller Service Areas.* On July 29, 2005, the Rural Cellular Association (RCA) filed a petition requesting that the Commission institute a review to consider assigning additional 700 MHz Band licenses over smaller geographic service areas.<sup>88</sup> RCA requests that additional CMAs be made available in both the unauctioned portions of the Upper and Lower 700 MHz Bands, contending that the use of smaller license areas will accelerate the delivery of broadband services in rural areas where the Commission did not anticipate that "demand . . . would be as compelling as it is today."<sup>89</sup> RCA claims that small entities are unable to compete effectively for licenses that combine rural and major metropolitan areas, and it argues that the availability of RSAs (as opposed to other small units) is especially important to small and rural carriers given their potential greater interest in serving these high-cost areas than large regional and nationwide carriers.<sup>90</sup>

23. Several parties have submitted comments and notices supporting the RCA petition, including the Rural Telecommunications Group (RTG), RVW, Inc. (RVW), and U.S. Cellular Corporation (USCC).<sup>91</sup> All of these filings support a reevaluation of the remaining unauctioned portions of the 700 MHz Band and point out changed regulatory circumstances and industry developments. RTG in particular cites the "allocation and anticipated auction" of AWS spectrum as a factor supporting the need to assign additional spectrum over CMAs. RTG states that the Commission's decision to assign 20

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<sup>84</sup> The Commission required entities to label the subject handsets with the appropriate technical rating, and to explain the technical rating system in the owner's manual or as part of the packaging material for the handset. *See Hearing Aid Compatibility Report and Order*, 18 FCC Rcd at 16785-86 ¶¶ 83, 85-86. *See also* 47 C.F.R. § 20.19(f).

<sup>85</sup> *See* 47 C.F.R. § 20.19(e)(1)-(2). The *de minimis* exception applies on a per air interface basis, and provides, *inter alia*, that manufacturers or mobile service providers that offer two or fewer digital wireless handsets in the U.S. are exempt from the requirements of the hearing aid compatibility rules.

<sup>86</sup> *See Hearing Aid Compatibility Report and Order*, 18 FCC Rcd at 16780 ¶ 65. *See also* 47 C.F.R. § 20.19(c)(1)-(3).

<sup>87</sup> *See* 47 C.F.R. §§ 20.18(a), 20.19(a). The 700 MHz Band is not among the radio services listed in these rules.

<sup>88</sup> *See* Petition to Institute Review and Modification of the Size of Service Areas for Geographic Licensing for the Lower and Upper Bands of 700 MHz Spectrum Not Yet Auctioned, Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, Rural Cellular Association, (filed July 29, 2005) (RCA Petition).

<sup>89</sup> RCA Petition at 4.

<sup>90</sup> *See id.* at 3-4.

<sup>91</sup> Comments of Rural Telecommunications Group, Inc. in Support of Modification of License Area Sizes for 700 MHz Spectrum, Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, Rural Telecommunications Group, Inc. (filed September 27, 2005) (RTG Comments); Comments of RVW, Inc., Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), GN Docket No. 01-74, Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, RVW, Inc. (filed October 4, 2005) (RVW Comments); *Ex Parte* Filings by USCC, WT Docket No. 99-168, GN Docket No. 01-74 (filed February 3 and 13, 2006). The Commission did not seek public comment on RCA's petition, but RTG and RVW filed comments in support of the petition.

megahertz of AWS spectrum over CMAs, in addition to the 12 megahertz of Lower 700 MHz Band spectrum over CMAs, is an approach that should be followed by assigning an additional 22 megahertz of 700 MHz Band spectrum (for 54 megahertz total of 700 MHz Band/AWS spectrum) over CMAs to continue to promote the rapid development of new technologies and services in rural areas.<sup>92</sup> RVW and USCC both endorse RCA's and RTG's positions; however, USCC also supports a reconfiguration of the Upper 700 MHz Band to assign a 10-megahertz paired block over Economic Areas (EAs) in addition to assigning 22 megahertz of Lower and Upper 700 MHz Band spectrum over CMAs.<sup>93</sup>

24. *Evolution of the CMRS Industry.* When, under direction by Congress, the Commission first addressed the reallocation of the 700 MHz Band, it established rules that would allow for fixed, mobile, and broadcasting services, and it noted that these rules should allow for the emergence of a wide range of advanced wireless services. In the seven years that have passed since the Commission first initiated a proceeding on the 700 MHz Band, the number of U.S. subscribers to mobile telephone services has more than doubled from approximately 86 million to more than 208 million subscribers.<sup>94</sup> This has produced an increase in nationwide mobile penetration from 32 percent to 69 percent during the period. In addition, the average monthly minutes of use by consumers has quadrupled from 185 minutes to 740 minutes.<sup>95</sup> This period also saw the introduction of mobile high-speed data networks by mobile telephony carriers including but not limited to Verizon Wireless, Sprint PCS, and Cingular. Today more than 93 percent of the U.S. population has access to at least one mobile high-speed data provider.<sup>96</sup> Text messaging usage has also greatly increased during this time. In December 2003, the first month for which statistics were kept, a reported 2 billion text messages were made, compared to nearly five times that amount, or 9.8 billion, text messages in December 2005.<sup>97</sup> Industry structure has also seen changes during this time including the expansion and consolidation of the number of nationwide carriers. In 1999, there were three operators with emerging nationwide footprints.<sup>98</sup> The number went up to six nationwide carriers in 2003.<sup>99</sup> By late 2005, there were four nationwide carriers.<sup>100</sup> Furthermore, as the Commission concluded last year, the market behaved and performed in a competitive manner.<sup>101</sup> These industry developments demonstrate the demands placed on carriers to offer more services to more consumers, which in turn has created increased demand for valuable spectrum, such as the 700 MHz Band.

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<sup>92</sup> RTG Comments at 5, 7. RTG requests that MSA/RSA licenses be provided for Lower Band Block B and Upper Band Block C, totaling 22 megahertz of spectrum.

<sup>93</sup> USCC *Ex Parte* at 3-4 (Feb. 13, 2006).

<sup>94</sup> CTIA, *Background on CTIA's Semi-Annual Wireless Industry Survey*, [http://www.ctia.org/research\\_statistics/statistics/index.cfm/AID/10030](http://www.ctia.org/research_statistics/statistics/index.cfm/AID/10030) (Annualized Wireless Industry Survey Results - December 1985 To December 2005: Reflecting Domestic U.S. Commercially-Operational Cellular, ESMR and PCS Providers) (*CTIA Industry Surveys*).

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

<sup>96</sup> See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, WT Docket No. 05-71, *Tenth Report*, 20 FCC Rcd 15908 (2005) (*Tenth CMRS Competition Report*).

<sup>97</sup> See *CTIA Industry Surveys* (December 2003 and 2005 data).

<sup>98</sup> Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, *Fifth Report*, 15 FCC Rcd 17660, 17670 (2000).

<sup>99</sup> Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, WT Docket No. 04-111, *Ninth Report*, 19 FCC Rcd 20597, 20613 (2004).

<sup>100</sup> See Applications of Nextel Communications, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, *Memorandum Opinion and Order*, 20 FCC Rcd 13967 (2005); Applications of AT&T Wireless Services, Inc., Transferor, and Cingular Wireless, Corp., Transferee, *Memorandum Opinion and Order*, 19 FCC Rcd 21522 (2004).

<sup>101</sup> See *Tenth CMRS Competition Report*, 20 FCC Rcd at 15985.



### III. DISCUSSION

25. Given that seven years have passed since the Commission first initiated a proceeding on the 700 MHz Band, we seek to evaluate whether changes to the existing service rules pertaining to 700 MHz Band licenses – including 48 megahertz of Lower 700 MHz Band spectrum (Blocks A-E), and the 30 megahertz of Upper 700 MHz Band spectrum (Blocks C and D) – may ultimately permit more effective use of this spectrum to better meet the needs of today’s consumers.<sup>102</sup> To the extent the Commission’s past decisions no longer reflect the best approach with regard to the size of geographic areas,<sup>103</sup> the size of spectrum blocks, performance requirements, renewal criteria, length of license terms, power limits, and 911/E911 and hearing aid-compatibility requirements,<sup>104</sup> we seek comment below on the possibility of making appropriate adjustments that serve the public interest.

26. First, we solicit comment on the possibility of revising the size of service areas for the unauctioned licenses in the 700 MHz Band. Under the Commission’s existing rules, each of the five blocks of unauctioned spectrum is to be licensed over large service areas defined by EAGs. Although we request comment on whether we should assign more of this spectrum over smaller license areas, including EAs, CMAs, or other small and/or rural areas, we also seek comment generally on the possible use of a range of service area sizes and the existing spectrum block(s) to which they should be assigned. Second, we seek comment on possibly increasing the overall number of blocks of 700 MHz Band licenses by reconfiguring a portion of the Upper 700 MHz Band or the Lower 700 MHz Band, or both, to provide additional opportunities for a variety of applicants to access 700 MHz Band spectrum. Third, we seek comment on the Commission’s “substantial service” performance standard with regard to these licenses, as well as whether there are other means that may facilitate access to spectrum and deployment of service, including whether these policies should be tailored to promote service on tribal lands. Fourth, we request comment on whether to amend our rules to clarify the requirements and procedures of the renewal process for 700 MHz Band licenses, particularly as they relate to existing rules requiring demonstrations of “substantial service” for renewal applicants involved in comparative proceedings. Fifth, we invite comment on extending the license terms of 700 MHz Band licenses to an expiration date beyond 2015 in order to afford licensees a sufficient period of time for deployment of new 700 MHz Band services once the DTV transition is complete. Sixth, we seek comment on whether the power limits in the existing rules for the 700 MHz Band spectrum should be revised. Finally, we seek comment on our tentative conclusion that services provided in the 700 MHz Band and in other bands subject to Part 27, including the AWS-1 Band,<sup>105</sup> should be subject to requirements concerning 911/E911 and hearing aid-compatible handsets to the extent that they meet certain criteria.

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<sup>102</sup> During this seven year period, the number of U.S. subscribers to mobile telephone services has more than doubled from approximately 86 million to more than 208 million subscribers. See *CTIA Industry Surveys* (December 1998 and 2005 data). This has produced an increase in nationwide mobile penetration from 32 percent to 69 percent during the period. See *supra* para. 24.

<sup>103</sup> With respect to the size of geographic service areas, comment is sought only with respect to the unauctioned portions of the 700 MHz Band.

<sup>104</sup> In the last seven years, advancements have occurred in wireless technologies and service offerings, the Commission has issued orders to facilitate spectrum access in rural areas, and there has been a greater awareness of the 700 MHz Band’s near-term suitability for deployment of broadband voice, data, and video services.

<sup>105</sup> See generally 47 C.F.R. § 27.5. The AWS-1 band is composed of the two 45-megahertz blocks of spectrum at 1710-1755 MHz and 2110-2155 MHz. In November 2002, as part of the *AWS Allocation Second Report and Order*, the Commission identified and allocated the two 45-megahertz blocks of spectrum at 1710-1755 MHz and 2110-2155 MHz for the provision of advanced wireless services for AWS-1. See Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, ET Docket No. 00-258, *Second Report and Order*, 17 FCC Rcd 23193 (2002) (*AWS Allocation Second Report and Order*).

### A. Size of Service Areas

27. In the section below, we seek comment on whether to auction additional spectrum in the 700 MHz Band over service area sizes other than EAGs. We first seek comment on whether there is a need for additional small geographic service area licenses, such as EAs, CMAs, or other small and/or rural areas, as opposed to larger areas. We ask commenters to consider such factors as the amount of spectrum that will have been assigned over CMAs by the conclusion of the AWS auction this year and assess how much additional spectrum over small areas may (or may not) be needed from the existing EAG blocks in the Upper 700 MHz Band, Lower 700 MHz Band, or both. To the extent there is a need demonstrated to change the *status quo*, we then solicit comment on what the optimal service area size, or combination of sizes both large and small, may be for the 700 MHz Band. We then seek comment on which particular 700 MHz Band block(s) would be most appropriate for licensing in such areas. In addressing these issues, commenters should present specific, factual support that would warrant the adoption of specific-sized service areas for one or more blocks of licenses in the 700 MHz Band, including any evidence based on changed legal circumstances, the state of technology, the demand in rural areas, spectrum access constraints, the fungibility of 700 MHz Band spectrum with other bands, and relevant costs such as those related to acquiring spectrum.

#### 1. Need for Additional Access to Spectrum Licensed over Small Service Areas

28. We seek comment on whether, in order to further enhance access to spectrum in rural areas, the service areas sizes of the licenses to be auctioned should be smaller than the EAGs provided for under existing rules. In deciding to employ EAGs in the Upper and Lower 700 MHz Bands, the Commission listed several factors in support of these larger geographic areas.<sup>106</sup> On this question of what amount of additional 700 MHz Band spectrum, if any, may be needed over small service areas, parties should address the relationship between spectrum access and the provision of service. In this regard, we seek comment on the extent to which the assignment of spectrum over smaller service areas could lead to increased and better service in these areas. In addition, parties should comment on possible transaction costs associated with the assignment of additional spectrum over small service areas on those service providers with business plans to provide service to rural areas as part of regional or national footprints. We seek comment on the factors that the Commission should use in balancing the needs of small and rural carriers as well as large and national carriers as they seek to provide service to their rural customers.

29. When addressing whether to license additional 700 MHz Band spectrum over small service areas, commenting parties should address the relationship between their ability to obtain licenses at auction and their ultimate deployment of service in rural areas. For example, we seek comment on whether certain areas may continue to have high costs of providing service that are unrelated to spectrum acquisition costs. As the Commission has noted, “[e]ven where spectrum access is not a barrier to entry, there will be certain rural areas that are very difficult to serve because of high equipment costs, low population density, or other economic factors.”<sup>107</sup> In their comments, parties should address the factors or challenges to rural deployment regardless of whether they have access to spectrum. We seek comment on whether certain areas may continue to have high costs of providing service that are unrelated to spectrum acquisition costs and whether or not there is a point at which the advantages of assigning additional small-area licenses diminish relative to the disadvantages.

30. In assessing any particular need and/or amount of spectrum, commenters should consider the 700 MHz Band’s potential suitability for more rapid deployment of mobile and other advanced

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<sup>106</sup> These factors included facilitating construction of a nationwide footprint by providers, allowing existing technologies to grow while also encouraging development of new technologies, providing economies of scale, addressing problems associated with incumbent TV stations, and facilitating completion of the auction in a timely manner. See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 501 ¶ 59, *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1059-1061 ¶¶ 91-94.

<sup>107</sup> *Rural Report and Order*, 19 FCC Rcd at 19089 ¶14.

services in high-cost areas given its propagation and other technical characteristics. In its comments on RCA's petition, for example, RVW states that it is seeing "typical system reach of 5 to 10 miles or more with some signal penetration through foliage."<sup>108</sup> We seek comment on whether the benefits due to the propagation characteristics of this spectrum make it appropriate to assign an additional amount of 700 MHz Band spectrum over small areas, or whether other considerations support licensing the bands over EAGs or other large areas. We are interested in any specific examples demonstrating that 700 MHz Band spectrum has unique spectral advantages that would help to lower the costs of construction in rural or high-cost areas.

31. As compared to other bands, we seek comment on the potential of 700 MHz Band spectrum to support broadband and other new applications. Commenters should explain how much additional 700 MHz Band spectrum licensed over areas other than EAGs may be necessary to support spectrum-based broadband applications in rural areas. In this regard, we seek information on the extent to which the 700 MHz Band is fungible with PCS, AWS, and other spectrum that is capable of supporting advanced services. Commenting parties should also present examples of the differences in costs of deployment of services over cellular, Specialized Mobile Radio (SMR), PCS, AWS, and any other bands that support (or do not support) the need for licensing additional 700 MHz Band spectrum over smaller sized areas in order to deploy broadband and other new services in rural areas.

32. We seek comment on the need for greater access to 700 MHz Band spectrum on a smaller-area basis.<sup>109</sup> As discussed above, in 2005, the Commission increased the amount of AWS spectrum to be assigned over CMAs due to market developments and the support of several commenters, including parties representing small and larger carriers.<sup>110</sup> Commenters should also consider the Commission's decision to assign 12 megahertz of 700 MHz Band spectrum over CMAs.<sup>111</sup> To the extent we decide not to assign additional 700 MHz spectrum over small areas, we seek comment on whether at some point in the future (*e.g.*, five years, ten years, twenty years) consumer demand and spectrum-intensive applications and technologies could exhaust the capacity of spectrum in rural areas that is currently assigned over CMAs.

## 2. Optimal Service Area Size(s) for Remaining Licenses

33. In the event we decide that there is a need for license sizes other than EAGs for the 700 MHz Band licenses that have yet to be auctioned, we must determine the appropriate initial service area size, or combination of sizes, for those licenses. For instance, we could modify the current service area designations for the 700 MHz Band to include one or more license sizes other than EAGs, or a combination thereof, or as discussed above keep in place the service areas currently reflected in our

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<sup>108</sup> RVW Comments at 2.

<sup>109</sup> The Commission has allocated 82 megahertz of spectrum on a CMA basis: 20 megahertz of AWS spectrum, *see* 47 C.F.R. § 27.6(h)(1); Service Rules for the Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Order on Reconsideration*, FCC 05-149, 2005 WL 1964113, at \*7 ¶ 20 (rel. Aug. 15, 2005) (*AWS-1 Order on Reconsideration*); 50 megahertz for cellular service, *see* 47 C.F.R. § 22.909; *Tenth CMRS Competition Report*, 20 FCC Rcd at 15934-3 ¶ 70; and the 12 megahertz in paired Block C in the Lower 700 MHz Band, *see* 47 C.F.R. § 27.6(c)(2).

<sup>110</sup> *See supra* para. 23. In that proceeding, RCA stated that its members for the most part hold 25-megahertz cellular RSA licenses to provide voice services, but that 10 megahertz of AWS spectrum over CMAs would not be sufficient for deploying anticipated forms of advanced wireless services in rural areas. *AWS-1 Order on Reconsideration*, 2005 WL 1964113, at \*5 ¶ 13.

<sup>111</sup> In its comments on RCA's petition, RTG states that it "applauds the FCC's recent . . . use of smaller geographic license areas in the Lower 700 MHz and AWS bands," RTG Comments at 7, but it states that 12 megahertz of 700 MHz spectrum over CMAs is insufficient and will be exhausted as the demand for broadband grows in these areas. *Id.* at 8

rules.<sup>112</sup> We therefore seek comment on the license size or combination of license sizes that should be provided.

34. First, we seek general comment on the costs associated with the initial service area sizes the Commission adopts in the 700 MHz Band. We recognize that consumer needs and geographic coverage will change over time, and we anticipate that there will be a need for providers to aggregate or disaggregate spectrum holdings as they address these evolving needs and market demands. Accordingly, we seek comment on the transaction costs associated with pre- and post-auction aggregation and disaggregation. Both large nationwide providers as well as small regional and rural providers may be able to make use of this spectrum, yet the optimal size of geographic service area is different for these two types of providers, and licenses for areas that are larger or smaller than desired will impose transaction costs on those parties that wish to acquire them. Thus, we consider here the degree and likelihood of such costs as 700 MHz Band spectrum is licensed in the future, and the extent to which the transaction costs of aggregating, disaggregating, or partitioning spectrum are a significant concern for those parties that most highly value this spectrum. Parties should compare the costs of arranging bidding consortia, as well as post-auction disaggregation and partitioning, to the costs imposed by aggregating spectrum and license areas at auction or in the secondary market. Parties should also address any costs resulting from the unwillingness to divide spectrum and service areas due to a lack of license marketability or other financial considerations.

35. Licensing areas could include large, regional licenses in addition to, or in lieu of, EAGs. Thus, in addition to seeking comment above on the continued use of the EAGs in the band, which consist of six geographic service areas,<sup>113</sup> we seek comment on whether to license the unauctioned spectrum, for example, by using the twelve Regional Economic Area Groupings (REAGs), the 52 Major Economic Areas (MEAs),<sup>114</sup> or some other large regional licensing area.<sup>115</sup> To the extent the Commission adopts large geographic service areas for the 700 MHz Band other than EAGs, we seek comment on whether REAGs may have advantages over EAGs. Commenters should address whether the potential combination of spectrum in the 700 MHz Band with spectrum from another band or bands would be suitable for wireless broadband services and offer enhanced opportunities for the provision of such services. On the other hand, we request comment on whether substituting REAGs for EAGs may have disadvantages. In particular, comments are invited on whether making 700 MHz Band licenses available

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<sup>112</sup> The Commission has utilized a wide variety of geographic service areas to license spectrum, including nationwide, regional and local licensing, as well as a combination of these approaches. Cellular markets comprise MSAs/RSAs, and broadband PCS licenses are based on 493 Basic Trading Areas (BTAs) and 51 Major Trading Areas (MTAs). For Wireless Communications Service (WCS) licenses, geographic areas based on 12 Regional Economic Area Groupings (REAGs) and 52 Major Economic Areas (MEAs) are used. *See* 47 C.F.R. §§ 27.5(a), 27.6(a). AWS licenses in the 1710-1755 MHz and 2110-2155 MHz Bands are to be based on three geographic area sizes – REAGs, EAs, and MSAs/RSAs – to meet the needs of a variety of prospective bidders and service providers. *Id.* § 27.6(h).

<sup>113</sup> For both the Upper and the Lower 700 MHz Bands, the Commission used a specific definition concerning the division of the Gulf of Mexico between two EAGs. *See Lower 700 MHz Report and Order*, 17 FCC Rcd at 1059 ¶¶ 90-91.

<sup>114</sup> Where the Gulf of Mexico has been included as a separate license areas, there have been 52 MEAs. *Compare, e.g.*, 47 C.F.R. § 27.6(a)(1) (MEA 52 for WCS service is the Gulf of Mexico) *with* 47 C.F.R. § 22.503(b)(3) (51 MEAs for paging service without a license area for Gulf of Mexico).

<sup>115</sup> We note that the Commission has adopted REAGs for three license blocks over 40 megahertz for AWS. *See AWS-1 Order on Reconsideration*, 2005 WL 1964113, at \*7 ¶ 20. The twelve REAGs adopted for AWS consist of six areas covering the continental U.S., plus six additional areas for: Alaska; Hawaii; Guam and the Northern Mariana Islands; Puerto Rico and the U.S. Virgin Islands; American Samoa; and the Gulf of Mexico. Besides treating these areas outside the United States as separate license areas, the six EAGs differ geographically from the six REAGs within the continental United States. WCS spectrum, as well as the AWS spectrum, has been made available for licensing on the basis of REAGs. *See* 47 C.F.R. § 27.5(a)(2).

using different service areas than already auctioned in the band might be a cause of concern for certain licensees. For example, we seek comment on whether there would be any particular disadvantages for licensees that may want to combine their use of previously auctioned licenses, *i.e.*, licenses on Block D of the Lower 700 MHz Band which have already been assigned over EAGs, with licenses with newly-defined service areas.

36. If the Commission were to determine that smaller areas should be provided, it could license the spectrum or some part thereof on the basis of local areas, such as MSAs, RSAs, or EAs. We seek comment on the use of smaller, local license areas based on these, or some other small area sizes. In particular, we ask that commenters address the request by RCA, as supported by other parties, that the Commission assign additional CMA-sized licenses in the 700 MHz Band.<sup>116</sup> Finally, we seek comment on whether a combination of different license sizes should be adopted and, if so, what combination should be reflected in our rules for the spectrum.

37. Notwithstanding the flexibility of use that permits 700 MHz Band spectrum to be used for any service consistent with the band's allocation,<sup>117</sup> commenting parties should describe any anticipated 700 MHz Band service offerings that demonstrate a need for greater access to this spectrum on a specific geographic basis. Commenters should explain how certain service area sizes correspond to the business plans of potential licensees and thus avoid the transaction costs that could be associated with aggregation, disaggregation, or partitioning. Commenters should also identify the service area sizes that best suit the anticipated uses for 700 MHz Band spectrum (*e.g.*, mobile broadband services, multi-media services, fixed services, *etc.*) individually and as a whole. Depending on the demand for service areas of different sizes, we could assign all remaining spectrum in the 700 MHz Band using a combination of larger and smaller areas. Alternatively, if it is unclear which services might ultimately dominate in the 700 MHz Band, we could employ medium-sized license areas (*e.g.*, MEAs). In such a case, commenters should consider whether the use of medium-sized initial service areas would be less efficient than a combination of differently sized service areas, given that transaction costs would be potentially incurred by auction winners of both small and large service areas that may have to aggregate, partition, or disaggregate spectrum in order to meet their particular spectrum needs.

38. We seek comment on the type of services that commenters believe will be accommodated in the service areas they favor, the economic advantages of adopting their favored approach, and what sized service area would be most advantageous for the particular service. For example, we note that Qualcomm Inc. ("Qualcomm") has acquired all six of the EAGs in the Lower 700 MHz Band Block D, and plans to deploy and operate (through its wholly-owned subsidiary, MediaFLO) a nationwide mobile multimedia network, delivering video, audio and data content to 3G mobile phones.<sup>118</sup> Certain providers in the 700 MHz Band have focused on smaller sized service areas,<sup>119</sup> and we note that a number of small

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<sup>116</sup> See *supra* paras. 22-23.

<sup>117</sup> See 47 C.F.R. § 27.2(a).

<sup>118</sup> See Press Release, Qualcomm Inc., Qualcomm Names Gina Lombardi to Lead MediaFLO USA, Inc. (Feb. 1, 2006), available at [http://www.qualcomm.com/press/releases/2006/060201\\_names\\_gina\\_lombardi.html](http://www.qualcomm.com/press/releases/2006/060201_names_gina_lombardi.html) (last visited Aug. 6, 2006). Among the results of this effort are demonstrations of FLO technology, a multicast feature and component of the MediaFLO system, which have featured handsets developed separately by equipment manufacturers. Press Release, Qualcomm Inc., Qualcomm and Samsung Electronics Conduct FLO™ Technology Demonstration at 2006 International CES (Jan. 4, 2006), available at [http://www.qualcomm.com/press/releases/2006/060104\\_samsung\\_electronics\\_conduct.html](http://www.qualcomm.com/press/releases/2006/060104_samsung_electronics_conduct.html) (last visited Aug. 6, 2006); Press Release, Qualcomm Inc., Qualcomm and LG Electronics MobileComm Demonstrate Flo™ Technology on 3G Handsets at 2006 International CES (Jan. 4, 2006), available at [http://www.qualcomm.com/press/releases/2006/060104\\_lg\\_electronics\\_mobilecomm.html](http://www.qualcomm.com/press/releases/2006/060104_lg_electronics_mobilecomm.html) (last visited Aug. 6, 2006).

<sup>119</sup> For example, Aloha Partners LP ("Aloha Partners") acquired 158 CMA licenses in the Lower 700 MHz Block C at auction and an additional 72 licenses in the secondary market in an apparent effort to provide high-speed data and

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providers have acquired Lower 700 MHz Block C spectrum apparently to provide services specifically to rural areas over RSAs.<sup>120</sup> We seek comment on how the size of licensed geographic service area impacts the services that are currently being developed, and which may be developed, for use of the spectrum.

39. We also seek comment on whether changes related to developments in technology should affect the appropriate size of initial service areas.<sup>121</sup> If there are different types of new technologies and services being created for these markets, commenters should address whether such developments support a certain service area size for portions of the 700 MHz Band. For example, we seek comment on the impact that systems employing Orthogonal Frequency Division Multiplexing (OFDM) technology such as 802.16 (“WiMax”),<sup>122</sup> or any other technology, potentially may have on the provision of services in the band, and whether a specific size of service area should be adopted in order to best accommodate any such technology.

40. In addressing the appropriate size(s) of service areas for 700 MHz Band licenses, we seek comment on any impact of using smaller service areas that cannot be used as building blocks to create larger service areas should we adopt a combination of license area sizes for the unauctioned spectrum in the 700 MHz Band. Specifically, under a combination approach, we seek comment on whether it would be preferable to assign licenses over large and small areas that are based on the same geographic unit

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Internet services in most areas of the country. It plans to offer a nationwide wireless Internet service in the 700 MHz band, including service to rural areas. *700 MHz Spectrum Auction a Likely Lure for Players Traditional and Otherwise*, Comm. Daily, Feb. 3, 2006, 2006 WLNR 1875145. Aloha Partners has conducted a market trial of a mobile broadband IP services using Flarion Technologies’ (“Flarion”) FLASH – OFDM equipment, and plans additional trials. *Digital Television Transition- Hearing II Before the Senate Comm. on Commerce Science and Transportation*, 109th Cong. (2005) (statement of Charles C. Townsend, President, Aloha Partners, LP), available at <http://commerce.senate.gov/pdf/townsend.pdf> (last visited Aug. 6, 2006) (Townsend testimony). See also, Lynnette Luna, *Aloha Plans Test of Arizona High-Speed Data Network, Mobile Radio Tech.*, Dec. 1, 2004, 2004 WLNR 14415288; *Flarion Press Release*. Qualcomm has acquired Flarion. See Press Release, Qualcomm Inc., Qualcomm Completes Acquisition of Flarion Technologies (Jan. 19, 2006), available at [http://www.qualcomm.com/press/releases/2006/060119\\_completes\\_acquisition\\_flarion.html](http://www.qualcomm.com/press/releases/2006/060119_completes_acquisition_flarion.html) (last visited Aug. 6, 2006).

<sup>120</sup> We note that Green Hills Companies (a small licensee in the Lower 700 MHz Block C) has worked with equipment vendor Airspan to develop a fixed wireless service in rural Missouri. See Anna Henry, *Green Hills Rolls Out 700 MHz Service, Rural Telecommunications*, Sept. 1, 2005, 2005 WLNR 16027147. Other Lower 700 MHz licensees have deployed a wireless 700 MHz platform developed by Vyyo Inc in rural portions of the United States. See U.S. Government’s Rural Utilities Service (RUS) Approves Vyyo’s 700 MHz Wireless Broadband Solution, Aug. 10, 2005, Vyyo, News Release available at <http://www.vyyo.com/Site/news/2005.html> (last visited Aug. 6, 2006). In comments supporting RCA’s petition, RVW states that seven small entities in Nebraska and Kansas have deployed broadband internet systems in Block C of the Lower 700 MHz Band. RVW Comments at 2.

<sup>121</sup> The Commission anticipated the development of 3G technologies, such as Wideband CDMA, when it adopted the *Upper 700 MHz First Report and Order*. See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 491 ¶ 36 (discussing the need for 5 MHz spectrum blocks to accommodate Wideband CDMA transmissions). Since that time, Wideband CDMA and 1xEV-DO systems have been implemented by GSM and CDMA carriers, respectively, in the Cellular and PCS bands, thereby making 3G services available in many parts of the country.

<sup>122</sup> Intel describes WiMax as a “standards-based wireless technology that provides high-throughput broadband connections over long distances.” See Communications at <http://www.intel.com/technology/comms/index.htm> (last visited July 31, 2006); WiMax Broadband Wireless Access Technology at <http://www.intel.com/netcomms/technologies/wimax/> (last visited Aug. 6, 2006). Qualcomm describes MediaFLO as a “nationwide ‘mediacast’ network, delivering many channels of high-quality video and audio programming to third-generation mobile phones at mass market prices.” See Press Release, Qualcomm, “Qualcomm Subsidiary to Support Nationwide Deliver of Mobile Multimedia in 700 MHz Spectrum,” (Nov. 1, 2004), available at [http://www.qualcomm.com/press/releases/2004/041101\\_mediaflo\\_700mhz.html](http://www.qualcomm.com/press/releases/2004/041101_mediaflo_700mhz.html) (last visited Aug. 6, 2006).

(e.g., MEAs and EAs).<sup>123</sup> We ask that commenters address the benefits of such an approach, and what impact the use of the same geographic unit (as a building block for potential aggregation) would have on transaction costs. Conversely, we seek comment on the costs of aggregation of dissimilar geographic areas, and on the relationship of such costs to any benefits which may be associated with mixing spectrum licenses based on different geographic units.

41. In the 700 MHz Band, the Gulf of Mexico was divided between two EAGs for EAG licensing, whereas it was designated as a separate area for CMA licensing.<sup>124</sup> In the event that we decide to revise our prior determinations regarding license sizes in the 700 MHz Band, we seek comment on including the Gulf of Mexico as part of larger service areas, or whether we should separately license one or more service areas to cover the Gulf of Mexico. Commenters who advocate separate service areas to cover the Gulf of Mexico should discuss what boundaries should be used, and whether special interference protection criteria or performance requirements are necessary due to the unique radio propagation characteristics and antenna siting challenges that exist for Gulf licensees.

### 3. Spectrum Block(s) Suitable for Potential Reassignment

42. In the event that we decide to provide for service area sizes other than EAGs in future 700 MHz Band auctions, we seek comment on which of the spectrum block(s) in the band that have not been auctioned should be re-designated to a different service area size or sizes. Commenters should identify which of the five blocks (Blocks A, B, & E in the Lower 700 MHz Band and Blocks C & D in the Upper 700 MHz Band), or any block in any potential revised band plan,<sup>125</sup> would be best suited for a different service area size given the factors discussed below. We note, for instance, that RTG suggests that the Commission provide CMA licensing in the Lower 700 MHz Band's Block B and in the Upper 700 MHz Band's Block C.<sup>126</sup> In addition to our request for comment on all of the unauctioned spectrum blocks, we seek comment on RTG's proposed use of these two specific blocks for re-designated service area sizes.

43. With respect to the blocks in the Upper 700 MHz Band, we seek comment on the use of CMA or other small service area licenses, and which spectrum block or blocks in that band, if any, should be licensed on that basis. We ask commenters to consider the presence of public safety systems, which, under Commission rules, receive special protection against harmful interference. For example, equipment operating in the Upper 700 MHz Band Blocks C and D must meet strict out-of-band emission (OOBE) limits to protect public safety operations.<sup>127</sup> Due to the relatively small spectral separation between these blocks and the public safety spectrum, such equipment may have to employ enhanced filtering,<sup>128</sup> which

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<sup>123</sup> For example, EAs and EAGs are related to each other. See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 498 ¶ 54 (stating that in the 220 MHz auction, spectrum was auctioned in six EAGs "which were also based on EAs as defined by the Department of Commerce"). There are six EAGs, see *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1024 ¶ 2, and, where the Gulf of Mexico has been included as a separate area, 176 EAs, see *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25162, 25177 ¶ 40 (2003) (*AWS-1 Report and Order*).

<sup>124</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1059 ¶ 90 & nn.257-58; *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 500 ¶ 56 & n.137.

<sup>125</sup> See *infra* section III.B.

<sup>126</sup> RTG Comments at 7.

<sup>127</sup> Base station transmitters on Blocks C and D must meet a  $76 + 10 \log P$  OOBE limit, and C and D block mobile transmitters must meet a  $65 + 10 \log P$  limit, for all emissions into the 764-776 and 794-806 MHz public safety bands. See 47 C.F.R. § 27.53.

<sup>128</sup> For example, base transmitters operating in the 752-762 MHz D block must limit emissions to the  $76 + 10 \log P$  level in spectrum only two megahertz from the upper edge of the band, and mobile stations operating in the 777-782 MHz C block must limit emissions to the  $65 + 10 \log P$  level in spectrum only one megahertz from the lower edge of that band. We note that Pegasus and Access Spectrum have proposed various alternative Upper 700 MHz band

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would likely add to the cost of base and mobile equipment. On the other hand, there may be certain spectrum blocks within the Upper 700 MHz Band that, because they are farther removed from the public safety spectrum, will require less costly equipment than equipment operating in spectrum blocks closer to the public safety bands.<sup>129</sup> Thus, we seek comment on the impact on equipment costs in general if we decide to revise the size of service area for Upper 700 MHz Band spectrum. We seek comment on which spectrum blocks in the current Upper 700 MHz band plan (*i.e.*, Blocks C or D), or in any revised band plan,<sup>130</sup> would incur the greatest and least equipment costs and the extent to which such additional costs could affect the provision of service.

44. Given these possible considerations relating to equipment costs, we also seek comment on whether any new CMA or other small service area licenses should be located in the Lower 700 MHz Band, rather than the Upper 700 MHz Band, if we decide to revise existing band plans to provide for small area licenses. In the event that additional equipment cost issues might make it preferable to locate new small-area licenses in the Lower 700 MHz Band, we seek comment on whether its 6 megahertz spectrum blocks would efficiently facilitate the implementation of 1xEV-DO and Wideband Code Division Multiple Access (CDMA) technologies – the 3G technologies of CDMA and GSM networks – in the Lower 700 MHz Band.<sup>131</sup> We also seek comment on whether WiMax, a possible alternative to 1xEV-DO and Wideband CDMA technologies, would support a variety of bandwidths, including 6 megahertz, and whether WiMax potentially could be readily accommodated on Lower 700 MHz Band spectrum blocks.<sup>132</sup> In addition, we seek comment on the ability of 6 megahertz segments to accommodate high-speed data systems similar to the MediaFLO multi-media system being implemented by Qualcomm on Block D in the Lower 700 MHz Band.

45. In the event we decide to locate additional CMA or other small service area licenses in the Lower 700 MHz Band, we seek comment on which spectrum blocks in that band should be licensed on that basis. We ask that comments address whether any particular spectrum blocks in the Lower 700

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plans. See Letters from Kenneth R. Boley, counsel to Access Spectrum, L.L.C., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 05-157 (Aug. 3, 2005 and Nov. 4, 2005) (appending White Papers *Implementing the Vision for 700 MHz: Rebanding the Upper 700 MHz A and B Blocks For Next-Generation Wireless Broadband* and *Rule Changes to Implement to Proposed Rebanding of the Upper 700 MHz A and B Blocks for Next Generation Wireless Broadband*); Federal Communications Commission Requests Comment on Spectrum Needs of Emergency Response Providers, Input Required for FCC Report Mandated by the Intelligence Reform and Terrorism Prevention Act of 2004, WT Docket 05-157, *Public Notice*, 20 FCC Rcd 7774 (2005). Their proposals would change the spectral separation that currently exists between the C and D blocks and the public safety bands.

<sup>129</sup> For example, as discussed below, *see infra* section III.B., we consider a possible revision to the band plan for the Upper 700 MHz Band, which would provide for three paired 10-megahertz blocks in the current location of Blocks C and D. Under such a revision, equipment operating in the “middle” paired 10-megahertz block, at 752-757/782-787 MHz, would be somewhat removed from the public safety bands, and would therefore not require as much filtering as equipment operating on either of the “outside” paired 10-megahertz blocks, at 747-752/777-782 MHz and 757-762/787-792 MHz.

<sup>130</sup> See *infra* section III.B.

<sup>131</sup> 1xEV-DO transmissions operate on 1.25 MHz bandwidths and Wideband CDMA transmissions operate on 5 MHz bandwidths.

<sup>132</sup> See “802.16 Enables Versatile Broadband Wireless Systems – Flexibility & Performance Key for Worldwide Deployment,” Matthias Feulner, Texas Instruments, *available at* <http://www.openbasestation.org/Newsletters/June2005/TI%20WiMAX%20RF%20article.htm> (last visited Aug. 6, 2006) (stating that “the [802.16] standard specifies optionally multiples of 1.25 MHz, 1.5 MHz and 1.75 MHz up to a total bandwidth of 20 MHz.”), (last visited July 25, 2006); Stephane Le Dreau, Vice President of CDMA Business Development, Nortel Networks, *Emerging Technologies*, at 8 (Sept. 26, 2004), *available at* [http://www.cdg.org/news/events/CDMASeminar/041019\\_Russia/8-Nortel-CDMA%20Russia%20Industry%20forum%2010.pdf](http://www.cdg.org/news/events/CDMASeminar/041019_Russia/8-Nortel-CDMA%20Russia%20Industry%20forum%2010.pdf) (last visited Aug. 6, 2006).



MHz Band (*i.e.*, Blocks A, B, and/or E) would be better suited for small-area licensing than other blocks, and to state the reasons for supporting the use of any one or more of these spectrum blocks for this purpose.<sup>133</sup>

46. Specifically, we seek comment on the impact of designating the unpaired 6 megahertz Block E in the Lower 700 MHz Band for small-area licensing. If 6 megahertz is sufficient to meet small and/or rural carriers' spectrum needs, commenters should address whether there are broadband technologies that can operate on unpaired spectrum such that the 6 megahertz of spectrum in Block E would be suitable for potential reassignment.<sup>134</sup> On the other hand, we seek comment on what spectrum in the Lower 700 MHz Band should be licensed over CMAs or other small service areas if additional paired spectrum is determined to be necessary and/or appropriate for small service areas. Commenters should consider whether there are particular reasons for selecting either Block A or Block B (or both) for this purpose.

47. We note that if we locate a CMA-based license adjacent to an EAG (or other differently sized area) in the Lower or Upper 700 MHz Band, there may be an impact on aggregation, including on the level of transaction costs. Thus, we seek comment on whether aggregation may be more difficult and complicated to accomplish if spectrum blocks of differing geographic sizes are located adjacent to one another, and what effect those factors should have on our consideration of the current band plan.

48. We also seek comment on whether, and to what extent, there would be an impact on the need to provide protection to TV Channel 51 if we were to provide for licensing areas that are smaller than EAGs in the adjacent Lower 700 MHz Band Block A. Comments should address how any need for small and rural carriers to provide adjacent TV Channel 51 protection might affect their ability to provide service to those areas if Block A were designated for small area licensing.

## **B. Size of Spectrum Blocks**

49. To the extent we decide to auction and assign additional licenses over service area sizes other than the six EAGs, we also seek comment on whether we could better accommodate such assignments by reconfiguring or sub-dividing existing spectrum blocks in the band plans in the 700 MHz Band. We seek comment generally on whether we should reconfigure the license blocks in the Upper 700 MHz Band, the Lower 700 MHz Band, or both. Although we believe we should retain the current band plan in the Lower 700 MHz Band, we nevertheless seek comment on potential changes to the size of the spectrum blocks in the Lower 700 MHz Band. We also discuss below the possibility of revising the size and pairing of licensed spectrum blocks in the Upper 700 MHz Band. In particular, we seek comment on dividing the 20-megahertz Block D license in the Upper 700 MHz Band into two or more license blocks. In addition, we seek comment on whether and how to make more licenses available to be potentially assigned on a geographic basis or bases smaller than EAGs, and on ways to provide licenses that may better reflect recent developments. Although we seek comment on this issue primarily with respect to unauctioned licenses, there are certain issues which we seek comment on that relate to already auctioned spectrum, *i.e.*, whether to change the size and location of the spectrum blocks in the Lower 700 MHz Band, and the use of a "two-sided auction."

50. We seek comment on whether the spectrum blocks in the Lower 700 MHz Band should be maintained at their current 6 megahertz alignment and sizes. The spectrum comprising Lower 700 MHz Band Blocks C and D, consisting of 18 of the 48 megahertz in the Lower 700 MHz Band, has already been auctioned,<sup>135</sup> and we believe that the location of these auctioned blocks limits our ability to

<sup>133</sup> RTG, in its comments in support of RCA's petition, suggests that the Commission provide CMA licensing in the Lower 700 MHz Band's Block B and in the Upper 700 MHz Band's Block C. RTG Comments at 7-9.

<sup>134</sup> We note that the WiMax standards under development provide for TDD, as well as frequency division duplexed (FDD), transmissions.

<sup>135</sup> See *supra* paras. 13-15. The lower block of Block C is located at 710-716 MHz, and Block D is located at 716-722 MHz. The upper block of Block C is located at 740-746 MHz.

reconfigure the remaining spectrum blocks in the Lower 700 MHz Band.<sup>136</sup> We nevertheless seek comment on whether we should make any changes to the size and location of spectrum blocks in the Lower 700 MHz Band and, if so, what those changes should be.

51. With respect to the Upper 700 MHz Band, we seek comment on USCC's proposal to divide the current 20 megahertz Block D into two separate 10 megahertz blocks.<sup>137</sup> USCC proposes that one of the new 10 megahertz blocks be assigned over EAs, and the other new 10 megahertz block be assigned over EAGs. We seek comment on possibly increasing the overall number of licenses available in any given geographic area by dividing Upper 700 MHz Band Block D into two or more smaller-sized blocks, and thus provide one or more additional licenses.

52. We seek comment on whether the provision of an additional 10 megahertz paired block in the Upper 700 MHz Band (by dividing the current Block D into two such blocks) would facilitate the implementation of a wider variety of technologies in the band. A 10 megahertz paired block can readily accommodate Wideband CDMA and 1xEV-DO technologies, and dividing Block D into two such blocks would, therefore, provide an additional license that could employ one of these technologies.<sup>138</sup> In addition, commenters should address whether 5 megahertz segments accommodate other systems that have recently been developed. For example, Qualcomm's MediaFLO will be deployed on a 6 megahertz block in the Lower 700 MHz Band, but there are indications that this multi-media system can be designed to operate on 5 megahertz blocks as well.<sup>139</sup>

53. We also seek comment on whether to divide the current 20 megahertz paired Block D into more than two smaller paired blocks to better accommodate other new technologies. For example, systems based on 802.16 standards (WiMax) could potentially operate on a variety of bandwidths ranging from 1.25 to 20 megahertz, including a number of bandwidths that are 5 megahertz or smaller.<sup>140</sup> Accordingly, we seek comment on whether a division of the 10 megahertz segments of paired Block D to create two or more smaller blocks – e.g., 1.25, 1.75, and 7 megahertz blocks – might better accommodate

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<sup>136</sup> We are seeking comment in this section on the use of 5 megahertz blocks in the Upper 700 MHz Band. However, the use of 5 megahertz blocks in the Lower 700 MHz Band appears to be problematic. For example, considering only the 12 megahertz of spectrum located at 698-710 MHz (*i.e.*, Blocks A and B), if we were to place two 5 megahertz blocks in this band, this would leave two megahertz of spectrum in the band that would have to be separately assigned. Also, because the 698-710 MHz band is paired with the 728-740 MHz band, this circumstance would apply to the 728-740 MHz band as well.

<sup>137</sup> See USCC *Ex Parte* at 3 (Feb. 13, 2006).

<sup>138</sup> The version of 1xEV-DO currently being implemented by CDMA carriers is referred to as "1xEV-DO Rev. 0." More advanced versions of 1xEV-DO technology, 1xEV-DO Rev. A and 1xEV-DO Rev. B, are expected to be deployed in 2006 and 2008, respectively. All 1xEV-DO versions operate on 1.25 megahertz bandwidths, and 5 megahertz blocks are needed to accommodate three 1xEV-DO emissions. See Press Release, CDMA Development Group, *CDMA2000 EV-DO Revision B Standard to be Published in First Quarter of 2006*, available at [http://www.cdg.org/news/press/2005/Nov16\\_05.asp](http://www.cdg.org/news/press/2005/Nov16_05.asp) (last visited Aug. 6, 2006). The next-generation technology to be implemented by GSM carriers is called High Speed Downlink Packet Access (HSDPA); HSDPA is not expected to be available in the U.S. until the second half of 2006. Like Wideband CDMA, HSDPA transmissions operate on 5 MHz channels. See Airvana, *Technology: Comparing Technologies*, available at [http://www.airvananet.com/technology/technology\\_hsdpa.htm](http://www.airvananet.com/technology/technology_hsdpa.htm) (last visited Aug. 6, 2006).

<sup>139</sup> See Qualcomm Inc.'s MediaFlo Overview, at 9 (April, 2005) available at [http://www.cdg.org/news/events/CDMASeminar/05\\_LatinAm/050420/6c%2015-30%20Omar%20Javaid.pdf](http://www.cdg.org/news/events/CDMASeminar/05_LatinAm/050420/6c%2015-30%20Omar%20Javaid.pdf) (last visited Aug. 6, 2006) (indicating support for channel widths of 5, 6, 7, and 8 MHz); see also *supra* paras. 38, 44 (discussing Qualcomm as licensee in the Lower 700 MHz Band).

<sup>140</sup> See Feulner, "802.16 Enables Versatile Broadband Wireless Systems – Flexibility & Performance Key for Worldwide Deployment," (stating that for WiMax a wide range of possible signal bandwidths must be supported, and that the standard specifies optionally multiples of 1.25 MHz, 1.5 MHz, and 1.75 MHz up to a total bandwidth of 20 MHz).

this technology. We also seek comment on other possible block sizes – either larger or smaller than the current blocks sizes – that might be supported by other existing or potential technologies. In addition, we seek comment generally on any potential benefits unrelated to technology, *e.g.*, increased competition, that may result from making more than one additional license available in the Upper 700 MHz Band.

54. On the other hand, we seek comment on any disadvantages that may result from subdividing Upper 700 MHz Band Block D into two or more blocks. Comments should address whether the two licenses in the Upper 700 MHz Band (along with the five total licenses in the Lower 700 MHz Band) are sufficient to help enhance competition among a wide variety of providers and applicants. Although the Commission has indicated that a bandwidth of at least 5 megahertz is required to accommodate 3G services<sup>141</sup> and 10 megahertz paired blocks can be used for certain new technologies, the Commission has also recently determined that wider bandwidths (*i.e.*, 20 megahertz paired blocks) licensed on a CMA basis will be “beneficial to carriers of various sizes.”<sup>142</sup> We ask that comments consider whether a 20 megahertz paired block licensed on, *e.g.*, CMAs, in the Upper 700 MHz Band would help enhance competition among a wider variety of providers and applicants.<sup>143</sup>

55. We also seek comment on whether we should sub-divide Block D into two 10 megahertz paired blocks given that, in doing so, the overall spectrum efficiency of the band may be decreased. For example, if 1xEV-DO technology were employed, the data throughput of the current 20 megahertz paired block would be more than twice the throughput of each of the two new 10 megahertz paired blocks.<sup>144</sup> We seek comment as well on whether, if we sub-divide Block D into two blocks, we should necessarily divide the block into two equal-sized 10 megahertz block pairs. WiMax, for example, may be able to be accommodated on 5 megahertz blocks, but the WiMax Forum<sup>145</sup> has certified the use of 3.5, 7, and 10 megahertz bandwidths for 802.16-based equipment.<sup>146</sup> Thus, by dividing Block D into two equal-sized 10 megahertz paired blocks, we would prevent an Upper 700 MHz Band licensee with only one license in

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<sup>141</sup> See *AWS-1 Order on Reconsideration*, 2005 WL 1964113, at \*5 ¶ 12 (citing *AWS-1 Report and Order*, 18 FCC Rcd at 25178 ¶ 44 (2003)).

<sup>142</sup> *Id.* at \*5 ¶ 14 (discussing that including 20 megahertz licensed on a CMA basis in that band plan will foster service to rural areas and tribal lands, and acknowledging that CMAs allow the mixing and matching of areas to fit business plans).

<sup>143</sup> *Id.* at \*4, 7 ¶¶ 10, 18 (reducing the spectrum attributable to an REAG area and creating an additional EA block adding 176 licenses).

<sup>144</sup> Specifically, if Block D were divided into two paired 10 megahertz blocks, 1xEV-DO transmissions on those two blocks would produce an overall data throughput 14 percent less than that of a single paired 20 megahertz block. This lower throughput level is due to the need to place 0.625 megahertz guard bands at both ends of 5 and 10 megahertz blocks and the loss of usable spectrum that then results from having four, rather than two guard bands in a 10 megahertz segment (*i.e.*, a 10 MHz block can accommodate seven 1.25 MHz emissions, while two 5 MHz blocks can accommodate only three 1.25 MHz emissions each). Thus, as the CDMA Development Group (a consortium comprised of CDMA service providers and manufacturers, application developers, and content providers) reports, a single 1xEV-DO (Rev. 0) emission on a 10 MHz block produces a throughput of 4200-6090 kb/s, but two 1xEV-DO (Rev. 0) emissions on two 5 MHz blocks produce a throughput of only 3600-5220 kb/s. See *Delivering Voice and Data: Comparing CDMA2000 and GSM/GPRS/EDGE/UMTS*, CDMA Development Group, Dec. 2005 available at [http://www.cdg.org/resources/white\\_papers/files/Capacity%20Dec%202005.pdf](http://www.cdg.org/resources/white_papers/files/Capacity%20Dec%202005.pdf) (last visited Aug. 6, 2006).

<sup>145</sup> The WiMAX Forum is a non-profit organization whose mission is to promote the adoption of IEEE 802.16 compliant equipment and to facilitate the deployment of broadband wireless networks based on IEEE 802.16 standards. See *About the WiMAX Forum* at <http://www.wimaxforum.org/about/> (last visited Aug. 6, 2006).

<sup>146</sup> See *Fixed, nomadic, portable and mobile applications for 802.16 – 2004 and 802.16e WiMAX networks*, WiMAX Forum, at 6, Nov. 2005 available at [http://www.wimaxforum.org/news/downloads/Applications\\_for\\_802.16-2004\\_and\\_802.16e\\_WiMAX\\_networks\\_final.pdf](http://www.wimaxforum.org/news/downloads/Applications_for_802.16-2004_and_802.16e_WiMAX_networks_final.pdf), (last visited Aug. 6, 2006).

any geographic area from employing 802.16-based equipment on bandwidths greater than 5 megahertz. We also seek comment on the effect of changing the block sizes on the overall spectrum efficiency of the band based on other existing or potential technologies.

56. Finally, we ask that commenters addressing proposals to reconfigure existing spectrum blocks in the 700 MHz Band also address existing and/or potential opportunities to aggregate new licenses and existing licenses. We note that licensees may be able to obtain a combination of spectrum blocks that meet their specific needs, even if individual licenses themselves do not comprise optimally sized blocks. For example, in any auction of new licenses, participants may be able to aggregate licenses, and thus spectrum blocks, in a market.<sup>147</sup> We seek comment on whether, for 700 MHz Band licenses, any changes to Commission competitive bidding rules are necessary or desirable in order to facilitate the efficient aggregation of new licenses, in light of the existing spectrum blocks for 700 MHz Band licenses and any spectrum blocks that may be proposed.

57. We further note that, following an auction, parties that wish to do so may aggregate spectrum covered by new 700 MHz Band licenses with spectrum covered by existing 700 MHz Band licenses available in the secondary market. We seek comment on whether any Commission action is necessary or desirable to facilitate the aggregation of new and existing 700 MHz Band licenses in the secondary market, in light of the existing and/or proposed 700 MHz Band spectrum blocks. If so, we ask that commenters address whether any such steps require changes to existing Commission competitive bidding or secondary market rules. We seek comment on the extent and nature of any benefits that may result from Commission action to facilitate aggregation of spectrum currently unassigned and previously licensed in the 700 MHz Band.

58. Alternatively, the Commission could facilitate such aggregation of spectrum by enabling an auction in which licenses for currently unassigned spectrum as well as licenses for spectrum previously assigned in the 700 MHz Band could be offered for sale in a single auction, a mechanism sometimes referred to as a “two-sided auction.” Such a “two-sided auction” could be implemented in several ways. As one example, the Commission might allow incumbent licensees to return their licenses to the Commission in exchange for a credit, which could be based on the prices of licenses for spectrum formerly associated with the returned licenses as determined in an auction. Alternatively, the Commission might allow existing licensees to offer their licenses in the auction, but relinquish the licenses in exchange for a credit only if prices (and related credit values) reached a certain level. A variation on this approach would be to allow incumbents to include their licenses in the auction inventory but “pay themselves” the winning bid if they chose to outbid other participants. In any of these alternatives, the Commission could provide that credits received in exchange for returned spectrum licenses would be transferable, and that bidders could use the credits to obtain other spectrum licenses in the same auction or another auction of spectrum licenses for the same or a different service. Consequently, incumbent licensees could exchange their current licenses for other spectrum licenses using credits, or transfer the credits to other bidders wishing to obtain licenses.<sup>148</sup>

59. Commenters addressing actions the Commission might take to create a two-sided auction should address details of how the existing licenses could be incorporated into the auction, how the incumbent licensees could be compensated for “selling” a license, and whether any particular aspects of such an auction, either discussed here or proposed by commenters, might exceed the Commission’s competitive bidding authority, under either the Commission’s current rules or the Communications Act.

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<sup>147</sup> In addition, current Commission rules enable licensees to disaggregate spectrum covered by a single license.

<sup>148</sup> We note that the Commission previously sought comment on a similar approach in another proceeding. *See* Amendment of Parts 1, 21, 73, 74, and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 Bands, WT Docket No. 03-66, *Notice of Proposed Rule Making and Memorandum Opinion and Order*, 18 FCC Rcd 6722, 6820-6822 ¶¶ 241-46 (2003).

In particular, commenters should consider whether the use of credits, or other means of compensating incumbents for their licenses, may require additional authority or the adoption of new Commission rules or procedures.<sup>149</sup> Among other things, commenters should consider whether there are particular design elements of a two-sided auction that would help such a mechanism work more efficiently. Commenters also should address the extent to which a two-sided auction, by offering all available (Commission-held and previously assigned) spectrum simultaneously, may provide an alternative with lower transaction costs as compared to the secondary market and whether such an alternative is needed. In addition, we seek comment on whether the use of a two-sided auction could or would promote opportunities for interested parties to better meet their needs for particular amounts of spectrum in this band. Would an ability to acquire more spectrum or aggregate it differently help promote service, especially in rural areas? Finally, commenters should address any issues or other matters which may relate to competitive bidding as a result of conducting a two-sided auction in the 700 MHz Band.

### C. Facilitating Access to Spectrum and Provision of Service to Consumers

60. In this section, we seek comment on whether the Commission should take additional action with regard to the spectrum in the 700 MHz Band so as to help facilitate access to that spectrum and the provision of service to all consumers, including those in rural areas.<sup>150</sup> Above, we sought comment on whether changes to the size of geographic service areas and/or spectrum blocks may help increase access to spectrum for a wide variety of entities, especially those seeking to provide service in rural areas. In this section, we seek comment on whether our existing “substantial service” performance requirements and related policies pertaining to these 700 MHz Band licenses serve to facilitate rural deployment of wireless services in the 700 MHz Band. We request comment on whether additional steps need to be considered to ensure the Commission’s goal of achieving rapid deployment of advanced services is met, both in the nation’s cities and more remote areas. First, we consider the possibility of modifying performance requirements for unauctioned licenses to the extent they could better promote both spectrum access and service provision. Second, for all 700 MHz Band licensees, we seek comment on options that may facilitate access to spectrum in the secondary market for all potential service providers, including those specifically seeking to deliver service to rural areas. Finally, we seek comment on policies the Commission could implement to promote service on tribal lands.

#### 1. Performance Requirements

61. We seek comment on whether we need to revise the existing “substantial service” performance requirement, or possibly adopt alternative build-out rules, for unauctioned licenses in the 700 MHz Band in order to further access to spectrum and provision of service to consumers, including those in rural areas. To the extent commenters believe the current requirement, or its safe harbors, should be revised, we seek comment below on whether other approaches may offer certain additional benefits that outweigh possible additional costs. These options could involve adopting rules that require specific actions by licensees in order to retain their licenses. For each of the proposals below, commenters should address the potential advantages to consumers in the license service areas, including those in rural areas, as well as any possible disadvantages, such as possibly limiting the flexibility of licensees to deploy services under time frames responsive to market conditions.

62. *Substantial Service.* The current performance requirement for the 700 MHz Band, as described above,<sup>151</sup> is based on the “substantial service” standard defined in Section 27.14(a).<sup>152</sup> We seek

<sup>149</sup> The Commission’s options with respect to competitive bidding are limited, of course, by the extent of its statutory authority. See 47 U.S.C. § 309(j).

<sup>150</sup> Section 309(j)(4)(B) of the Communications Act requires the Commission to prescribe regulations that include “performance requirements, such as appropriate deadlines and penalties for performance failures, to ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services.” 47 U.S.C. § 309(j)(4)(B).

<sup>151</sup> See *supra* para. 16.

comment as to the effectiveness of this approach in promoting service in the unauctioned portions of the 700 MHz Band, especially in rural areas. Under this standard, the Commission established “safe harbors” to provide examples of what would be considered substantial service in the 700 MHz Band. We seek comment below on whether any changes to these safe harbors are warranted to better promote service to all areas. To the extent commenters address whether Section 27.14(a) or its safe harbors should be revised, they should also consider whether any other provisions in the existing Part 27 rules require specific recognition or adjustment to comport with the potential application of those performance requirements for 700 MHz Band licensees. For example, we seek comment on whether we need to clarify the extent to which certain of the Commission’s non-Part 27 rule parts, as listed in Section 27.3, apply to 700 MHz Band licensees with regard to performance requirements relating to build-out and/or provision of service.<sup>153</sup> In addition, we note that Section 27.15 describes *inter alia* elections for “geographic partitioning and spectrum disaggregation” to ensure the Commission’s performance requirements are met when licenses are divided spectrally or geographically between two or more parties.<sup>154</sup> We seek comment on whether to change any aspect of Section 27.15 in order to help ensure the provision of service to consumers, including any rural areas that are part of a partitioned or disaggregated license.<sup>155</sup>

63. We also seek comment on whether the Commission should further define safe harbors for licensees seeking to meet the Part 27 “substantial service” standard on 700 MHz Band spectrum. We note, for example, that the Commission’s safe harbors for 700 MHz Band licensees did not specifically mandate that a particular level of service be provided in rural areas. Rather, the Commission stated in the *Upper 700 MHz Report and Order* that a licensee “that limits buildout to urban areas and areas with high density population, will not necessarily be ensured of license renewal, even if otherwise compliant with the construction benchmarks,” and added its belief that substantial service “requires the licensee to buildout in rural areas as well.”<sup>156</sup> The Commission provided some guidance on rural construction in the *Rural Report and Order*, which established a safe harbor for providing mobile service to rural areas.<sup>157</sup> In particular, it stated that a mobile wireless service licensee in various bands, including the 700 MHz Band, “will be deemed to have met the substantial service requirement if it provides coverage to at least 75 percent of the geographic area of at least 20 percent of the ‘rural areas’ within its licensed area.”<sup>158</sup> We seek comment on whether this “rural safe harbor” for mobile wireless services should continue to apply to the 700 MHz Band licenses that have not been auctioned, or whether it should be revised. We also seek

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<sup>152</sup> 47 C.F.R. § 27.14(a).

<sup>153</sup> Section 27.3, entitled “Other applicable rule parts,” lists various of the Commission’s other, non-Part 27 rule parts that are applicable to Wireless Communications Services. *See* 47 C.F.R. § 27.3.

<sup>154</sup> *Id.* § 27.15(d).

<sup>155</sup> Under the current rule in Section 27.15(d), licensees in some cases are able to decide that one party has the performance obligation regardless of the amount of spectrum or area held by that party. *Id.*

<sup>156</sup> *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 505 ¶ 71.

<sup>157</sup> The order defines “rural areas” as “those counties (or equivalent) with a population density of 100 persons per square mile or less, based upon the most recently available Census data.” *Rural Report and Order*, 19 FCC Rcd at 19087 ¶ 11.

<sup>158</sup> *Rural Report and Order*, 19 FCC Rcd at 19123 ¶ 79. We note that the Commission, in adopting substantial service requirements and safe harbors for the Broadband Radio Service (BRS) and the Educational Broadband Service (EBS), stated that “the traditional safe harbors associated with other Part 27 services are too lenient given the particular circumstances of BRS and EBS.” Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, WT Docket No. 03-66, *Order on Reconsideration and Fifth Memorandum Opinion and Order and Third Memorandum Opinion and Order and Second Report and Order*, 21 FCC Rcd 5606, 5722-26 ¶¶ 281-290 (2006) (quoting para. 286). In addition, the Commission adopted modified versions of the safe harbors which had been adopted in the *Rural Report and Order*. *Id.* at 5728 ¶ 294.

comment as to whether to apply a safe harbor to other types of services (*e.g.*, fixed) in the 700 MHz Band and, if so, what other services should be included and how the safe harbor should be defined. In addition, we ask how “coverage” would be measured for these other services so as to improve incentives to serve rural areas. Finally, we seek comment on whether there are other safe harbors pertaining to construction in rural areas that should fulfill the substantial service requirement and that would provide additional regulatory certainty regarding the Commission’s performance requirements.

64. *Construction Benchmarks.* As an alternative to maintaining the substantial service standard that the Commission previously determined should apply to the 700 MHz Band,<sup>159</sup> we seek comment on whether we should apply more specific construction benchmarks to the unauctioned licenses in the 700 MHz Band. In the past, such construction benchmarks have required a licensee to make service available to a certain percentage of the population or geographic area. For example, some broadband PCS licensees originally were required to build out their networks sufficient to serve one-third of the population of the license area within five years and two-thirds within ten years.<sup>160</sup> In contrast, narrowband PCS licensees were given the option of constructing networks sufficient to serve at least a minimum amount of the geographic area of the license, or constructing networks sufficient to serve 37.5 percent of the population of the license area within five years and 75 percent within ten years, or meeting a substantial service requirement.<sup>161</sup>

65. We seek comment on whether the Commission should adopt a population-based construction requirement as part of any possible revisions to the licensing rules in some or all of the spectrum bands to be auctioned in the 700 MHz Band. We ask for comment on the advantages of adopting this type of benchmark. If such a benchmark were adopted, we seek comment on the precise population benchmark that should be adopted, and whether it should be more extensive than the previous PCS rules, such as requiring coverage sufficient to provide service to one-half of the population of the license area within five years and three-fourths within ten years. We also request comment on the disadvantages that adoption of population-based benchmarks might cause, such as the risk that licensees would focus first on the most economically viable build-out and would be less likely to serve less-populous areas, at least during the initial license term.

66. As another option, we seek comment on whether a benchmark based on geography for 700 MHz Band unauctioned licenses would be more effective in promoting service to underserved areas without offsetting disadvantages. We note that, in the *Rural Report and Order*, the Commission considered in 2004 whether it should adopt geographic based benchmarks for any particular service, but declined at that time to adopt such a policy based on the record in that proceeding.<sup>162</sup> In the instant

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<sup>159</sup> *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 505 ¶ 70 (adopting the “substantial service” standard for the Upper 700 MHz Band); *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1079 ¶ 149 (later adopting the same “substantial service” standard for the Lower 700 MHz Band). In choosing to apply the “substantial service” standard, the Commission stated that the policy, together with its auction rules, service rules, and overall competition and universal service policies, constitute “effective safeguards and performance requirements for licensing this spectrum.” *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 505-06 ¶ 72. In applying the “substantial service” standard in lieu of other performance requirements, such as a construction benchmark, for the Lower 700 MHz Band, the Commission observed that a “substantial service” standard “provides the flexibility required to accommodate the new and innovative services that are permitted by the Lower 700 MHz Band’s reallocation.” *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1079 ¶ 150.

<sup>160</sup> See 47 C.F.R. § 24.203.

<sup>161</sup> See 47 C.F.R. § 24.103. Nationwide narrowband PCS licensees that chose to meet the geographic requirement had to construct sufficient to serve a composite area of 750,000 square kilometers, regional licensees that chose this option had to construct sufficient to serve a composite area of 150,000 square kilometers, and MTA licensees in the service that chose this option had to construct sufficient to serve a composite area of 75,000 square kilometers.

<sup>162</sup> *Rural Report and Order*, 19 FCC Rcd at 19124-25 ¶ 82. In the *Rural NPRM*, the Commission had sought comment on whether it should adopt geographic-based benchmarks for certain services that are licensed on a geographic area basis and that do not have such a requirement. Facilitating the Provision of Spectrum-Based

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rulemaking, we seek comment on whether geographic-based benchmarks warrant further consideration and, in particular, whether these rules could be designed to promote build-out in rural portions of these licenses yet to be auctioned. If so, we seek comment on how such a geography-based benchmark could or should be structured. We also seek comment on any other geographic benchmarks that would be appropriate for these licenses. For any proposed benchmark, we ask commenters to describe how the Commission should apply it to the variety of fixed, mobile, broadcast, and private services that are authorized in this spectrum.

67. “*Keep What You Use.*” We also seek comment on whether the Commission should consider adopting a “keep what you use” re-licensing mechanism<sup>163</sup> for the unauctioned spectrum in the 700 MHz Band, similar to the approach adopted for cellular service in the 1980s.<sup>164</sup> Under a “keep what you use” rule, the Commission would reclaim any “unused” spectrum in a license area after a pre-defined period of time. We also seek comment on whether the Commission should consider a modified version of this rule, such as a “triggered keep what you use” rule, in which the Commission, rather than reclaiming “unused” spectrum after a period of time, would reclaim spectrum only in the event a party other than the licensee (*e.g.*, a spectrum lessee) seeks access to the licensed spectrum in an unserved portion of the license area. Similarly, we seek comment on whether the Commission should consider applying either the “keep what you use” rule or “triggered keep what you use” rule only to a portion of the spectrum (*e.g.*, one-half) of the spectrum that otherwise would be reclaimed, or eligible for reclamation, by the Commission.

68. Given that these variations of the “keep what you use” approach may make unused spectrum available to other parties interested in gaining access to spectrum, we seek comment on whether it may be an effective means to provide additional service, including in rural areas. If commenters believe licensees are less likely to use spectrum in rural portions of their license areas, would such a mechanism be an efficient way to provide spectrum access to other potential service providers? To the extent that licensees may be less likely to use the spectrum in rural portions of their license areas, we also seek comment as to whether the Commission should apply this approach only to licenses covering rural areas, or only to that portion of licenses that covers rural areas.<sup>165</sup>

69. To the extent commenters believe a “keep what you use” mechanism is appropriate, we seek comment on how “use” could or should be defined, given the goals we here seek to further. In particular, we seek comment on how the Commission should define what type of activities demonstrate that the spectrum is being “used” in this context, considering that the Part 27 rules that the Commission adopted facilitate a wide variety of services and uses in this band.

## 2. Facilitating Access to Spectrum in the Secondary Market

70. In addition to facilitating access to spectrum based on Commission rules relating to the size of geographic license areas and spectrum blocks, we also seek comment on the extent to which the Commission could facilitate access through possible revisions to our existing secondary markets policies

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Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services, WT Docket No. 02-381, *Notice of Proposed Rulemaking*, 18 FCC Rcd 20802, 20824-25 ¶¶ 41-42 (2003) (*Rural NPRM*).

<sup>163</sup> See generally *Rural Further Notice*, 19 FCC Rcd at 19156-59 ¶¶ 151-156.

<sup>164</sup> Licensees for the cellular service, which are geographically based, are given five years to construct facilities and provide service. After the end of this period, those portions of the license area that have been constructed are retained by the licensee, while those portions that are not constructed revert back to the Commission for re-licensing. 47 C.F.R. §§ 22.947, 22.949.

<sup>165</sup> As noted above, *supra* note 159, the Commission specifically rejected the use of a “keep what you use” standard, as well as population- or geography-based construction requirements, for the 700 MHz Band. See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1079 ¶ 150.



and rules applicable to both unauctioned and previously auctioned licenses in the 700 MHz Band. In 2003 and 2004, in its *Secondary Markets* proceeding, the Commission took significant steps to facilitate the ability of entities, through spectrum leasing arrangements, to gain access to licensed spectrum in areas and amounts suited to their particular spectrum needs.<sup>166</sup> In addition, that proceeding established a streamlined or immediate approval process for transfers and assignments of licenses.<sup>167</sup> In earlier proceedings, the Commission had established policies that permit partitioning and disaggregation of geographic area licenses.<sup>168</sup> Among the Commission's goals with these policies has been to create an efficient secondary market that can move spectrum to its highest valued end use and to increase the number and/or level of wireless providers and services, including in rural areas.<sup>169</sup>

71. In the *Rural Report and Order* issued in 2004, the Commission determined that it was premature to evaluate its secondary markets policies in comparison to other spectrum access mechanisms. In particular, it noted that more time was needed for an efficient secondary market to develop and for its impact to be seen.<sup>170</sup> At that time, some commenters suggested that secondary market policies are insufficient when it comes to enabling access to spectrum.<sup>171</sup> Given the passage of time, we now seek comment on whether there are additional mechanisms relating to our secondary market policies that should be adopted so as to help move spectrum from licensees to other entities that place a higher value on its use. For instance, we seek comment on whether requiring licensees to make "good faith" efforts to negotiate with potential spectrum lessees could help increase access to spectrum, including in rural areas, and thus promote the development of these markets. Potential "good faith" requirements could take one of several forms. At a minimal level, licensees could be required to establish a contact point for potential lessees, e.g., providing the name and contact information of a designated representative in the licensee's organization who would accept inquiries from potential spectrum lessees. Under an alternative approach, licensees could be required to engage in "good faith" negotiations with potential spectrum lessees, with the Commission determining the minimum steps necessary to meet this requirement. For example, 700 MHz Band licensees could be required to have a minimum number of meetings with potential spectrum lessees and/or provide their terms for an acceptable spectrum leasing arrangement. Would the use of such requirements for licensees in the 700 MHz Band encourage licensees to more seriously consider the opportunity cost of the spectrum they hold but do not use? On the other hand, given the large number and diverse nature of potential users in this band, we seek comment on whether a requirement to, e.g., establish contact and/or communicate with all interested parties would be unduly burdensome or subject to abuse. We also seek comment on whether the Commission should adopt additional mechanisms to encourage partitioning and/or disaggregation of 700 MHz Band spectrum and the extent to which such policies ultimately may promote more service, especially in rural areas.

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<sup>166</sup> See Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 20604 (2003) (*Secondary Markets First Report and Order*); Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503 (2004) (*Secondary Markets Second Report and Order*).

<sup>167</sup> See generally *Secondary Markets First Report and Order*, 18 FCC Rcd 20604; *Secondary Markets Second Report and Order*, 19 FCC Rcd 17503.

<sup>168</sup> See, e.g., *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 506 ¶ 74, *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1080-81 ¶¶ 154-57.

<sup>169</sup> *Rural Report and Order*, 19 FCC Rcd at 19097, 19098-99, ¶ 33, ¶ 38.

<sup>170</sup> *Id.* at 19099-19100 ¶ 40.

<sup>171</sup> We note that some commenters in the rural proceeding, especially those representing rural interests, argued that existing secondary market mechanisms are insufficient to promote access to spectrum. See, e.g., *Rural Further Notice*, 19 FCC Rcd at 19153-56 ¶¶ 147-50.

72. In addition, we seek comment on whether the Commission could use its existing oversight role during the license renewal process to review a 700 MHz Band licensee's actions during its license term, including its participation in secondary market transactions, and evaluate issues related to spectrum access, service to rural areas, or both. As we discuss below,<sup>172</sup> under this approach, licensees of unauctioned and auctioned 700 MHz Band spectrum would be subject to greater informational filings and Commission review at renewal even if they are not "involved in a comparative renewal proceeding."<sup>173</sup> We seek comment on the advantages and disadvantages of this approach in promoting service to rural areas, and we ask commenters to compare it to "keep what you use" and other mechanisms designed to promote access to spectrum during the license term.

### 3. Facilitating Access to Spectrum and the Provision of Service to Tribal Lands

73. Ensuring that qualifying tribal lands have access to affordable, quality telecommunications services continues to be a goal of the Commission.<sup>174</sup> Promoting access to spectrum and the provision of service on tribal lands is an important means to meet that goal. Accordingly, we seek comment on what steps, if any, we can take with regard to the 700 MHz Band to further facilitate access to spectrum and the provision of service to tribal lands. Some of these steps, such as the performance requirements discussed above, generally would be applicable to the unauctioned spectrum in the 700 MHz Band. In contrast, policies to facilitate access to spectrum in tribal lands could be applied to both unauctioned and the already auctioned spectrum in this band.

74. The Commission's rules currently promote deployment of wireless services on tribal lands through its Tribal Lands Bidding Credit.<sup>175</sup> Pursuant to this program, the Commission grants bidding credits to winning bidders who deploy wireless facilities and provide service to federally-recognized tribal areas that have a wireline telephone subscription or penetration rate equal to or below 85 percent. The credit provides qualifying winning bidders \$500,000 for the first two hundred square miles of qualifying tribal land and \$2,500 for each additional square mile. Within 180 days after the filing deadline for long-form applications, a winning bidder that wishes to receive this credit must certify to the Commission that it has complied with various requirements, which include obtaining certification from the tribal government to provide service on its tribal land. Following satisfactory completion of this process, the amount of the bidding credit is subtracted from the gross bid amount,<sup>176</sup> and once this amount is paid, the license is issued.

75. We seek comment on whether the Commission should make any potential adjustments to its Tribal Land Bidding Credit rules as they apply to the 700 MHz Band licenses to be auctioned in order to further the deployment of wireless services to tribal lands. We also seek comment on use of the Tribal Land Bidding Credit in this context given statutory requirements that the Commission commence the

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<sup>172</sup> See *infra* section III.D.

<sup>173</sup> See 47 C.F.R. § 27.14(b).

<sup>174</sup> Section 1.2110(f)(3)(i) of the Commission's rules provide that a qualifying tribal land is any federally recognized Indian tribe's reservation, Pueblo, or Colony, including former reservations in Oklahoma, Alaskan Native regions established pursuant to the Alaskan Native Claims Settlement Act (85 Stat. 688), and Indian allotments, that has a wireline telephone subscription rate equal to or less than 85 percent, based on the most recently available U.S. Census Data. 47 C.F.R. § 1.2110(f)(3)(i) (2005).

<sup>175</sup> See 47 C.F.R. § 1.2110(f)(3). See *Extending Wireless Telecommunications Services to Tribal Lands*, WT Docket No. 99-266, *Report and Order and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 11794 (2000) (*Tribal Lands Bidding Credit Report and Order*); *Extending Wireless Telecommunications Services to Tribal Lands*, WT Docket No. 99-266, *Second Report and Order and Second Further Notice of Proposed Rulemaking*, 18 FCC Rcd 4775 (2003) (*Tribal Lands Bidding Credit Second Report and Order*); *Extending Wireless Telecommunications Services to Tribal Lands*, WT Docket No. 99-266, *Third Report and Order*, 19 FCC Rcd 17652 (2004) (*Tribal Lands Bidding Credit Third Report and Order*).

<sup>176</sup> See 47 C.F.R. § 1.2110(f).

auction for recovered analog broadcast spectrum no later than January 28, 2008, and deposit the proceeds from such an auction in the Digital Television Transition and Public Safety Fund no later than June 30, 2008.<sup>177</sup> For instance, do we need to reduce for the 700 MHz Band auction the 180 day period that winning bidders currently have to obtain a Tribal Lands Bidding Credit? Alternatively, should we accept as sufficient from winning bidders in a 700 MHz Band auction either self-certification or a promise to negotiate in good faith with the tribal government? In either case, we would thereby rely, at least in part, on the winning bidder's need to obtain consent of the tribal government to ensure that the tribes are adequately included in the process.<sup>178</sup> What, if any, other changes should we make to the Tribal Lands Bidding Credit process in light of the special circumstances for the 700 MHz Band? In addition, given the statutory deadlines, we seek comment on whether our goal of promoting the deployment of wireless services to tribal lands would be better served with respect to the 700 MHz Band by exploring other means to promote access to spectrum and the provision of service in tribal lands, as discussed below.

76. We seek comment as well on whether there are other steps the Commission should take to promote service in tribal lands. In particular, we seek comment on whether the performance requirements and/or policies to facilitate access to spectrum, discussed in Section C.1 and C.2 above, should be specifically tailored for tribal lands. For example, should the Commission consider applying a "keep what you use" performance requirement to the tribal lands portion of geographic license areas, even if it decides to apply some other standard, such as substantial service, to all other areas of a license that are not tribal lands? We seek comment on whether such an approach would promote access to spectrum and the provision of service on tribal lands. In addition, we seek comment on whether any policies designed to facilitate access to spectrum, such as requiring "good faith" negotiations or other efforts by licensees in response to a request for a spectrum lease, should be applied specifically to tribal lands, even if the Commission decides not to apply these policies to non-tribal license areas. Similarly, are there other steps we could take to revise our partitioning and disaggregation rules in order to better facilitate access to spectrum on tribal lands? Commenters also should consider, as discussed below in Section D, whether the provision of service to tribal lands could be codified as a criteria or factor relevant to a licensee's demonstration that renewal is in the public interest.

77. To the extent the Commission should revise its performance requirements and/or policies to facilitate access to spectrum and apply these policies only to tribal lands, we seek comment generally on how such a process should be implemented. For instance, we seek comment on how a "keep what you use" approach for tribal lands would operate in the event all other license areas were subject to different performance requirements. Similarly, we seek comment on the feasibility of applying one set of secondary markets rules to those portions of a license that cover tribal lands while applying different rules to the rest of a licensee's geographic area.

78. We also seek comment on whether it would facilitate access to spectrum and promote service to tribal lands to create license areas based on the contours of a reservation or any tribal boundary line. We note that, in creating the Tribal Lands Bidding Credit program, the Commission considered and declined to adopt this policy in the *Tribal Lands Bidding Credit Report and Order*.<sup>179</sup> We seek comment whether adopting this policy would have the unintended consequence of partitioning off licenses covering tribal lands such that the newly created license areas will remain unbuilt, because companies will bid only for the licenses not covering the tribal lands. For instance, would it generally be economically feasible to

<sup>177</sup> DTV Act §§ 3003(a), 3004 (establishing a Digital Television and Public Safety Fund); *see supra* para. 9.

<sup>178</sup> In 2004, the Commission decided not to accept applicant self-certification generally as sufficient for obtaining Tribal Lands Bidding Credits. *See Tribal Lands Bidding Credit Third Report and Order*, 19 FCC Rcd at 17656-57 ¶ 9.

<sup>179</sup> *Tribal Lands Bidding Credit Report and Order*, 15 FCC Rcd at 11816 ¶ 64. In this order, the Commission stated: "[W]e do not favor creating small license areas comprised exclusively or primarily of tribal lands. We find that tribal lands should generally be included in a larger licensing area to enable licensees to use profits derived from serving lower cost areas to provide service to typically high cost, tribal areas." *Id.*

provide service only within a tribal land service area? We note that, unlike other service areas, many tribal land service areas would result in licensed areas wholly contained within the larger geographic area of other licensees. We ask whether: (1) interference issues would be more significant because of the greater number of borders between licensed service areas; and (2) limitations of system design may make it difficult to engineer solutions around multiple small areas. Could any of these technical obstacles be mitigated by limiting tribal land license areas to tribal lands of a particular size or greater, or to those not contained wholly within another license area? We also ask commenters to address possible auction-related difficulties caused by this approach, especially those for potential bidders. For instance, if we were to implement this approach for a single spectrum block for which the basic geographic area was CMAs, the 585 federally recognized tribal lands, combined with the 734 CMAs, would result in 1319 separate licenses being offered for that one block.

79. Finally, in the event the Commission adopts other policies discussed above, such as increasing the number of spectrum blocks made available and/or the amount of spectrum assigned by small geographic license areas in the 700 MHz Band, we seek comment on whether policies focused solely on tribal lands would be necessary. We note that, in Auction No. 44, two CMA-based licenses for the Lower 700 MHz Band were won by San Carlos Apache Telecommunications Utility, Inc.,<sup>180</sup> and we therefore inquire whether further use of such small geographic areas may be the most effective means to promote service on tribal lands.

#### **D. Criteria for Renewal**

80. In this section, we seek comment on whether to amend our rules to clarify or modify the requirements and procedures of the renewal process for licenses in the 700 MHz Band, including both licenses that have already been auctioned and those that have yet to be auctioned. We seek comment on the possibility of amending the Commission's rules to state more explicitly the criteria for renewal that apply to 700 MHz Band authorizations under Part 27, regardless of whether licensees are involved in a comparative hearing. In addition, to the extent the Commission's renewal requirements and at least some of its performance requirements apply at the end of a license term, we seek comment on the advantages and disadvantages of combining any performance requirements applicable to 700 MHz Band licensees with the criteria that the Commission would review in a license renewal application. We also seek comment on whether to use these criteria to replace the procedures for the filing of competing applications at renewal time. For instance, the licenses could revert to the Commission for re-auction should a license not be renewed. We also ask commenters to address whether any amendments of our rules on the renewal process should be limited to the unauctioned 700 MHz Band licenses, or whether any such amendments also should apply to those 700 MHz Band licenses which already have been auctioned in order to have a unitary regime for these licenses.<sup>181</sup>

81. We first seek comment on whether 700 MHz Band licensees should be subject to requirements at renewal in addition to any end-of-term performance requirements.<sup>182</sup> As stated above, licensees are required to meet "substantial service" under the performance requirements of Section 27.14(a) as well as in the context of any renewal proceedings under Section 27.14(b) of the Commission's

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<sup>180</sup> See Wireless Telecommunications Bureau Grants Lower 700 MHz Band Licenses, Auction Event No. 44, *Public Notice*, 18 FCC Rcd 4584 attachment A (2003).

<sup>181</sup> If applied to the unauctioned 700 MHz Band licenses, this policy would include Lower 700 MHz Band Blocks A, B, and E, as well as Upper 700 MHz Band Blocks C and D. If applied to the 700 MHz Band licenses that already have been auctioned, this policy also would include the Lower 700 MHz Band Blocks C and D. We could also apply the same rules for all Lower 700 MHz Band licenses, and different rules for the Upper 700 MHz Band licenses. The renewal criteria and process for authorizations for the 700 MHz Guard Bands at Blocks A and B in the Upper 700 MHz Band are beyond the scope of this Notice.

<sup>182</sup> See *supra* section III.C.1.

rules.<sup>183</sup> Although renewal of 700 MHz Band licensees is governed under Section 27.14(b)-(d) of the Commission's rules, which indicates that a comparative process is used to choose among renewal applicants based on certain showings, the rule does not describe the factors that the Commission will consider in connection with a license renewal application to the extent no competing application is filed. When establishing the Part 27 rules that apply to the 700 MHz Band, the Commission stated only that: "We will *require* that a [Part 27] licensee's *renewal application include* at a minimum the following showing to claim renewal expectancy: (1) a description of current service in terms of geographic coverage and population served or links installed; (2) an explanation of the licensee's record of expansion, including a timetable for the construction of new base sites or links to meet changes in demand for service; (3) a description of the licensee's investments in its system; and (4) copies of any FCC orders finding the licensee to have violated the Communications Act or any FCC rule or policy, and a list of any pending proceedings that relate to any matter described by the requirements for the renewal expectancy."<sup>184</sup> Accordingly, we seek comment on whether we should amend our rules to define the standards and informational filings that apply to license renewal applications for these licenses.<sup>185</sup> In particular, we seek comment on the requirements (or factors) that should be considered for 700 MHz Band licensees at renewal, including: the level of service and whether it was "substantial"; whether service was ever interrupted and discontinued; whether service has been provided to any rural areas; whether a licensee has received any requests from others seeking to enter into spectrum leasing arrangements, and whether it has entered into any such arrangements; and any other factors typically associated with assessments of a licensee's level of service to the public. Commenters should address which, if any, of these or other elements should be codified as requirements for renewal or, in the alternative, whether the Commission should list factors that are relevant to a licensee's demonstration that renewal is in the public interest.

82. In addition, we seek comment on whether the Commission should integrate Section 27.14(a)'s "substantial service" performance requirement, and any new end-of-term requirements,<sup>186</sup> into the renewal process for 700 MHz Band licenses.<sup>187</sup> We note that, in its orders, the Commission focused

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<sup>183</sup> See *supra* paras. 16-17 (discussing "substantial service" under both Section 27.14(a) and 27.14(b) of the Commission's rules).

<sup>184</sup> 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, 10840-41 ¶ 107 (1997) (*Part 27 R&O*) (establishing Sections 27.14(b)-(d)) (emphasis added). These renewal provisions were later adopted for licenses in the 700 MHz Band. See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 503-04 ¶¶ 66, 68 & n.163 (adopting the renewal provisions in existing Part 27 and citing *Part 27 R&O*); *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1076-77, 1077-78 ¶¶ 143, 146 (adopting the renewal provisions in existing Part 27). Although the Part 27 rule adopted only stated that these showings were required for renewal applicants involved in a comparative renewal proceeding, see 47 C.F.R. § 27.14(c), we note that in its Part 27 notice of proposed rulemaking, the Commission stated that "we propose to consider *the amount and type of service* being provided by the licensee *in connection with its license renewal application*," Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS"), GN Docket No. 96-228, *Notice of Proposed Rulemaking*, 11 FCC Rcd 21713, 21728 ¶ 30 (1996) (emphasis added) (describing proposed factors that Commission would review during license renewal); see also *Part 27 R&O*, 12 FCC Rcd at 10840 ¶ 106 ("We will adopt our proposals regarding . . . the renewal expectancy."). Although the Commission did not codify any special informational showings from 700 MHz renewal applicants unless they are "involved in a comparative renewal proceeding" triggered by the filing of a competing application, 47 C.F.R. § 27.14(b), licensees' renewal applications are nevertheless subject to Commission's review and approval based on general public interest factors (*e.g.*, amount and type of service provided by the licensee during its license term).

<sup>185</sup> These criteria for renewal would apply to 700 MHz authorizations that have been assigned, transferred, partitioned or disaggregated during their license terms.

<sup>186</sup> See *supra* section III.C.1.

<sup>187</sup> We note that the license term for Multichannel Video Distribution & Data Service (MVDDS) is ten years, and that a renewal expectancy for MVDDS is based on a showing of substantial service at the end of five years into the

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on renewal in the context of partitioned and disaggregated licenses,<sup>188</sup> and stated that to the extent a licensee meets “the [substantial service] performance requirement[] . . . , [it] will be deemed to have met this element of the renewal expectancy requirement regardless of which of the construction options . . . the licensee has chosen.”<sup>189</sup> Accordingly, to the extent the Commission’s renewal requirements and at least some of its performance requirements apply at the end of a license term,<sup>190</sup> we seek comment on the advantages and disadvantages of combining these requirements into, for example, a single substantial service provision in Section 27.14 of the Commission’s rules. For instance, instead of requiring the enforcement of separate rules regulating construction or discontinuance of service,<sup>191</sup> the Commission could replace such end-of-term / mid-term requirement(s) and require 700 MHz Band licensees to submit informational showings in their renewal applications based on factors that could be used to determine whether a grant of renewal is in the public interest. Under this approach, all licensees, included those holding authorizations that have been assigned, transferred, partitioned or disaggregated during their license terms, would be subject to review on these criteria, and the Commission would not need to have separate procedures for assessing satisfaction of construction standards (*e.g.*, standards pertaining to partitioned licenses under Section 27.15(d)(1)), and for determining whether renewal criteria have been met.<sup>192</sup> In the event that we decide to integrate performance requirements and end-of-term requirements into the renewal process for 700 MHz Band licensees, we seek comment on whether licensees who fail to meet such requirements could be subject to potential forfeiture penalties.<sup>193</sup> If, for example, a licensee files for renewal, but fails to meet the substantial service requirement, we seek comment on whether it could be subject to forfeiture penalties under this approach.

83. Finally, under a modified or combined Section 27.14 standard,<sup>194</sup> we seek comment on whether to use codified renewal criteria to measure the 700 MHz Band licensees’ level of service instead of relying on any performance incentives that may arise due to the possibility of competing applications being filed against a renewal (with the concomitant need for the incumbent to demonstrate “substantial

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license period and ten years into the license period. 47 C.F.R. § 101.1413(a),(b); *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; 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, *Memorandum Opinion and Order and Second Report and Order*, 17 FCC Rcd 9614, 9683-85 ¶¶ 175-77 (2002), *amended by*, Amendment of Parts 25 and 101 of the Commission’s Rules Governing Multichannel Video Distribution and Data Service in the 12.2-12.7 GHz Band, ET Docket No. 98-206, *Order*, 19 FCC Rcd 9727 (2004) (adopting rules).

<sup>188</sup> *See supra* para. 17 (explaining that the Commission’s orders did not discuss the details of its renewal criteria).

<sup>189</sup> *See, e.g., Lower 700 MHz Report and Order*, 17 FCC Rcd at 1078 ¶ 146 (emphasis added; footnote omitted).

<sup>190</sup> Sections 27.14(a) and (b) require that licensees demonstrate “substantial” service both as a “construction requirement” “within the prescribed license term” and to obtain a renewal expectancy preference in a comparative hearing. 47 C.F.R. § 27.14(a), (b). Thus, the Commission’s rules require substantial service by the end of a 700 MHz Band licensee’s term, the same point at which renewal filings would be reviewed and potentially granted. *See* 47 C.F.R. § 27.14(a).

<sup>191</sup> *See* 47 C.F.R. § 1.955(a)(3) (providing that wireless licenses automatically terminate if service is permanently discontinued and stating that “permanent discontinuance” is defined in either the specific authorization or the service rules governing that authorization); *but see* § 27.66 (requiring Part 27 licensees that discontinue service to notify the Commission in certain contexts, but not providing a definition of “permanent discontinuance”).

<sup>192</sup> *See* 47 C.F.R. § 27.15(d)(1).

<sup>193</sup> The Communications Act provides the Commission with authority to assess monetary penalties for willful and knowing violations of its rules *See* 47 U.S.C. §§ 502, 503(b).

<sup>194</sup> *See* 47 C.F.R. § 27.14.

service” to receive a renewal expectancy preference). Although Section 27.14(b)-(d) of Commission rules indicates that a comparative process is used to choose among renewal and competing applicants, it is unclear what type of comparative hearing is to be employed. Under a modified Section 27.14 of the Commission’s rules, the Commission could eliminate the filing of competing applications at renewal time and, for example, adopt a process by which licenses revert to the Commission for re-auction if a license is not renewed. To the extent such an approach is adopted, commenters should address the procedures for renewal processing, the components of a renewal filing and any demonstrations of “substantial” service or other requirements, provisions for petitions to deny renewal applications, and procedures governing dismissal/denial of renewal applications and subsequent re-licensing through competitive bidding to competing bidders.<sup>195</sup> In addition, we seek comment on whether the petition to deny process, coupled with the ability of a petitioner to participate in any subsequent auction to re-license spectrum that reverts to the Commission for lack of renewal, creates sufficient incentives to challenge inferior service or poor qualifications of licensees at renewal and thereby protect the public interest.

#### **E. Length of License Terms**

84. In this section, we seek comment on whether the license terms applicable to both the unauctioned and auctioned spectrum in the 700 MHz Band should be revised and, if so, in what manner.<sup>196</sup> Section 27.13(b) of the Commission’s rules provides that initial license authorizations for spectrum in the 700 MHz Band will extend until January 1, 2015, except that a Part 27 licensee commencing broadcast services will be required to seek renewal of its license for such services at the termination of the eight-year term following commencement of such operations.<sup>197</sup> We also ask whether the Commission should establish a uniform license term regardless of regulatory status associated with the services being provided.

85. We seek comment on whether the license terms for both the unauctioned and already auctioned 700 MHz Band licenses should be revised in consideration of the delays in auctioning most of the licenses in the 700 MHz Band,<sup>198</sup> the new mandate under the DTV Act to auction all spectrum in the 700 MHz Band by a date certain,<sup>199</sup> and/or the establishment in the DTV Act of a date certain for the end of the DTV transition.<sup>200</sup> Comments should address the impact that these factors may have on the development and use of the spectrum in the context of the appropriate license term length for the 700

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<sup>195</sup> For example, if the Commission dismisses or denies a renewal application, the spectrum could automatically revert to either the Commission (in the case of geographic-area licenses) to re-license using competitive bidding or to the geographic-overlay licensee (in the case of site-specific licenses subject to reversionary rights for geographic-overlay licensees) as part of its licensed service area. Moreover, the petitioner could be eligible to participate in any auction of the non-renewed license.

<sup>196</sup> As noted earlier, the Guard Band spectrum, and the rules applicable thereto, is not within the scope of this Notice.

<sup>197</sup> 47 C.F.R. § 27.13(b). Other Part 27 services generally have license terms which extend for terms not to exceed ten years. *See id.* § 27.13(a), (c)-(e). For AWS at 1710-1755 and 2110-2155 MHz, authorizations issued on or before December 31, 2009, have a term of fifteen years, and other authorizations in that band will have a ten year license term. *Id.* at § 27.13(g).

<sup>198</sup> After the current license term was adopted, the Commission was directed not to auction certain portions of the spectrum in the 700 MHz Band; *see supra* para. 8 (discussing the Auction Reform Act’s direction that the Commission not commence or conduct auctions for certain Upper and Lower 700 MHz band licenses). However, certain other licenses in the Lower 700 MHz Band were auctioned pursuant to the Auction Reform Act. *Id.*

<sup>199</sup> The DTV Act now mandates that the Commission conduct an auction of this spectrum. *See* DTV Act § 3003(a)(2).

<sup>200</sup> The DTV Act establishes a firm deadline of February 17, 2009, for the DTV transition, with the auction of the spectrum to commence no later than January 28, 2008. As a result, the statutory provision that allowed the transition to be extended in certain circumstances, *see* 47 U.S.C. § 309(j)(14)(B) (2005), and thus provided an opportunity for the continued presence of TV broadcasters in the band, has been eliminated.

MHz Band. We note that the period extending from the new firm deadline for the DTV transition, February 17, 2009, to the current January 1, 2015, termination date set forth in Section 27.13(b) is shorter than both the ten-year license term generally afforded to many other (including CMRS) licensees and the eight-year average time for complying with the performance requirements which the Commission considered when the current rule was first adopted in 2000.<sup>201</sup> We seek comment on whether the changes to the DTV transition mandated by the DTV Act warrant a modification of the license terms currently in Section 27.13(b) of the rules. We also seek comment on other considerations and developments that would support (or not support) extending or revising the license terms of these licenses.

86. In the event that a change in the license term for these 700 MHz Band licenses is warranted, we seek comment on what new license terms should be adopted. First, we invite comment on whether the Commission should adopt a new initial license term that would extend to a date certain, and what that date should be. For instance, we seek comment on whether the license term should extend until February 18, 2017. Consistent with the Commission's adoption of a license term that recognized an eight-year period after the then-target date for the end of the DTV transition,<sup>202</sup> a new license term extending until February 18, 2017 would cover a period of eight years after the new firm deadline for the transition. We also seek comment on whether some other specific date may be more appropriate. In addressing this or any other potential license term, including those considered below, we ask that commenters favoring a particular proposal specify the appropriate license term and include a basis for the term proposed. We ask that commenters discuss whether and how any proposal suggested might provide regulatory certainty and stability, encourage investment in and development of the 700 MHz Band, and better serve the public interest.

87. In the alternative, we seek comment on whether a new license term should extend for a specified period of time rather than be tied to a specific termination date and, if so, what that period of time should be. For instance, we seek comment on whether the license term should be amended to extend for a period not to exceed ten years from the date of initial issuance or renewal. In the Lower 700 MHz Band, the Commission declined to adopt a ten-year license term because the eight additional years beyond the earliest date that incumbents could then have been required to vacate the band was seen as providing new licensees a reasonable period to meet performance requirements.<sup>203</sup> We note that many of the Part 27 services covered under Section 27.13 generally have a ten-year license term,<sup>204</sup> and there have been significant changes to the DTV transition and delays in auctioning the majority of the 700 MHz Band. There may also be factors that relate specifically to the 700 MHz Band that support adopting a license term of some other length than ten years.<sup>205</sup> Thus, we seek comment on whether Section 27.13(b) should

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<sup>201</sup> See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 504 ¶ 67 (finding that an average of eight years was a reasonable time to comply with the performance requirements, and that the license term should extend eight years beyond the then target date of 2006 for the DTV transition); see also *supra* para. 18 (discussing license term).

<sup>202</sup> See, e.g., *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 504 ¶ 67.

<sup>203</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1077 ¶ 145.

<sup>204</sup> These include initial authorizations for the 2305-2320 MHz and 2345-2360 MHz bands, the 1390-1392 MHz bands, the paired 1392-1395 and 1432-1435 MHz bands, the 1670-1675 MHz band, and the AWS authorizations in the 1710-1755 and 2110-2155 MHz bands that are issued after December 31, 2009. See 47 C.F.R. §§ 27.13(a),(c)-(e),(g). The Commission also has adopted a ten year license term for other services. See, e.g., *Wireless Operations in the 3650-3700 MHz Band*, ET Docket No. 04-151, *Rules for Wireless Broadband Services in the 3650-3700 MHz Band*, WT Docket No. 05-96, *Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, ET Docket No. 02-380, *Amendment of the Commission's Rules with Regard to the 3650-3700 MHz Government Transfer Band*, ET Docket No. 98-237, *Report and Order and Memorandum Opinion and Order*, 20 FCC Rcd 6502, 6516 ¶ 39 (2005) (stating that adoption of ten year license term in that proceeding is consistent with license terms adopted for other services) (modified by Erratum, DA 05-1186 (rel. April 28, 2005)).

<sup>205</sup> For example, the Commission adopted a 15 year license term for AWS spectrum in the 1710-1755 and 2110-2155 MHz bands, but only for initial licenses issued on or before December 31, 2009. See 47 C.F.R. § 27.13(g). The Commission stated that the circumstances surrounding the future development and deployment of service in

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be revised to provide a different term, either longer than ten years (*e.g.*, 15 years), or less than ten years if conditions warrant such a change.

88. We ask that comments on the length of license terms also address our discussion in this Notice concerning potential revisions to the performance requirements for licensees in the 700 MHz Band.<sup>206</sup> The “substantial service” construction requirement in Section 27.14(a) of our rules requires that licensees make a “substantial service” showing “within the prescribed license term set forth in § 27.13.”<sup>207</sup> If we alter the length of license term, commenters should consider whether we should modify or amend the existing performance requirements in Section 27.14.

89. Finally, we seek comment on whether to establish a uniform license term for all services provided by 700 MHz Band licensees, regardless of regulatory status. Licensees in the 700 MHz Band are authorized to provide a combination of different services in a single license: common carrier, non-common carrier, private internal communications, and broadcast services.<sup>208</sup> These licensees also are permitted, consistent with Commission rules, to switch their regulatory status at any time prior to the end of their license period.<sup>209</sup> As reflected in Section 27.13(b) of our rules, to the extent licensees offer services that qualify as broadcasting under the Communications Act, an eight-year license term applies from the onset of broadcast operations, whereas the license term extends until January 1, 2015 for non-broadcast operations.<sup>210</sup> We seek comment on the impact of the two different license terms set forth in Section 27.13(b), depending on the service offered, on those situations where a licensee deploys services with both broadcast and non-broadcast components under a single license authorization. We also seek comment on the operation and impact of the two license terms on those situations where a licensee changes the type of service offered between broadcast and non-broadcast services during the term of the license. We ask that commenters address the effect that these dual license terms applicable to the same license authorization have had, or will have, on matters such as licensing, development, use, and renewal with respect to these 700 MHz Band licensees. We seek comment on whether the Commission should consider implementing a uniform license term for all services and, if so, how any such uniformity could be realized given legal and/or regulatory requirements.<sup>211</sup> Comment also is requested on whether the Commission should maintain a distinct term for licenses in which licensees offer broadcast services. We also seek comment on what changes, if any, should be made to our current approach of administering different license terms within a single authorization.

## **F. Power Limits and Related Requirements**

90. In this section of the Notice we seek comment on whether to modify the power limits that apply to base stations operating in either the unauctioned or auctioned spectrum in the 700 MHz Band. Currently, the power limit for base stations operating in the Upper 700 MHz Band is 1 kW ERP<sup>212</sup>

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those bands warranted a license term longer than ten years in order to encourage the investment necessary for the bands' development. *See AWS-1 Report and Order*, 18 FCC Rcd at 25190 ¶ 70 & n.182.

<sup>206</sup> *See supra* section III.C.

<sup>207</sup> 47 C.F.R. § 27.14(a).

<sup>208</sup> *See* 47 C.F.R. § 27.10(a).

<sup>209</sup> *See* 47 C.F.R. § 27.10(d).

<sup>210</sup> *See* 47 C.F.R. § 27.13(b).

<sup>211</sup> *See, e.g.*, 47 U.S.C. § 307(c)(1) (license for operation of a broadcasting station shall be for a term not to exceed 8 years).

<sup>212</sup> *See Upper 700 MHz First Report and Order*, 15 FCC Rcd at 521 ¶ 109. The 1 kW ERP power limit applies to commercial, Guard Band and Public Safety base stations operating in the Upper 700 MHz Band. However, any discussion of the power limit for the Guard Band and Public Safety spectrum is beyond the scope of this Notice.

and the power limit for base stations operating in the Lower 700 MHz Band is 50 kW ERP.<sup>213</sup> The 1 kW ERP power limit in the Upper 700 MHz Band, along with other technical safeguards, was designed to enable commercial licensees to implement mobile and fixed systems without causing harmful interference to adjacent band Upper 700 MHz Band Public Safety and Guard Band operations.<sup>214</sup> The 50 kW ERP power limit in the Lower 700 MHz Band was adopted to allow high-power broadcast, as well as mobile and fixed services, in the band.<sup>215</sup> To ensure that transmissions in excess of 1 kW in the Lower 700 MHz Band would not cause interference to adjacent band operations, the Commission required Lower 700 MHz Band licensees operating base stations at power levels above 1 kW ERP to comply with a power flux density (PFD) limit at all locations on the ground within one kilometer of their base stations.<sup>216</sup>

91. *Upper 700 MHz Band.* We seek comment on whether, and to what extent, the power limit of 1 kW ERP, which currently applies to base stations operating in Blocks C and D of the Upper 700 MHz Band, should be revised. Specifically, commenters should address whether a need or demand exists for a higher power limit in the Upper 700 MHz Band and what additional types of services could be implemented in the band if a higher power limit is permitted. We request that any commenters that propose raising the power limit in the Upper 700 MHz Band submit a technical analysis showing how their proposal would not increase the risk of interference to adjacent operations. Because we are concerned that any increase in power beyond the current 1 kW ERP limit could cause interference to Public Safety and Guard Band systems operating in the Upper 700 MHz Band, commenters should address whether permitting higher powered transmissions could cause interference to Public Safety or Guard Band operations.<sup>217</sup> Specifically, we seek comment on whether a higher power limit, along with a

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<sup>213</sup> See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1062-65 ¶¶ 99-107; 47 C.F.R. § 27.50(c).

<sup>214</sup> For example to prevent commercial stations from causing interference to Public Safety operations, commercial base and mobile stations are required to meet strict out-of-band emission (“OOBE”) limits with respect to the Public Safety bands. See *Upper 700 MHz First Report and Order*, 15 FCC Rcd at 518-20 ¶¶ 103-107. To prevent commercial stations from causing overload interference to Public Safety operations, guard bands were established between the commercial blocks and the Public Safety bands. *Id.* at 478 ¶¶ 2, 3.

<sup>215</sup> We note that maximum power applies per RF emission, not per polarization; thus, multiple antenna elements radiating the same radio wave (*e.g.*, a power divider feeding multiple polarizations) would be considered a single RF emission. Therefore, if, for example, a Lower 700 MHz licensee employs a circularly polarized transmission, the power of the transmission would be limited to its combined horizontal and vertical polarizations, up to a total of 50 kW ERP (*i.e.*, the transmission would be limited to no greater than 25 kW ERP in each of the horizontal and vertical planes).

<sup>216</sup> The Commission concluded that mobiles would be protected from interference from adjacent band base stations operating at power levels greater than 1 kW ERP if such base stations produced the same PFD on the ground near the base station that they would produce if they operated at power levels of 1 kW ERP or less. See *Lower 700 MHz Report and Order*, 17 FCC Rcd at 1064 ¶ 104. The Commission decided that that power flux density would be the PFD that would be generated by a base station operating at 1 kW ERP and employing a half-wave dipole antenna located 75 meters above ground; the PFD limit that the Commission adopted was 3 milliwatts/m<sup>2</sup>. *Id.* at 1121 app. D ¶ 2. As to the protection of adjacent band base stations from interference from high-power base transmissions, the Commission noted that in order for high-powered base stations to meet the required PFD limit, such stations would have to employ antennas that were: 1) located very high above ground; and 2) able to greatly attenuate the station’s signal in the area near the antenna. The Commission further concluded that in using such antennas, high-powered base stations would also be able to provide appropriate protection to nearby adjacent band base stations. The Commission reached this conclusion based on the assumption that the receive antenna of an adjacent band base station would, if part of a cellular network, likely operate at a relatively low height, and that the height differential that would then exist between the high-powered base station antenna and the adjacent band base station receive antenna would enable the signal to be greatly attenuated at the receive antenna. *Id.* at 1121 app. D.

<sup>217</sup> In establishing Upper 700 MHz Band rules, the Commission took steps to ensure that Public Safety operations would be protected from interference. Specifically, the Commission required base station transmitters operating on Blocks C and D to meet a  $76 + 10 \log P$  OOBE limit and required C and D block mobile transmitters to meet a  $65 + 10 \log P$  limit, for all emissions into the 764-776 and 794-806 MHz Public Safety bands. *Upper 700 MHz First*

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3 milliwatts/m<sup>2</sup> or similar PFD limit, will adequately protect Public Safety and Guard Band mobile and base station operations from interference. If not, what PFD limits, or other restrictions, would be necessary to protect such operations?<sup>218</sup> Of course, given the importance we attach to preventing interference to Public Safety operations,<sup>219</sup> we will not adopt any modifications to our power limit rules that would cause interference to such operations in the Upper 700 MHz Band.

92. We seek comment as well on whether a PFD limit would necessarily have to be applied to high-powered transmissions originating in *all* upper and lower C and D block spectrum in the Upper 700 MHz Band,<sup>220</sup> or whether it might be necessary to apply PFD limits to stations operating in only certain Upper 700 MHz Band spectrum blocks to protect Public Safety and Guard Band operations. In the event the Commission finds that certain spectrum blocks could accommodate such transmissions without the need for a PFD limit, we ask commenters whether we should permit high-powered transmissions only on these spectrum blocks.

93. We also ask whether, if commenters believe that a general approach of employing PFD limits may not be sufficiently effective in preventing interference from higher-powered transmissions to adjacent channel operations, or if such transmissions could potentially cause interference to co-channel operations, we should limit any increase in permissible power to, *e.g.*, 20 kW, 10 kW, or 5 kW ERP, or not modify the current 1 kW ERP power limit at all. Commenters should also address whether such “intermediate” power limits in the Upper 700 MHz Band might be able to be implemented in some, or all, of the commercial Upper 700 MHz Band spectrum without the need for PFD limits to protect adjacent channel operations. In addition, regardless of whether we decide to increase the power limit for base stations in the Upper 700 MHz Band, we ask if we should, consistent with PCS and AWS, double the existing power limit, to 2 kW ERP, for rural areas only in the Upper 700 MHz Band (without the need for a PFD limit) and what benefit such an increase might provide in the provision of service in rural areas.<sup>221</sup>

94. Finally, we seek comment on whether any additional modifications to our Upper 700 MHz Band power limit rules would be appropriate. For example, in the event that we authorize base stations operating in all or in portions of the commercial blocks in the Upper 700 MHz Band to employ higher powered transmissions, should we adopt the same notification procedures for high-powered Upper 700 Band operations that we currently apply to high-powered Lower 700 MHz Band operations, and will

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*Report and Order*, 15 FCC Rcd at 519-20 ¶¶ 105, 106. These limits are considerably stronger than the  $43 + 10 \log P$  OOB limit generally applied to stations operating in the land mobile services. The Commission also placed one and two megahertz guard bands between the C and D blocks and the Public Safety bands in order to reduce the likelihood for overload interference into Public Safety receivers.

<sup>218</sup> As we have discussed, *see supra* note 216, the protection of commercial base stations from high-powered adjacent band transmissions is achieved through, among other things, the significant height differential that is likely to exist between high-powered transmitting antennas and commercial base station receive antennas. However, because Public Safety and Guard Band base station antennas may not operate at the same low heights as commercial base station antennas, Public Safety and Guard Band base stations could be susceptible to interference from adjacent band, high-powered base stations. Thus, more stringent technical requirements would appear to be needed to protect such stations.

<sup>219</sup> *See, e.g.*, Improving Public Safety Communications in the 800 MHz Band, WT Docket 02-55, *Report and Order*, *Fifth Report and Order*, *Fourth Memorandum Opinion and Order*, and *Order*, 19 FCC Rcd 14969 (2004) (amended by Erratum, 19 FCC Rcd 19651 (2004), and Erratum, 19 FCC Rcd 21818 (2004)) (*800 MHz Report and Order*).

<sup>220</sup> Base station transmissions are currently permitted in both the lower and upper C and D blocks.

<sup>221</sup> *See Rural Report and Order*, 19 FCC Rcd at 19131-32 ¶ 95, 19133-34 ¶ 100 (adopting 3280 watt EIRP power limits for base station operating in the PCS and AWS bands).

such notification procedures adequately protect other Upper 700 MHz Band licensees from interference?<sup>222</sup>

95. *Lower 700 MHz Band.* We also seek comment on whether to revise the 50 kW ERP power limit that applies to base stations operating in the Lower 700 MHz Band. In the first instance, we seek comment on whether to revise the power limit with respect to the unauctioned portion of the Lower 700 MHz Band. For example, commenters should discuss whether a need or demand exists for such high-powered transmissions in the band, and the impact, if any, a reduction in the power limit would have on current and future services and the efficient utilization of this spectrum. Commenters also should address the extent to which current and anticipated use of the Lower 700 MHz Band would require a 50 kW ERP power limit.

96. We also ask whether we should reduce the current power limit to, *e.g.*, 20 kW, 10 kW, 5 kW ERP, or even to 1 kW ERP because of possible concerns that the Lower 700 MHz Band PFD limit does not adequately limit adjacent channel interference from 50 kW ERP transmissions or believe that the potential exists for co-channel interference from transmissions at that power level. Commenters, in responding to this request for comment, should indicate what types of services they believe might benefit from and/or require the use of power levels lower than 50 kW ERP. Finally, commenters should address whether we should, consistent with PCS and AWS, adopt a power limit of 2 kW ERP for rural areas only (without the need for a PFD limit) for base stations operating in the Lower 700 MHz Band.<sup>223</sup>

97. We also seek comment on whether any revisions to the Lower 700 MHz Band power limit should be uniformly applied across the entire band, *i.e.*, including the existing licenses in Blocks C and D as well as the unauctioned Blocks A, B, and E. We seek comment on whether, and to what extent, applying a revised power limit to existing licenses in Blocks C and D to provide for uniform treatment across the band, will promote the public interest, convenience, and necessity, or the provisions of the Communications Act, as amended.<sup>224</sup> We also ask that commenters address whether any public interest benefits resulting from a change in the Lower 700 MHz Band power limit would outweigh any additional costs that may be associated with such a change.

98. Finally, we seek comment on whether any additional modifications to our Lower 700 MHz Band power limit rules would be appropriate. For example, we seek comment on whether the current notification procedures that apply to high-powered Lower 700 MHz Band operations will adequately protect adjacent band Lower 700 MHz Band licensees from interference.<sup>225</sup>

#### **G. 911/E911 and Hearing Aid-Compatible Wireless Handsets**

99. In this section, we tentatively conclude that we should amend our Part 20 rules to clarify that certain services offered using both unauctioned and previously auctioned spectrum in the 700 MHz Band and spectrum in other bands subject to Part 27, such as AWS-1, should be subject to the 911/E911<sup>226</sup> and hearing aid-compatibility requirements.<sup>227</sup>

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<sup>222</sup> In the *Lower 700 MHz Report and Order*, the Commission required licensees intending to operate base or fixed stations in excess of 1 kW ERP to file notifications with the Commission and provide notifications to all Part 27 licensees authorized on adjacent blocks in their area of operation. *See Lower 700 MHz Report and Order*, 17 FCC Rcd at 1066 ¶ 110; 47 C.F.R. § 27.50(c)(5).

<sup>223</sup> *See supra* para. 93.

<sup>224</sup> *See* 47 U.S.C. § 316.

<sup>225</sup> *See supra* para. 94.

<sup>226</sup> *See* 47 C.F.R. § 20.18.

<sup>227</sup> *See* 47 C.F.R. § 20.19.

100. With regard to 911 and E911, the Commission previously has recognized the critical public safety benefits of these services:

Wireless E911 is a vital step toward applying wireless technology to improving public safety. For many Americans, the ability to call for help in an emergency is the principal reason they own a wireless phone. A significant percentage of all 911 calls nationwide are made from wireless phones, and this percentage is growing. E911 will save lives and property by helping emergency services personnel do their jobs more quickly and efficiently. Automatic Location Identification (ALI) capability will permit rapid response in situations where callers are disoriented, disabled, unable to speak, or do not know their location by allowing for the immediate dispatch of emergency assistance to the location of the emergency. Wireless E911 provides a critical safety-of-life feature, and it should be deployed as quickly and ubiquitously as possible.<sup>228</sup>

The Commission also has noted that “911 service is critical to our Nation’s ability to respond to a host of crises,”<sup>229</sup> and that “access to 911 service has dramatically improved the ability of emergency personnel to respond quickly to people in distress.”<sup>230</sup>

101. In addition, the hearing aid-compatibility requirements imposed on digital wireless phone manufacturers and digital wireless service providers ensure access to telecommunications services by individuals with hearing disabilities. The Commission has noted that, in addition to the public safety benefits such access affords, enhancing the ability of individuals with hearing disabilities to access wireless telecommunications services would extend to those individuals “the social, professional, and convenience benefits” that accrue to other wireless telecommunications users.<sup>231</sup>

102. In the *E911 Scope Order* adopted in 2003, the Commission broadened the scope of its wireless E911 rules, which applied only to licensees of particular services specified in the rules, so that the requirements extended to various other services and devices to the extent that they met certain specified criteria.<sup>232</sup> Under that order, a service or device provider, whether or not it is a licensee, is to be subject to E911 rules based on whether: (1) it offers real-time, two-way voice service that is interconnected to the public switched network on either a stand-alone basis or packaged with other telecommunications services; (2) the customers using the service or device have a reasonable expectation of access to 911 and E911 services; (3) the service competes with traditional CMRS or wireline local exchange service; and (4) it is technically and operationally feasible for the service or device to support E911.<sup>233</sup> Applying these criteria, the Commission determined in the *E911 Scope Order* to amend its rules to include additional service offerings within the scope of the E911 requirements, including telematics, and resold and prepaid mobile wireless services.

103. Sections 20.18(a) and 20.19(a) currently specify that service providers within certain enumerated radio services (cellular, PCS, and SMR) are subject to the 911/E911 and hearing aid-

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<sup>228</sup> See Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers, CC Docket No. 94-102, *Order to Stay*, 17 FCC Rcd 14841, 14842 ¶ 4 (2002). See also Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; E911 Phase II Compliance Deadlines for Tier III Carriers, *Order*, 20 FCC Rcd 7709, 7709 ¶ 1 (2005) (reaffirming the Commission’s commitment to ensuring that the Nation’s wireless telephone users have timely access to emergency services using E911 technology).

<sup>229</sup> See *E911 Scope Order*, 18 FCC Rcd at 25341 ¶ 1.

<sup>230</sup> See *E911 Scope NPRM*, 17 FCC Rcd at 25577 ¶ 1.

<sup>231</sup> See *Hearing Aid Compatibility Report and Order*, 18 FCC Rcd at 16755 ¶ 4.

<sup>232</sup> See *E911 Scope Order*, 18 FCC Rcd at 25346 ¶ 15.

<sup>233</sup> *Id.* at 25347 ¶ 18. The Commission also may use other factors in making its determination. *Id.* at 25347 ¶ 19.

compatibility requirements.<sup>234</sup> These rule sections have not been expanded to include licensees providing service in later authorized, additional wireless services such as in the 700 MHz Band, although many of the services permitted in the 700 MHz Band can be expected to be very similar to services presently subject to the 911/E911 and hearing aid-compatibility requirements.

104. Based on the criteria established in the *E911 Scope Order*, we tentatively conclude that services provided in the 700 MHz Band that meet these criteria should be subject to the 911/E911 requirements. We also tentatively conclude that services provided in the 700 MHz Band that meet these same criteria, with some minor adjustments respecting access to hearing aid-compatible phones, should be subject to the hearing aid-compatibility requirements. Further, we tentatively conclude that the public safety and accessibility objectives of the 911/E911 and hearing aid compatibility rules would be served by application of these rules to services provided in the 700 MHz Band and meeting the above criteria. We seek comment on these tentative conclusions.

105. We expect as well that other services provided, at least in part, using spectrum subject to Part 27, such as AWS-1, may meet the above criteria and thus also should be subject to 911/E911 and hearing aid-compatibility requirements. Accordingly, we seek comment on a tentative conclusion that services provided using bands subject to Part 27, including AWS-1, that meet these criteria should also be subject to the 911/E911 and hearing aid-compatibility requirements. We also seek comment on what changes to the industry standard governing digital wireless handsets compatibility with hearing aids, ANSI C63.19-2006, would be necessary in order to establish measurement methods and parametric requirements for services provided in the 700 MHz Band.<sup>235</sup> In addition, we seek comment on the time necessary to complete such changes to the standard.

106. Finally, as noted above, Sections 20.18(a) and 20.19(a) presently limit the applicability of the 911/E911 and hearing aid compatibility requirements to specific radio services. As a result, we would need to propose rule amendments to apply the 911/E911 and hearing aid-compatibility requirements each time a new service is authorized in the future that would meet the criteria discussed above. Therefore, we seek comment on whether we should amend Sections 20.18(a) and 20.19(a) to ensure that all similar wireless services that meet the four criteria discussed above will be subject to the 911/E911 and hearing aid-compatibility requirements.

#### IV. PROCEDURAL MATTERS

##### A. Regulatory Flexibility Act

107. As required by the Regulatory Flexibility Act (RFA), 5 U.S.C. § 603, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic

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<sup>234</sup> Section 20.18(a) states that the scope of 911 requirements “are only applicable to Broadband PCS Services, Cellular Radio Telephone Service, Geographic Area Specialized Mobile Radio Services, Incumbent Wide Area SMR licensees in the 800 and 900 MHz bands and those entities that offer voice service to customers by purchasing airtime or capacity at wholesale rates from these licensees, collectively CMRS providers.” 47 C.F.R. § 20.18(a). This rule further provides that service providers “in these enumerated services” are subject to the 911 requirements solely to the extent that they offer real-time, two-way, switched voice service that is interconnected with the public switched network and utilizes an in-network switching facility which enables the provider to reuse frequencies and accomplish seamless hand-off of subscriber calls. *See id.* Section 20.19(a) states that the scope of the hearing aid-compatible handset requirements extends “to providers of Broadband Personal Communications Services (part 24, subpart E of this chapter), Cellular Radio Telephone Service (part 22, subpart H of this chapter), and Specialized Mobile Radio Services in the 800 MHz and 900 MHz bands (included in part 90, subpart S of this chapter) if such providers offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls. This section also applies to the manufacturers of the wireless phones used in delivery of these services.”

<sup>235</sup> *See supra* note 82.

impact on small entities of the policies and rules addressed in this Notice. The IRFA is set forth in the Appendix. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines as comments filed in response to the Notice, and must have a separate and distinct heading designating them as responses to the IRFA. Although Section 213 of the Consolidated Appropriations Act 2000 provides that the RFA shall not apply to the rules and competitive bidding procedures for frequencies in the 746-806 MHz Band,<sup>236</sup> we nevertheless believe that it would serve the public interest to analyze the possible significant economic impact of the proposed policy and rule changes in this band on small entities. Accordingly, the IRFA in the Appendix of this Notice includes an analysis of (and seeks comment on) this impact in connection with all spectrum that falls within the scope of this Notice, including spectrum in the 746-806 MHz Band.

## **B. Paperwork Reduction Act of 1995**

108. This document contains proposed new or modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. Public and agency comments are due 30 days after date of publication in the Federal Register. Comments should address: (a) 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; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) 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. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees." We note, however, that Section 213 of the Consolidated Appropriations Act 2000 provides that rules governing frequencies in the 746-806 MHz Band become effective immediately upon publication in the Federal Register without regard to certain sections of the Paperwork Reduction Act.<sup>237</sup> We are therefore not inviting comment on any information collections that concern frequencies in the 746-806 MHz Band.

## **C. Other Procedural Matters**

### **1. *Ex Parte* Presentations**

109. The rulemaking this Notice initiates shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.<sup>238</sup> Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented generally is required.<sup>239</sup> Other requirements pertaining to oral and written presentations are set forth in Section 1.1206(b) of the Commission's rules.<sup>240</sup>

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<sup>236</sup> In particular, this exemption extends to the requirements imposed by Chapter 6 of Title 5, United States Code, Section 3 of the Small Business Act (15 U.S.C. 632) and Section 3507 and 3512 of Title 44, United States Code. Consolidated Appropriations Act 2000, Pub. L. No. 106-113, 113 Stat. 2502, Appendix E, Sec. 213(a)(4)(A)-(B); *see* 145 Cong. Rec. H12493-94 (Nov. 17, 1999); 47 U.S.C.A. 337 note at Sec. 213(a)(4)(A)-(B).

<sup>237</sup> *Id.*

<sup>238</sup> 47 C.F.R. §§ 1.200 *et. seq.*

<sup>239</sup> *See* 47 C.F.R. § 1.1206(b)(2).

<sup>240</sup> 47 C.F.R. § 1.1206(b).

## 2. Comment Filing Procedures

110. Pursuant to Sections 1.415 and 1.419 of the Commission's rules,<sup>241</sup> interested parties may file comments and reply comments regarding the Notice on or before the dates indicated on the first page of this document. All filings related to this Notice of Proposed Rulemaking should refer to WT Docket No. 06-150, CC Docket No. 94-102, and WT Docket No. 01-309. Comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies.<sup>242</sup>

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the website for submitting comments.
  - ECFS filers must transmit one electronic copy of the comments for WT Docket No. 06-150, CC Docket No. 94-102, and WT Docket No. 01-309. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and WT Docket No. 06-150, CC Docket No. 94-102, and WT Docket No. 01-309. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov) and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.
- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Marlene H. Dortch, Office of the Secretary, Federal Communications Commission, 445 12<sup>th</sup> Street, S.W., Washington, DC, 20554. Parties who choose to file by paper should also send a copy of their comments to: Michael Rowan, Special Counsel, Spectrum & Competition Policy Division, Wireless Telecommunications Bureau, Federal Communications Commission, 445 12<sup>th</sup> Street, S.W., Portals I, Room 6315, Washington, DC, 20554; and Bill Stafford, Special Counsel, Spectrum & Competition Policy Division, Wireless Telecommunications Bureau, Federal Communications Commission, 445 12<sup>th</sup> Street, S.W., Portals I, Room 6221, Washington, DC, 20554.
  - The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, DC 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
  - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
  - U.S. Postal Service first-class, Express, and Priority mail should be addressed to 445 12<sup>th</sup> Street, S.W., Washington DC 20554.

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<sup>241</sup> 47 C.F.R. §§ 1.415, 1.419.

<sup>242</sup> See Electronic Filing of Documents in Rulemaking Proceedings, 63 FR 24121 (1998).



111. Parties shall serve one copy with the Commission's copy contractor, Best Copy and Printing, Inc. (BCPI), Portals II, Room CY-B402, 445 12<sup>th</sup> Street, S.W., Washington, D.C. 20554, (202) 488-5300, or via e-mail to [fcc@bcpiweb.com](mailto:fcc@bcpiweb.com).

112. Documents in WT Docket No. 06-150, CC Docket No. 94-102, and WT Docket No. 01-309 will be available for public inspection and copying during business hours at the FCC Reference Information Center, Portals II, Room CY-A257, 445 12<sup>th</sup> Street, S.W., Washington, D.C. 20554. The documents may also be purchased from BCPI, telephone (202) 488-5300, facsimile (202) 488-5563, TTY (202) 488-5562, e-mail [fcc@bcpiweb.com](mailto:fcc@bcpiweb.com).

### 3. Accessible Formats

113. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [FCC504@fcc.gov](mailto:FCC504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY). Contact the FCC to request reasonable accommodations for filing comments (accessible format documents, sign language interpreters, CARTS, etc.) by e-mail: [FCC504@fcc.gov](mailto:FCC504@fcc.gov); phone: 202-418-0530 (voice), 202-418-0432 (TTY).

## V. ORDERING CLAUSES

114. Accordingly, IT IS ORDERED, pursuant to sections 1, 2, 4(i), 5(c), 7, 10, 201, 202, 208, 214, 222(d)(4)(A)-(C), 222(f), 222(g), 222(h)(1)(A), 222(h)(4)-(5), 251(e)(3), 301, 302, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 332, 333, 336, 337, 614, 615, and 710 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 155(c), 157, 160, 201, 202, 208, 214, 222(d)(4)(A)-(C), 222(f), 222(g), 222(h)(1)(A), 222(h)(4)-(5), 251(e)(3), 301, 302, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 332, 333, 336, 337, 534, 535, and 610 that this NOTICE OF PROPOSED RULEMAKING, FOURTH FURTHER NOTICE OF PROPOSED RULEMAKING, AND SECOND FURTHER NOTICE OF PROPOSED RULEMAKING are hereby ADOPTED.

115. IT IS FURTHER ORDERED that pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments on the NOTICE OF PROPOSED RULEMAKING, FOURTH FURTHER NOTICE OF PROPOSED RULEMAKING, AND SECOND FURTHER NOTICE OF PROPOSED RULEMAKING on or before 30 days after publication in the Federal Register and reply comments on or before 60 days after publication in the Federal Register.

116. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of these Notices, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

## APPENDIX

## Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> the Federal Communications Commission (Commission) has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules considered in this Notice of Proposed Rulemaking, WT Docket No. 06-150, Fourth Further Notice of Proposed Rulemaking, CC Docket No. 94-102, and Second Further Notice of Proposed Rulemaking, WT Docket No. 01-309.<sup>2</sup> 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* provided on page one of this *Notice*. The Commission will send a copy of this *Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).<sup>3</sup> In addition, this *Notice* and IRFA (or summaries thereof) will be published in the Federal Register.<sup>4</sup>

2. Although Section 213 of the Consolidated Appropriations Act 2000 provides that the RFA shall not apply to the rules and competitive bidding procedures for frequencies in the 746-806 MHz Band,<sup>5</sup> the Commission believes that it would serve the public interest to analyze the possible significant economic impact of the proposed policy and rule changes in this band on small entities. Accordingly, this IRFA contains an analysis of this impact in connection with all spectrum that falls within the scope of this *Notice*, including spectrum in the 746-806 MHz Band.

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

3. In the *Notice*, the Commission seeks comment on possible changes to the rules governing wireless licenses in the 698-746, 747-762, and 777-792 MHz spectrum bands (herein, the “700 MHz Band”), spectrum that does not include the Upper 700 MHz Guard Bands nor the portions of the Upper 700 MHz Band that have been allocated for public safety services. These spectrum bands in the 698-806 MHz band have been allocated to new fixed, mobile, and broadcast services. Under the Digital Television and Public Safety Act of 2005 (DTV Act), the Commission is required to commence an auction of previously unauctioned spectrum in the 700 MHz Band no later than January 28, 2008. In response to the changes made by the DTV Act affecting the 700 MHz Band, and because more than four years have passed since the Commission previously established band plans and service rules for this spectrum, the *Notice* revisits some of the Commission’s earlier decisions regarding the service rules for licenses in this band.

4. Specifically, the *Notice* seeks comment on whether there is a need to revise the size of the geographic service areas for the remaining unauctioned spectrum in the band, including the possibility of using smaller areas, such as the 734 Cellular Market Areas (CMAs) composed of Metropolitan Statistical

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<sup>1</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>2</sup> Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, *Notice of Proposed Rulemaking*; Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Fourth Further Notice of Proposed Rulemaking*; Section 68.4(a) of the Commission’s Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, *Second Further Notice of Proposed Rulemaking*; FCC 06-114, (rel. Aug. 10, 2006) (*Notice*).

<sup>3</sup> See 5 U.S.C. § 603(a).

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

<sup>5</sup> In particular, this exemption extends to the requirements imposed by Chapter 6 of Title 5, United States Code, Section 3 of the Small Business Act (15 U.S.C. 632) and Section 3507 and 3512 of Title 44, United States Code. Consolidated Appropriations Act 2000, Pub. L. No. 106-113, 113 Stat. 2502, Appendix E, Sec. 213(a)(4)(A)-(B); see 145 Cong. Rec. H12493-94 (Nov. 17, 1999); 47 U.S.C.A. 337 note at Sec. 213(a)(4)(A)-(B).

Areas (MSAs) and Rural Service Areas (RSAs). The *Notice* then seeks comment on whether to modify the size of certain 700 MHz Band spectrum blocks, including the possibility of dividing Block D in the Upper 700 MHz Band into smaller blocks. The *Notice* also requests input on whether to add or revise performance requirements for unauctioned spectrum, including such alternatives as specific construction benchmarks. In addition, the *Notice* seeks comment on options that may facilitate access to spectrum in the secondary market for all licenses in the 700 MHz Band, as well as on policies the Commission could implement to promote service to tribal lands.

5. The *Notice* then seeks comment on several additional issues relating to both auctioned and unauctioned licenses in the 700 MHz Band. For these licenses, comment is sought on whether to clarify or modify the rules and criteria for license renewal. The *Notice* also seeks comment on whether to revise and possibly extend the term of licenses, as well as whether to modify the existing power limits in both the Upper 700 MHz and the Lower 700 MHz Bands. In light of the importance of public safety operations in the 700 MHz Band, the Commission states that it would take no action that would cause harmful interference to public safety licensees in the band.

6. Finally, the *Notice* requests comment on the tentative conclusion that services provided by licensees in the 700 MHz Band, and in other bands subject to Part 27 of the rules, should be subject to E911 and hearing aid-compatibility requirements to the same extent that such services would be covered if provided in other bands. It then seeks comment on how to modify Commission rules to ensure that they include all similar wireless services, herein referred to as Wireless Radio Services (WRS).

## **B. Legal Basis**

7. The potential actions about which comment is sought in this *Notice* would be authorized pursuant to the authority contained in Sections 1, 2, 4(i), 5(c), 7, 10, 201, 202, 208, 214, 222(d)(4)(A)-(C), 222(f), 222(g), 222(h)(1)(A), 222(h)(4)-(5), 251(e)(3), 301, 302, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 332, 333, 336, 337, 614, 615, and 710 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 155(c), 157, 160, 201, 202, 208, 214, 222(d)(4)(A)-(C), 222(f), 222(g), 222(h)(1)(A), 222(h)(4)-(5), 251(e)(3), 301, 302, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 332, 333, 336, 337, 534, 535, and 610.

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

8. 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>6</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>7</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>8</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>9</sup>

9. This *Notice* could result in rule changes that, if adopted, would create new opportunities and obligations for Commission wireless licensees. Under the *Notice*, any of the changes to the

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<sup>6</sup> 5 U.S.C. § 604(a)(3).

<sup>7</sup> 5 U.S.C. § 601(6).

<sup>8</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, 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.”

<sup>9</sup> 15 U.S.C. § 632.

Commission's rules which may occur as a result of the *Notice* would be limited to Upper 700 MHz and Lower 700 MHz Band licensees in the 698-746, 747-762, and 777-792 MHz spectrum bands, with one exception. In the *Notice*, the Commission seeks comment on the tentative conclusion that services provided in the 700 MHz Band, and in other bands subject to Part 27, should be subject to requirements concerning 911/E911 and hearing aid-compatible handsets to the extent they meet certain criteria. The *Notice* then seeks comment on how to modify Commission rules to ensure that they include all similar WRS. Thus, because such revisions potentially could affect small entity licensees holding licenses in many wireless services (and not just bands which are subject to Part 27 of the Commission's rules), this discussion includes estimates of the number of small entities in each of the categories of WRS identified below.

10. Since this rulemaking proceeding applies to multiple services, this IRFA analyzes the number of small entities affected on a service-by-service basis. When identifying small entities that could be affected by the Commission's new rules, this IRFA provides information describing auctions results, including the number of small entities that were winning bidders. However, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily reflect the total number of small entities currently in a particular service. The Commission does not generally require that licensees later provide business size information, except in the context of an assignment or transfer of control application where unjust enrichment issues are implicated. Consequently, to assist the Commission in analyzing the total number of potentially affected small entities, the Commission requests commenters to estimate the number of small entities that may be affected by any rule changes that might result from this *Notice*.

#### ***Part 27 Miscellaneous Wireless Communications Services (MWCS)***

11. **Wireless Communications Services.** This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses in the 2305-2320 MHz and 2345-2360 MHz bands. The Commission defined "small business" for the wireless communications services (WCS) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a "very small business" as an entity with average gross revenues of \$15 million for each of the three preceding years.<sup>10</sup> The SBA has approved these definitions.<sup>11</sup> The Commission auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity.

12. **700 MHz Guard Band Licenses.** In the *700 MHz Guard Band Order*, the Commission adopted size standards for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>12</sup> A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.<sup>13</sup> Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.<sup>14</sup> SBA approval of these

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<sup>10</sup> Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS), *Report and Order*, 12 FCC Rcd 10785, 10879 ¶ 194 (1997).

<sup>11</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

<sup>12</sup> See Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299 (2000).

<sup>13</sup> *Id.* at 5343 ¶ 108.

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

definitions is not required.<sup>15</sup> An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000.<sup>16</sup> Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.<sup>17</sup>

13. **Upper 700 MHz Band Licenses.** The Commission released a *Report and Order* authorizing service in the Upper 700 MHz band.<sup>18</sup> An auction for these licenses, previously scheduled for January 13, 2003, was postponed.<sup>19</sup>

14. **Lower 700 MHz Band Licenses.** The Commission adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.<sup>20</sup> The Commission has defined a small business as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.<sup>21</sup> A very small business is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.<sup>22</sup> Additionally, the Lower 700 MHz Band has a third category of small business status that may be claimed for Metropolitan/Rural Service Area (MSA/RSA) licenses. The third category is entrepreneur, which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.<sup>23</sup> The SBA has approved these small size standards.<sup>24</sup> An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses.<sup>25</sup> A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: 5 EAG licenses

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<sup>15</sup> *Id.* At 5343 ¶ 108 n.246 (for the 746-764 MHz and 776-794 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain Small Business Administration approval before adopting small business size standards).

<sup>16</sup> See “700 MHz Guard Bands Auction Closes: Winning Bidders Announced,” *Public Notice*, 15 FCC Rcd 18026 (2000).

<sup>17</sup> See “700 MHz Guard Bands Auctions Closes: Winning Bidders Announced,” *Public Notice*, 16 FCC Rcd 4590 (WTB 2001).

<sup>18</sup> Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, *Second Memorandum Opinion and Order*, 16 FCC Rcd 1239 (2001).

<sup>19</sup> See “Auction of Licenses for 747-762 and 777-792 MHz Bands (Auction No. 31) Is Rescheduled,” *Public Notice*, 16 FCC Rcd 13079 (WTB 2003).

<sup>20</sup> See Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022 (2002).

<sup>21</sup> *Id.* at 1087-88 ¶ 172.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.* at 1088 ¶ 173.

<sup>24</sup> See Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999.

<sup>25</sup> See “Lower 700 MHz Band Auction Closes,” *Public Notice*, 17 FCC Rcd 17272 (WTB 2002).

and 476 CMA licenses.<sup>26</sup> Seventeen winning bidders claimed small or very small business status and won sixty licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.<sup>27</sup>

15. **Government Transfer Bands.** The Commission adopted small business size standards for the unpaired 1390-1392 MHz, 1670-1675 MHz, and the paired 1392-1395 MHz and 1432-1435 MHz bands.<sup>28</sup> Specifically, with respect to these bands, the Commission defined an entity with average annual gross revenues for the three preceding years not exceeding \$40 million as a “small business,” and an entity with average annual gross revenues for the three preceding years not exceeding \$15 million as a “very small business.”<sup>29</sup> Correspondingly, the Commission adopted a bidding credit of 15 percent for “small businesses” and a bidding credit of 25 percent for “very small businesses.”<sup>30</sup> This bidding credit structure was found to have been consistent with the Commission’s schedule of bidding credits, which may be found at Section 1.2110(f)(2) of the Commission’s rules.<sup>31</sup> The Commission found that these two definitions will provide a variety of businesses seeking to provide a variety of services with opportunities to participate in the auction of licenses for this spectrum and will afford such licensees, who may have varying capital costs, substantial flexibility for the provision of services.<sup>32</sup> The Commission noted that it had long recognized that bidding preferences for qualifying bidders provides such bidders with an opportunity to compete successfully against large, well-financed entities.<sup>33</sup> The Commission also noted that it had found that the use of tiered or graduated small business definitions is useful in furthering its mandate under Section 309(j) to promote opportunities for and disseminate licenses to a wide variety of applicants.<sup>34</sup> An auction for one license in the 1670-1674 MHz band commenced on April 30, 2003 and closed the same day. One license was awarded. The winning bidder was not a small entity.

<sup>26</sup> See “Lower 700 MHz Band Auction Closes,” *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

<sup>27</sup> *Id.*

<sup>28</sup> See Amendments to Parts 1, 2, 27 and 90 of the Commission’s Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, AND 2385-2390 MHz Government Transfer Bands, 17 FCC Rcd 9980 (2002) (*Government Transfer Bands Service Rules Report and Order*).

<sup>29</sup> See *Service Rules Notice*, 17 FCC Rcd at 2550-51 ¶¶ 144-146. To be consistent with the size standard of “very small business” proposed for the 1427-1432 MHz band for those entities with average gross revenues for the three preceding years not exceeding \$3 million, the *Service Rules Notice* proposed to use the terms “entrepreneur” and “small business” to define entities with average gross revenues for the three preceding years not exceeding \$40 million and \$15 million, respectively. Because the Commission is not adopting small business size standards for the 1427-1432 MHz band, it instead uses the terms “small business” and “very small business” to define entities with average gross revenues for the three preceding years not exceeding \$40 million and \$15 million, respectively.

<sup>30</sup> Such bidding credits are codified for the unpaired 1390-1392 MHz, paired 1392-1395 MHz, and the paired 1432-1435 MHz bands in 47 C.F.R. § 27.807. Such bidding credits are codified for the unpaired 1670-1675 MHz band in 47 C.F.R. § 27.906.

<sup>31</sup> In the *Part 1 Third Report and Order*, the Commission adopted a standard schedule of bidding credits, the levels of which were developed based on its 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>32</sup> See *Service Rules Notice*, 17 FCC Rcd at 2550-51 ¶ 145.

<sup>33</sup> See, e.g., Revision of Part 22 and Part 90 of the Commission’s Rules to Facilitate Future Development of Paging Systems; Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, WT Docket No. 96-18, PR Docket No. 93-253, *Memorandum Opinion and Order on Reconsideration and Third Report and Order*, 14 FCC Rcd 10030, 10091 ¶ 112 (1999).

<sup>34</sup> 47 U.S.C. § 309(j)(3)(B), (4)(C)-(D). The Commission will also not adopt special preferences for entities owned by minorities or women, and rural telephone companies. The Commission did not receive any comments on this issue, and it does not have an adequate record to support such special provisions under the current standards of judicial review. See *Adarand Constructors v. Peña*, 515 U.S. 200 (1995) (requiring a strict scrutiny standard of

(continued....)

16. **Advanced Wireless Services.** In the *AWS-1 Report and Order*, the Commission adopted rules that affect applicants who wish to provide service in the 1710-1755 MHz and 2110-2155 MHz bands.<sup>35</sup> The Commission did not know precisely the type of service that a licensee in these bands might seek to provide. Nonetheless, the Commission anticipated that the services that will be deployed in these bands may have capital requirements comparable to those in the broadband Personal Communications Service (PCS), and that the licensees in these bands will be presented with issues and costs similar to those presented to broadband PCS licensees. Further, at the time the broadband PCS service was established, it was similarly anticipated that it would facilitate the introduction of a new generation of service. Therefore, the *AWS-1 Report and Order* adopts the same small business size standards that the Commission adopted for the broadband PCS service. In particular, the *AWS-1 Report and Order* defines a “small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a “very small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. The *AWS-1 Report and Order* also provides small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent.

17. **Broadband Radio Service (formerly Multipoint Distribution Service) and Educational Broadband Service (formerly Instructional Television Fixed Service).** Multichannel Multipoint Distribution Service (MMDS) systems, often referred to as “wireless cable,” transmit video programming to subscribers using the microwave frequencies of the Multipoint Distribution Service (MDS) and Instructional Television Fixed Service (ITFS).<sup>36</sup> In its recently issued *BRS/EBS Report and Order* in WT Docket No. 03-66, the Commission comprehensively reviewed its policies and rules relating to the ITFS and MDS services, and replaced the MDS with the Broadband Radio Service and ITFS with the Educational Broadband Service in a new band plan at 2495-2690 MHz.<sup>37</sup> In connection with the 1996 MDS auction, the Commission defined “small business” as an entity that, together with its affiliates, has average gross annual revenues that are not more than \$40 million for the preceding three calendar years.<sup>38</sup> The SBA has approved of this standard.<sup>39</sup> The MDS auction resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs).<sup>40</sup> Of the 67 auction winners, 61 claimed status as a small business. At this time, the Commission estimates that of the 61 small business MDS

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review for government 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>35</sup> Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25162 (2003) (*AWS-1 Report and Order*).

<sup>36</sup> 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 and Implementation of Section 309(j) of the Communications Act – Competitive Bidding, MM Docket No. 94-131 and PP Docket No. 93-253, *Report and Order*, 10 FCC Rcd 9589, 9593 ¶ 7 (1995) (*MDS Auction R&O*).

<sup>37</sup> See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, *Report and Order and Further Notice of Proposed Rulemaking*, FCC 03-145 (rel. July 29, 2004) (*BRS/EBS Report and Order*). As the Commission noted in the *Further Notice*, there are unique policies associated with ITFS licensees’ educational purposes, and the services have already developed their own approach to excess capacity leasing. See *Further Notice* at ¶¶ 307-08.

<sup>38</sup> 47 C.F.R. § 21.961(b)(1).

<sup>39</sup> See Letter to Margaret Wiener, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Bureau, from Gary Jackson, Assistant Administrator for Size Standards, Small Business Administration, dated March 20, 2003 (noting approval of \$40 million size standard for MDS auction).

<sup>40</sup> Basic Trading Areas (BTAs) were designed by Rand McNally and are the geographic areas by which MDS was auctioned and authorized. See *MDS Auction R&O*, 10 FCC Rcd at 9608 ¶ 34.

auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent MDS licensees that have gross revenues that are not more than \$40 million and are thus considered small entities.<sup>41</sup>

18. In addition, the SBA has developed a small business size standard for Cable and Other Program Distribution, which is: all such firms having \$13.5 million or less in annual receipts.<sup>42</sup> According to Census Bureau data for 2002, there were a total of 1,191 firms in this category that operated for the entire year.<sup>43</sup> Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.<sup>44</sup> Thus, under this size standard, the majority of firms can be considered small.

### ***Additional Wireless Radio Services (WRS)***

19. **Cellular Licensees.** The SBA has developed a small business size standard for small businesses in the category “Cellular and Other Wireless Telecommunications.”<sup>45</sup> Under that SBA category, a business is small if it has 1,500 or fewer employees.<sup>46</sup> For the census category of “Cellular and Other Wireless Telecommunications,” Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.<sup>47</sup> Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.<sup>48</sup> Thus, under this category and size standard, the majority of firms can be considered small.

20. **220 MHz Radio Service – Phase I Licensees.** The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz Band. The Commission has not developed a definition of small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, the Commission applies the small business size standard under the SBA rules applicable to “Cellular and Other Wireless Telecommunications” companies. This category provides that a small business is a wireless company employing no more than 1,500 persons.<sup>49</sup> For the census category of “Cellular and Other Wireless Telecommunications,” Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.<sup>50</sup> Of this total, 1,378

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<sup>41</sup> 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA’s small business size standard for “other telecommunications” (annual receipts of \$12.5 million or less). See 13 C.F.R. § 121.201, NAICS code 517910.

<sup>42</sup> 13 C.F.R. § 121.201, NAICS code 517510.

<sup>43</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

<sup>44</sup> *Id.* An additional 61 firms had annual receipts of \$25 million or more.

<sup>45</sup> 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517212.

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

<sup>47</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).

<sup>48</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

<sup>49</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>50</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).



firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.<sup>51</sup> Thus, under this category and size standard, the majority of firms can be considered small.

21. **220 MHz Radio Service – Phase II Licensees.** The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is subject to spectrum auctions. In the *220 MHz Third Report and Order*, the Commission adopted a small business size standard for defining “small” and “very small” businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>52</sup> This small business standard indicates that a “small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.<sup>53</sup> A “very small business” is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed \$3 million for the preceding three years.<sup>54</sup> The SBA has approved these small size standards.<sup>55</sup> Auctions of Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998.<sup>56</sup> In the first auction, 908 licenses were auctioned in three different-sized geographic areas: three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold.<sup>57</sup> Thirty-nine small businesses won 373 licenses in the first 220 MHz auction. A second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.<sup>58</sup> A third auction included four licenses: 2 BEA licenses and 2 EAG licenses in the 220 MHz Service. No small or very small business won any of these licenses.<sup>59</sup>

22. **Paging.** In the *Paging Second Report and Order*, the Commission adopted a size standard for “small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>60</sup> A small business is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.<sup>61</sup> The SBA has approved this definition.<sup>62</sup> An auction of Metropolitan Economic Area (MEA) licenses commenced on February 24, 2000, and closed on March 2, 2000. Of the 2,499 licenses

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<sup>51</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

<sup>52</sup> Amendment of Part 90 of the Commission’s Rules to Provide For the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, *Third Report and Order*, 12 FCC Rcd 10943, 11068-70 ¶¶ 291-295 (1997).

<sup>53</sup> *Id.* at 11068 ¶ 291.

<sup>54</sup> *Id.*

<sup>55</sup> See Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.

<sup>56</sup> See generally “220 MHz Service Auction Closes,” *Public Notice*, 14 FCC Rcd 605 (WTB 1998).

<sup>57</sup> See “FCC Announces It is Prepared to Grant 654 Phase II 220 MHz Licenses After Final Payment is Made,” *Public Notice*, 14 FCC Rcd 1085 (WTB 1999).

<sup>58</sup> See “Phase II 220 MHz Service Spectrum Auction Closes,” *Public Notice*, 14 FCC Rcd 11218 (WTB 1999).

<sup>59</sup> See “Multi-Radio Service Auction Closes,” *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

<sup>60</sup> Revision of Part 22 and Part 90 of the Commission’s Rules to Facilitate Future Development of Paging Systems, *Second Report and Order*, 12 FCC Rcd 2732, 2811-2812 ¶¶ 178-181 (*Paging Second Report and Order*); see also Revision of Part 22 and Part 90 of the Commission’s Rules to Facilitate Future Development of Paging Systems, *Memorandum Opinion and Order on Reconsideration*, 14 FCC Rcd 10030, 10085-10088 ¶¶ 98-107 (1999).

<sup>61</sup> *Paging Second Report and Order*, 12 FCC Rcd at 2811 ¶ 179.

<sup>62</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

auctioned, 985 were sold.<sup>63</sup> Fifty-seven companies claiming small business status won 440 licenses.<sup>64</sup> An auction of MEA and Economic Area (EA) licenses commenced on October 30, 2001, and closed on December 5, 2001. Of the 15,514 licenses auctioned, 5,323 were sold.<sup>65</sup> 132 companies claiming small business status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs commenced on May 13, 2003, and closed on May 28, 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses.<sup>66</sup> Currently, there are approximately 24,000 Private Paging site-specific licenses and 74,000 Common Carrier Paging licenses. According to the Commission's *Trends in Telephone Service*, 375 such carriers reported that they were engaged in the provision of either paging or "messaging service."<sup>67</sup> Of these, the Commission estimates that 370 are small, under the SBA-approved small business size standard.<sup>68</sup> The Commission estimates that the majority of private and common carrier paging providers would qualify as small entities under the SBA definition.

**23. Broadband Personal Communications Service.** The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission has created a small business size standard for Blocks C and F as an entity that has average gross revenues of less than \$40 million in the three previous calendar years.<sup>69</sup> For Block F, an additional small business size standard for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>70</sup> These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.<sup>71</sup> No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auctions. A total of 93 "small" and "very small" business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.<sup>72</sup> On March 23, 1999, the Commission reaucted 155 C, D, E, and F Block licenses; there were 113 small business winning bidders.<sup>73</sup> On January 26, 2001, the Commission completed the auction of 422 C and F PCS licenses in Auction 35.<sup>74</sup> Of the 35 winning bidders in this auction, 29 qualified as "small" or "very small" businesses. Subsequent events concerning Auction 35,

<sup>63</sup> See "929 and 931 MHz Paging Auction Closes," *Public Notice*, 15 FCC Rcd 4858 (WTB 2000).

<sup>64</sup> See *id.*

<sup>65</sup> See "Lower and Upper Paging Band Auction Closes," *Public Notice*, 16 FCC Rcd 21821 (WTB 2002).

<sup>66</sup> See "Lower and Upper Paging Bands Auction Closes," *Public Notice*, 18 FCC Rcd 11154 (WTB 2003).

<sup>67</sup> See *Trends in Telephone Service*, Industry Analysis Division, Wireline Competition Bureau, Table 5.3 (Number of Telecommunications Service Providers by Size of Business) (June 2005).

<sup>68</sup> 13 C.F.R. § 121.201, NAICS code 517211.

<sup>69</sup> See Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7850-7852 ¶¶ 57-60 (1996); see also 47 C.F.R. § 24.720(b).

<sup>70</sup> See Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7852 ¶ 60.

<sup>71</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

<sup>72</sup> FCC News, "Broadband PCS, D, E and F Block Auction Closes," No. 71744 (rel. January 14, 1997).

<sup>73</sup> See "C, D, E, and F Block Broadband PCS Auction Closes," *Public Notice*, 14 FCC Rcd 6688 (WTB 1999).

<sup>74</sup> See "C and F Block Broadband PCS Auction Closes; Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 2339 (2001).

including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant.

24. **Narrowband Personal Communications Service.** The Commission held an auction for Narrowband Personal Communications Service (PCS) licenses that commenced on July 25, 1994, and closed on July 29, 1994. A second commenced on October 26, 1994 and closed on November 8, 1994. For purposes of the first two Narrowband PCS auctions, “small businesses” were entities with average gross revenues for the prior three calendar years of \$40 million or less.<sup>75</sup> Through these auctions, the Commission awarded a total of forty-one licenses, 11 of which were obtained by four small businesses.<sup>76</sup> To ensure meaningful participation by small business entities in future auctions, the Commission adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order*.<sup>77</sup> A “small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$40 million.<sup>78</sup> A “very small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$15 million.<sup>79</sup> The SBA has approved these small business size standards.<sup>80</sup> A third auction commenced on October 3, 2001 and closed on October 16, 2001. Here, five bidders won 317 (MTA and nationwide) licenses.<sup>81</sup> Three of these claimed status as a small or very small entity and won 311 licenses.

25. **Specialized Mobile Radio.** The Commission awards “small entity” bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than \$15 million in each of the three previous calendar years.<sup>82</sup> The Commission awards “very small entity” bidding credits to firms that had revenues of no more than \$3 million in each of the three previous calendar years.<sup>83</sup> The SBA has approved these small business size standards for the 900 MHz Service.<sup>84</sup> The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 1996. Sixty bidders claiming that they qualified as small businesses under the \$15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800

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<sup>75</sup> Implementation of Section 309(j) of the Communications Act – Competitive Bidding Narrowband PCS, *Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, 10 FCC Rcd 175, 196 ¶ 46 (1994).

<sup>76</sup> See “Announcing the High Bidders in the Auction of ten Nationwide Narrowband PCS Licenses, Winning Bids Total \$617,006,674,” *Public Notice*, PNWL 94-004 (rel. Aug. 2, 1994); “Announcing the High Bidders in the Auction of 30 Regional Narrowband PCS Licenses; Winning Bids Total \$490,901,787,” *Public Notice*, PNWL 94-27 (rel. Nov. 9, 1994).

<sup>77</sup> Amendment of the Commission’s Rules to Establish New Personal Communications Services, Narrowband PCS, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 15 FCC Rcd 10456, 10476 ¶ 40 (2000).

<sup>78</sup> *Id.*

<sup>79</sup> *Id.*

<sup>80</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

<sup>81</sup> See “Narrowband PCS Auction Closes,” *Public Notice*, 16 FCC Rcd 18663 (WTB 2001).

<sup>82</sup> 47 C.F.R. § 90.814(b)(1).

<sup>83</sup> *Id.*

<sup>84</sup> See Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999. We note that, although a request was also sent to the SBA requesting approval for the small business size standard for 800 MHz, approval is still pending.

MHz SMR auction for the upper 200 channels began on October 28, 1997, and was completed on December 8, 1997. Ten bidders claiming that they qualified as small businesses under the \$15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band.<sup>85</sup> A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.<sup>86</sup>

26. The auction of the 1,050 800 MHz SMR geographic area licenses for the General Category channels began on August 16, 2000, and was completed on September 1, 2000. Eleven bidders won 108 geographic area licenses for the General Category channels in the 800 MHz SMR band qualified as small businesses under the \$15 million size standard. In an auction completed on December 5, 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were sold. Of the 22 winning bidders, 19 claimed “small business” status and won 129 licenses. Thus, combining all three auctions, 40 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small business.

27. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than \$15 million. One firm has over \$15 million in revenues. The Commission assumes, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities, as that small business size standard is established by the SBA.

28. **Private Land Mobile Radio.** Private Land Mobile Radio (PLMR) systems serve an essential role in a range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories, and are often used in support of the licensee’s primary (non-telecommunications) business operations. For the purpose of determining whether a licensee of a PLMR system is a small business as defined by the SBA, the Commission could use the definition for “Cellular and Other Wireless Telecommunications.” This definition provides that a small entity is any such entity employing no more than 1,500 persons.<sup>87</sup> The Commission does not require PLMR licensees to disclose information about number of employees, so the Commission does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition. Moreover, because PLMR licensees generally are not in the business of providing cellular services but instead use the licensed facilities in support of other business activities, the Commission notes that the current Census numbers are likely overbroad. We also note that, for some such licensees, it might be appropriate to assess PLMR licensees under the standards applied to the particular industry subsector to which the licensee belongs.<sup>88</sup>

29. **Fixed Microwave Services.** Fixed microwave services include common carrier,<sup>89</sup> private-operational fixed,<sup>90</sup> and broadcast auxiliary radio services.<sup>91</sup> Currently, there are approximately

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<sup>85</sup> See “Correction to Public Notice DA 96-586 ‘FCC Announces Winning Bidders in the Auction of 1020 Licenses to Provide 900 MHz SMR in Major Trading Areas,’” *Public Notice*, 18 FCC Rcd 18367 (WTB 1996).

<sup>86</sup> See “Multi-Radio Service Auction Closes,” *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

<sup>87</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>88</sup> See generally 13 C.F.R. § 121.201.

<sup>89</sup> 47 C.F.R. §§ 101 *et seq.* (formerly, part 21 of the Commission’s Rules).

<sup>90</sup> Persons eligible under parts 80 and 90 of the Commission’s rules can use Private Operational-Fixed Microwave services. See generally 47 C.F.R. parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee’s commercial, industrial, or safety operations.

22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not yet defined a small business with respect to microwave services. For purposes of this analysis, the Commission will use the SBA's definition applicable to "Cellular and Other Wireless Telecommunications" companies—that is, an entity with no more than 1,500 persons.<sup>92</sup> The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are 22,015 or fewer small common carrier fixed licensees and 61,670 or fewer small private operational-fixed licensees and small broadcast auxiliary radio licensees in the microwave services that may be affected by the rules and policies adopted herein. The Commission notes, however, that the common carrier microwave fixed licensee category includes some large entities.

30. **39 GHz Service.** The Commission defines "small entity" for 39 GHz licenses as an entity that has average gross revenues of less than \$40 million in the three previous calendar years.<sup>93</sup> "Very small business" is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>94</sup> The SBA has approved these definitions.<sup>95</sup> The auction of the 2,173 39 GHz licenses began on April 12, 2000, and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses.

31. **Local Multipoint Distribution Service.** An auction of the 986 Local Multipoint Distribution Service (LMDS) licenses began on February 18, 1998, and closed on March 25, 1998. The Commission defined "small entity" for LMDS licenses as an entity that has average gross revenues of less than \$40 million in the three previous calendar years.<sup>96</sup> An additional classification for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>97</sup> These regulations defining "small entity" in the context of LMDS auctions have been approved by the SBA.<sup>98</sup> There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and 387 B Block licenses. On March 27,

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<sup>91</sup> Auxiliary Microwave Service is governed by part 74 of Title 47 of the Commission's Rules. *See* 47 C.F.R. Part 74. Available to licensees of broadcast stations and to broadcast and cable network entities, broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile TV pickups, which relay signals from a remote location back to the studio.

<sup>92</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>93</sup> *See* Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Band, *Report and Order*, 12 FCC Rcd 18600 (1997).

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

<sup>95</sup> *See* Letter to Margaret Wiener, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Hector Barreto, Administrator, Small Business Administration, dated January 18, 2002.

<sup>96</sup> *See* Rulemaking to Amend Parts 1, 2, 21, 25, of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, Reallocate the 29.5-30.5 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rule Making*, 12 FCC Rcd 12545, 12689-90 ¶ 348 (1997).

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

<sup>98</sup> *See* Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.

1999, the Commission re-auctioned 161 licenses; there were 32 small and very small business winning bidders that won 119 licenses.

32. **218-219 MHz Service.** The first auction of 218-219 MHz (previously referred to as the Interactive and Video Data Service or IVDS) spectrum resulted in 178 entities winning licenses for 594 Metropolitan Statistical Areas (MSAs).<sup>99</sup> Of the 594 licenses, 567 were won by 167 entities qualifying as a small business. For that auction, the Commission defined a small business as an entity that, together with its affiliates, 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>100</sup> In the *218-219 MHz Report and Order and Memorandum Opinion and Order*, the Commission defined a small business as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.<sup>101</sup> A very small business is defined as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its affiliates, has average annual gross revenues not exceeding \$3 million for the preceding three years.<sup>102</sup> The SBA has approved of these definitions.<sup>103</sup> At this time, the Commission cannot estimate the number of licenses that will be won by entities qualifying as small or very small businesses under its rules in future auctions of 218-219 MHz spectrum. Given the success of small businesses in the previous auction, and the prevalence of small businesses in the subscription television services and message communications industries, the Commission assumes for purposes of this analysis that in future auctions, many, and perhaps all, of the licenses may be awarded to small businesses.

33. **Location and Monitoring Service.** Multilateration Location and Monitoring Service (LMS) systems use non-voice radio techniques to determine the location and status of mobile radio units. For purposes of auctioning LMS licenses, the Commission has defined “small business” as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$15 million.<sup>104</sup> A “very small business” is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$3 million.<sup>105</sup> These definitions have been approved by the SBA.<sup>106</sup> An auction for multilateration LMS licenses commenced on February 23, 1999, and closed on March 5, 1999. Of the 528 licenses auctioned, 289 licenses were sold to four small businesses. The Commission cannot accurately predict the number of remaining licenses that could be awarded to small entities in future LMS auctions. In addition, there are numerous site-by-site non-multilateration licensees, and the Commission does not know how many of these providers have annual revenues of no more than \$15 million. The

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<sup>99</sup> See “Interactive Video and Data Service (IVDS) Applications Accepted for Filing,” *Public Notice*, 9 FCC Rcd 6227 (1994).

<sup>100</sup> Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *Fourth Report and Order*, 9 FCC Rcd 2330 (1994).

<sup>101</sup> Amendment of Part 95 of the Commission’s Rules to Provide Regulatory Flexibility in the 218-219 MHz Service, *Report and Order and Memorandum Opinion and Order*, 15 FCC Rcd 1497 (1999).

<sup>102</sup> *Id.*

<sup>103</sup> See Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.

<sup>104</sup> Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, *Second Report and Order*, 13 FCC Rcd 15182, 15192 ¶ 20 (1998); see also 47 C.F.R. § 90.1103

<sup>105</sup> Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, *Second Report and Order*, 13 FCC Rcd at 15192 ¶ 20; see also 47 C.F.R. § 90.1103.

<sup>106</sup> See Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated February 22, 1999.

Commission assumes, for purposes of this analysis, that all of these licenses are held by small entities, as that small business size standard is established by the SBA.

34. **Rural Radiotelephone Service.** The Commission uses the SBA definition applicable to cellular and other wireless telecommunication companies, *i.e.*, an entity employing no more than 1,500 persons.<sup>107</sup> There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies adopted herein.

35. **Air-Ground Radiotelephone Service.** The Commission uses the SBA definition applicable to cellular and other wireless telecommunication companies, *i.e.*, an entity employing no more than 1,500 persons.<sup>108</sup> There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and the Commission estimates that almost all of them qualify as small entities under the SBA definition.

36. **Offshore Radiotelephone Service.** This service operates on several ultra high frequency (UHF) TV broadcast channels that are not used for TV broadcasting in the coastal area of the states bordering the Gulf of Mexico. At present, there are approximately 55 licensees in this service. The Commission uses the SBA definition applicable to cellular and other wireless telecommunication companies, *i.e.*, an entity employing no more than 1,500 persons.<sup>109</sup> The Commission is unable at this time to estimate the number of licensees that would qualify as small entities under the SBA definition. The Commission assumes, for purposes of this analysis, that all of the 55 licensees are small entities, as that term is defined by the SBA.

37. **Multiple Address Systems.** Entities using Multiple Address Systems (MAS) spectrum, in general, fall into two categories: (1) those using the spectrum for profit-based uses, and (2) those using the spectrum for private internal uses. With respect to the first category, the Commission defines “small entity” for MAS licenses as an entity that has average gross revenues of less than \$15 million in the three previous calendar years.<sup>110</sup> “Very small business” is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$3 million for the preceding three calendar years.<sup>111</sup> The SBA has approved of these definitions.<sup>112</sup> The majority of these entities will most likely be licensed in bands where the Commission has implemented a geographic area licensing approach that would require the use of competitive bidding procedures to resolve mutually exclusive applications. The Commission’s licensing database indicates that, as of January 20, 1999, there were a total of 8,670 MAS station authorizations. Of these, 260 authorizations were associated with common carrier service. In addition, an auction for 5,104 MAS licenses in 176 EAs began November 14, 2001, and closed on November 27, 2001.<sup>113</sup> Seven winning bidders claimed status as small or very small businesses and won 611 licenses.

38. With respect to the second category, which consists of entities that use, or seek to use, MAS spectrum to accommodate their own internal communications needs, MAS serves an essential role in a range of industrial, safety, business, and land transportation activities. MAS radios are used by companies of all sizes, operating in virtually all U.S. business categories, and by all types of public safety entities. For the majority of private internal users, the definitions developed by the SBA would be more

<sup>107</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

<sup>110</sup> See Amendment of the Commission’s Rules Regarding Multiple Address Systems, *Report and Order*, 15 FCC Rcd 11956, 12008 ¶ 123 (2000).

<sup>111</sup> *Id.*

<sup>112</sup> See Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated June 4, 1999.

<sup>113</sup> See “Multiple Address Systems Spectrum Auction Closes,” *Public Notice*, 16 FCC Rcd 21011 (2001).

appropriate. The applicable definition of small entity in this instance appears to be the “Cellular and Other Wireless Telecommunications” definition under the SBA rules. This definition provides that a small entity is any entity employing no more than 1,500 persons.<sup>114</sup> The Commission’s licensing database indicates that, as of January 20, 1999, of the 8,670 total MAS station authorizations, 8,410 authorizations were for private radio service, and of these, 1,433 were for private land mobile radio service.

39. **Incumbent 24 GHz Licensees.** The rules at issue could affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. The Commission did not develop a definition of small entities applicable to existing licensees in the 24 GHz band. Therefore, the applicable definition of small entity is the definition under the SBA rules for “Cellular and Other Wireless Telecommunications.” This definition provides that a small entity is any entity employing no more than 1,500 persons.<sup>115</sup> The Commission believes that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent<sup>116</sup> and TRW, Inc. The Commission understands that Teligent and its related companies have less than 1,500 employees, though this may change in the future. TRW is not a small entity. Thus, only one incumbent licensee in the 24 GHz band is a small business entity.

40. **Future 24 GHz Licensees.** With respect to new applicants in the 24 GHz band, the Commission has defined “small business” as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the three preceding years not exceeding \$15 million.<sup>117</sup> “Very small business” in the 24 GHz band is defined as an entity that, together with controlling interests and affiliates, has average gross revenues not exceeding \$3 million for the preceding three years.<sup>118</sup> The SBA has approved these definitions.<sup>119</sup> The Commission will not know how many licensees will be small or very small businesses until the auction, if required, is held.

41. **Cable Television Relay Service.** This service includes transmitters generally used to relay cable programming within cable television system distribution systems. The Census Bureau has defined a category of Cable and Other Program Distribution as follows: “This industry comprises establishments primarily engaged as third-party distribution systems for broadcast programming. The establishments of this industry deliver visual, aural, or textual programming received from cable networks, local television stations, or radio networks to consumers via cable or direct-to-home satellite systems on a subscription or fee basis. These establishments do not generally originate programming material.”<sup>120</sup> The SBA has developed a small business size standard for Cable and Other Program Distribution, which is: all such firms having \$13.5 million or less in annual receipts.<sup>121</sup> According to Census Bureau data for 2002, there were a total of 1,191 firms in this category that operated for the entire

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<sup>114</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>115</sup> See *id.*

<sup>116</sup> Teligent acquired the Digital Electronic Message Service (DEMS) licenses of FirstMark, the only licensee other than TRW in the 24 GHz band whose license has been modified to require relocation to the 24 GHz band.

<sup>117</sup> Amendments to Parts 1, 2, 87 and 101 of the Commission’s Rules To License Fixed Services at 24 GHz, *Report and Order*, 15 FCC Rcd 16934, 16967 ¶ 77 (2000) (*24 GHz Report and Order*); see also 47 C.F.R. § 101.538(a)(2).

<sup>118</sup> *24 GHz Report and Order*, 15 FCC Rcd at 16967 ¶ 77; see also 47 C.F.R. § 101.538(a)(1).

<sup>119</sup> See Letter to Margaret W. Wiener, Deputy Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Gary M. Jackson, Assistant Administrator, Small Business Administration, dated July 28, 2000.

<sup>120</sup> U.S. Census Bureau, 2002 NAICS Definitions, “517510 Cable and Other Program Distribution”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

<sup>121</sup> 13 C.F.R. § 121.201, NAICS code 517510.



year.<sup>122</sup> Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.<sup>123</sup> Thus, under this size standard, the majority of firms can be considered small.

42. **Cable Companies and Systems.** The Commission has also developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers, nationwide.<sup>124</sup> Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard.<sup>125</sup> In addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers.<sup>126</sup> Industry data indicate that, of 7,208 systems nationwide, 6,139 systems have under 10,000 subscribers, and an additional 379 systems have 10,000-19,999 subscribers.<sup>127</sup> Thus, under this second size standard, most cable systems are small.

43. **Cable System Operators.** The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000."<sup>128</sup> The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.<sup>129</sup> Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.<sup>130</sup> The Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,<sup>131</sup> and therefore it is unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

44. **Multichannel Video Distribution and Data Service.** Multichannel Video Distribution and Data Service (MVDDS) is a terrestrial fixed microwave service operating in the 12.2-12.7 GHz band.

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<sup>122</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

<sup>123</sup> *Id.* An additional 61 firms had annual receipts of \$25 million or more.

<sup>124</sup> 47 C.F.R. § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

<sup>125</sup> These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, "Top 25 Cable/Satellite Operators," pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, "Ownership of Cable Systems in the United States," pages D-1805 to D-1857.

<sup>126</sup> 47 C.F.R. § 76.901(c).

<sup>127</sup> Warren Communications News, *Television & Cable Factbook 2006*, "U.S. Cable Systems by Subscriber Size," page F-2 (data current as of Oct. 2005). The data do not include 718 systems for which classifying data were not available.

<sup>128</sup> 47 U.S.C. § 543(m)(2); *see* 47 C.F.R. § 76.901(f) & nn. 1-3.

<sup>129</sup> 47 C.F.R. § 76.901(f); *see* Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, DA 01-158 (Cable Services Bureau, Jan. 24, 2001).

<sup>130</sup> These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, "Top 25 Cable/Satellite Operators," pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, "Ownership of Cable Systems in the United States," pages D-1805 to D-1857.

<sup>131</sup> The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. *See* 47 C.F.R. § 76.909(b).

Licenses in this service were auctioned in January 2004, with 10 winning bidders for 192 licenses. Eight of these 10 winning bidders claimed small businesses status for 144 of these licenses.<sup>132</sup>

45. **Amateur Radio Service.** These licensees are believed to be individuals, and therefore are not small entities.

46. **Aviation and Marine Services.** Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. For purposes of this analysis, the Commission uses the SBA small business size standard for the category “Cellular and Other Telecommunications,” which is 1,500 or fewer employees.<sup>133</sup> Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of the Commission’s evaluations in this analysis, the Commission estimates that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a “small” business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$15 million dollars. In addition, a “very small” business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$3 million dollars.<sup>134</sup> There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as “small” businesses under the above special small business size standards.

47. **Personal Radio Services.** Personal radio services provide short-range, low power radio for personal communications, radio signaling, and business communications not provided for in other services. The Personal Radio Services include spectrum licensed under Part 95 of the rules.<sup>135</sup> These services include Citizen Band Radio Service (CB), General Mobile Radio Service (GMRS), Radio Control Radio Service (R/C), Family Radio Service (FRS), Wireless Medical Telemetry Service (WMTS), Medical Implant Communications Service (MICS), Low Power Radio Service (LPRS), and Multi-Use Radio Service (MURS).<sup>136</sup> There are a variety of methods used to license the spectrum in these rule parts, from licensing by rule, to conditioning operation on successful completion of a required test, to site-based licensing, to geographic area licensing. Under the RFA, the Commission is required to make a determination of which small entities are directly affected by the rules being adopted. Since all such entities are wireless, the Commission applies the definition of cellular and other wireless telecommunications, pursuant to which a small entity is defined as employing 1,500 or fewer persons.<sup>137</sup> Many of the licensees in these services are individuals, and thus are not small entities. In addition, due to

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<sup>132</sup> “Multichannel Video Distribution and Data Service Auction Closes,” *Public Notice*, DA 04-215 (Feb. 2, 2004).

<sup>133</sup> 13 CFR § 121.201, NAICS code 517212 (2002).

<sup>134</sup> Amendment of the Commission’s Rules Concerning Maritime Communications, *Third Report and Order and Memorandum Opinion and Order*, 13 FCC Rcd 19853 (1998).

<sup>135</sup> 47 C.F.R. Part 90.

<sup>136</sup> The Citizens Band Radio Service, General Mobile Radio Service, Radio Control Radio Service, Family Radio Service, Wireless Medical Telemetry Service, Medical Implant Communications Service, Low Power Radio Service, and Multi-Use Radio Service are governed by Subpart D, Subpart A, Subpart C, Subpart B, Subpart H, Subpart I, Subpart G, and Subpart J, respectively, of Part 95 of the Commission’s rules. *See generally* 47 C.F.R. Part 95.

<sup>137</sup> 13 C.F.R. § 121.201, NAICS Code 517212.

the mostly unlicensed and shared nature of the spectrum utilized in many of these services, the Commission lacks direct information upon which to base an estimation of the number of small entities under an SBA definition that might be directly affected by the proposed rules.

48. Despite the paucity, or in some instances, total absence, of information about their status as licensees or regulatees or the number of operators in each such service, users of spectrum in these services are listed here as a matter of Commission discretion in order to fulfill the mandate imposed on the Commission by the RFA to regulate small business entities with an understanding towards preventing the possible differential and adverse impact of the Commission's rules on smaller entities. Further, the listing of such entities, despite their indeterminate status, should provide them with fair and adequate notice of the possible impact of the instant proposals.

49. **Public Safety Radio Services.** Public Safety radio services include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.<sup>138</sup> There are a total of approximately 127,540 licensees in these services. Governmental entities<sup>139</sup> as well as private businesses comprise the licensees for these services. All governmental entities with populations of less than 50,000 fall within the definition of a small entity.<sup>140</sup>

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

50. The *Notice* seeks to evaluate whether changes to the existing service rules pertaining to 700 MHz Band licenses may ultimately permit more effective use of this spectrum to better meet the needs of today's consumers. To the extent the Commission's past decisions no longer reflect the best approach with regard to the license area sizes, band plan, performance requirements, renewal criteria, length of license terms, power limits, and 911/E911 & hearing aid-compatibility requirements, the *Notice* seeks comment on the possibility of making appropriate adjustments to various requirements that will serve the public interest.

51. Although the *Notice* does not propose any specific rules with new reporting, recordkeeping or other compliance requirements for small entities on the aforementioned issues, the Commission is open to comment on what, if any, requirements it should, or should not, impose for small entities if it adopts new rules based on the proposals in the *Notice*. For example, there is the possibility that modifying performance requirements and secondary market provisions for certain 700 MHz Band licenses could require new reporting and recordkeeping practices for small entities regarding where and

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<sup>138</sup> With the exception of the special emergency service, these services are governed by Subpart B of part 90 of the Commission's Rules, 47 C.F.R. §§ 90.15-90.27. The police service includes approximately 27,000 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code) and teletype and facsimile (printed material). The fire radio service includes approximately 23,000 licensees comprised of private volunteer or professional fire companies as well as units under governmental control. The local government service that is presently comprised of approximately 41,000 licensees that are state, county, or municipal entities that use the radio for official purposes not covered by other public safety services. There are approximately 7,000 licensees within the forestry service which is comprised of licensees from state departments of conservation and private forest organizations who set up communications networks among fire lookout towers and ground crews. The approximately 9,000 state and local governments are licensed to highway maintenance service provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. The approximately 1,000 licensees in the Emergency Medical Radio Service (EMRS) use the 39 channels allocated to this service for emergency medical service communications related to the delivery of emergency medical treatment. 47 C.F.R. §§ 90.15-90.27. The approximately 20,000 licensees in the special emergency service include medical services, rescue organizations, veterinarians, people with disabilities, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities. 47 C.F.R. §§ 90.33-90.55.

<sup>139</sup> 47 C.F.R. § 1.1162.

<sup>140</sup> 5 U.S.C. § 601(5).

how spectrum is used. In addition, new renewal criteria could possibly be established such that the Commission would codify new requirements for renewal or, in the alternative, list factors that are relevant to licensees' (including small entities') informational showings that renewal is in the public interest. Under such a proposal, the *Notice* states that such licensees may have to report on factors such as the level of service and whether it was "substantial"; whether service was ever interrupted and discontinued; whether service has been provided to any rural or tribal areas; whether a licensee has received any requests from others seeking to enter into spectrum leasing arrangements, and whether it has entered into any such arrangements; and any other factors typically associated with assessments of a licensee's level of service to the public. The *Notice* also seeks comment on whether any additional modifications to 700 MHz Band power limit rules would be appropriate; in this regard, it states that such action could result in, e.g., the use of the notification procedures for high-powered Upper 700 MHz Band operations that are currently applied to high-powered Lower 700 MHz Band operations. A tentative conclusion to require certain 700 MHz Band, and Part 27, licensees to comply with the 911/E911 and hearing aid-compatibility requirements (as well as seeking comment on whether to apply these requirements to licensees in other WRS) is another example of a projected compliance requirement that could affect small entities.

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

52. The RFA requires an agency to describe any significant, specifically small business 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) and exemption from coverage of the rule, or any part thereof, for small entities."<sup>141</sup>

53. In the *Notice*, the Commission specifically considers small business alternatives in seeking comment on the existing size of geographic service areas for the 700 MHz Band. Specifically, the *Notice* seeks comment on whether there is a need for additional small geographic service area licenses in the band, such as the 734 CMAs. The Commission notes that the Rural Cellular Association claims that small entities are unable to compete effectively for licenses that combine rural and major metropolitan areas and the availability of RSAs (as opposed to other small units) is especially important to small and rural carriers given their potential greater interest in serving these high-cost areas than large regional and nationwide carriers.

54. On this question of the optimal size of the service areas for the 700 MHz Band, the *Notice* seeks comment on whether firms, including small entities, need additional access to spectrum over small service areas. It considers in general the economic impact to small entities of the possible transaction costs associated with the assignment of additional spectrum over small and large service areas alike. For example, the *Notice* seeks comment on the factors that the Commission should use in balancing the needs of small and rural carriers as well as large and national carriers as they seek to provide service to their rural customers.

55. The *Notice* also seeks comment on the optimal service area size(s) for the remaining unauctioned licenses to the extent a demonstrated need exists for smaller or other sized areas. With respect to impacts to small entities, the *Notice* states that both large nationwide providers as well as small regional and rural providers may be able to make use of the 700 MHz Band, yet explains that the optimal size of geographic service area is different for these two types of providers, and licenses for areas that are larger or smaller than desired will impose transaction costs on those parties that wish to acquire them. The *Notice* seeks comment on the degree and likelihood of such economic costs as 700 MHz Band spectrum is licensed in the future, and the extent to which the transaction costs of aggregating,

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<sup>141</sup> 5 U.S.C. §§ 603(c)(1)-(c)(4).

disaggregating, or partitioning spectrum are a significant concern for those parties that most highly value this spectrum, including small entities. The *Notice* also discusses how certain providers in the 700 MHz Band have focused on smaller sized service areas, and it notes that a number of small providers have acquired Lower 700 MHz Block C spectrum apparently to provide services specifically to rural areas over RSAs. Thus, the *Notice* seeks comment on what the optimal size for smaller areas would be, as well as how the size of licensed geographic service area impacts the services that are currently being developed, and which may be developed, for use of the 700 MHz Band.

56. The *Notice* then seeks comment on which spectrum blocks in the 700 MHz Band would be suitable for licensing over small or other sized areas. Specifically, the Commission seeks comment on the impact of designating the unpaired 6 megahertz Block E in the Lower 700 MHz Band for small-area licensing. Regarding this significant alternative, the *Notice* inquires if 6 megahertz is sufficient to meet small and/or rural carriers' spectrum needs, and asks commenters to address whether there are broadband technologies that can operate on unpaired spectrum such that the 6 megahertz of spectrum in Block E would be suitable for potential reassignment. Taking into account the resources available to small entities, the *Notice* also addresses how any need for small and rural carriers to provide adjacent TV Channel 51 protection might affect their ability to provide service to those areas if Block A were designated for small area licensing.

57. In addition to seeking comment on the size of service areas, the Commission seeks comment on possibly changing the size of spectrum blocks in the 700 MHz Band plan. To the extent the Commission decides to auction and assign additional licenses over service area sizes other than the six EAGs, the *Notice* seeks comment on whether reconfiguring or sub-dividing existing spectrum blocks in the band plans in the 700 MHz Band could better accommodate such assignments and thereby facilitate access to spectrum by small entities. In particular, the *Notice* seeks comment on dividing the 20-megahertz Block D license in the Upper 700 MHz Band into two or more license blocks to create additional opportunities for firms to acquire spectrum, including small business and rural providers.

58. In the next section of the *Notice*, the Commission seeks comment on whether it should take additional action with regard to the spectrum in the 700 MHz Band so as to help facilitate access to that spectrum and the provision of service to all consumers, including those in rural areas. In contrast to the significant alternatives above on the size of geographic service areas and/or spectrum blocks that may help increase access to spectrum at auction for a wide variety of entities, this section seeks comment on whether the Commission's existing "substantial service" performance requirements and related policies pertaining to 700 MHz Band licenses serve to facilitate deployment of wireless services in the 700 MHz Band. For example, the *Notice* seeks comment on significant alternatives that impact small entities, such as the possibility of adopting "keep what you use" re-licensing mechanisms. It also seeks comment on options that may facilitate access to spectrum in the secondary market for all potential service providers, including small entities and those specifically seeking to deliver service to rural areas and tribal lands.

59. The next portions of the *Notice* seek comment on potential changes to several of the Commission's initial determinations applicable to 700 MHz Band licenses, changes which could affect small entities. First, the *Notice* requests comment on whether to amend Commission rules to clarify the requirements and procedures of the renewal process for 700 MHz Band licenses, particularly as they relate to existing rules requiring demonstrations of "substantial service" for renewal applicants involved in comparative proceedings. Second, the *Notice* invites comment on extending the license terms of 700 MHz Band licenses to an expiration date beyond 2015 in order to afford licensees a sufficient period of time for deployment of new 700 MHz Band services once the DTV transition is complete. Third, the *Notice* seeks comment on whether the power limits in the existing rules for the 700 MHz Band spectrum should be revised. In addition to the discussion above regarding possible new reporting, recordkeeping or other compliance requirements that could impact small entities,<sup>142</sup> it is not anticipated that any rules

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<sup>142</sup> See *supra* section D.

adopted in this area would adversely impact small entities. Both small and large entities may benefit from changes to these rules.

60. Finally, because Commission rules have not been expanded to include licensees (including small entities) providing service in later authorized, additional WRS such as the 700 MHz Band, the *Notice* seeks comment on the tentative conclusion that services provided by licensees in the 700 MHz Band, and in other bands subject to Part 27 of the rules such as AWS-1, should be subject to E911 and hearing aid-compatibility requirements to the same extent that such services would be covered if provided in other bands. It then seeks comment on how to modify Commission rules to ensure that they include all similar WRS. Because many of the services permitted across the WRS can be expected to be similar to services presently subject to the 911/E911 and hearing aid-compatibility requirements, the *Notice* seeks comment on whether to amend the rules to ensure that all similar wireless services that meet certain criteria discussed in the *Notice* will be subject to the 911/E911 and hearing aid-compatibility requirements. To minimize significant economic impact to the many firms, including small entities, that are or will become licensees in the various WRS, the *Notice* seeks comment on impacts including, *e.g.*, the time necessary to complete such changes to the standards.

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

61. None.

**STATEMENT OF  
CHAIRMAN KEVIN J. MARTIN**

Re: Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones (WT Docket Nos. 06-150, 01-309, and CC Docket No. 94-102).

With today's action, the Commission continues its efforts to provide consumers with new and advanced wireless services by making spectrum available for wireless broadband.

The Commission will soon auction 90 MHz of spectrum in the Advanced Wireless Services band. In this item, we seek comment on our service rules for the 700 MHz band, which is similarly well-suited for the provision of wireless broadband services and must be auctioned for commercial use by January 28, 2008. We are reevaluating our service rules for this band to account for Congress' recent adoption of digital television legislation and the needs of both small and large service providers. We also intend to ensure that service providers in this band and other broadband bands comply with our E911 and hearing aid-compatibility rules.

I expect that wireless services will continue to be an increasing part of broadband service deployment. Consumers are increasingly demanding access to broadband services any time they want it, wherever they want it. This spectrum will help bring consumers everywhere more opportunities to use these services both at home and on the go.

**STATEMENT OF  
COMMISSIONER MICHAEL J. COPPS**

*Re:* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones (WT Docket Nos. 06-150, 01-309, and CC Docket No. 94-102).

With the grand-daddy of all auctions coming at us in 700 MHz in less than two years, I am encouraged that we begin today the process of developing service rules for it. Getting this one absolutely right is absolutely necessary if we are going to reap the full measure of benefit from this beach-front property spectrum. We're on the right road here, we're asking the right questions, and I want to thank the Bureau for bringing this especially thoughtful and well-crafted item to us.

As I stated earlier today in our discussion of BPL technology, we have a broadband crisis in this country that stems from a lack of competition. Wireless technologies can play, I believe, a critical role in remedying the egregious gaps in our national communications system. The 700MHz spectrum that we will auction in 2008 is key to spreading the benefits of broadband across our country. In order to make sure that our nation's consumers get the most out of this great national resource, we need to begin by answering some difficult questions about the service rules for this band.

One critical issue is the size of the geographic service areas. I am pleased that we have heeded the Rural Cellular Association's call to consider assigning a significant number of these licenses over smaller geographic areas. Smaller providers need a fighting chance to bid against the large national carriers for spectrum that is ideally suited for rural broadband applications. I look forward to a record that will inform us how to best achieve this goal.

Another critical issue involves the build-out and renewal standards to be applied in this valuable spectrum. We need, of course, to give companies breathing room and regulatory certainty so they can raise capital and build networks. At the same time, we must not countenance spectrum warehousing or any other unreasonable delay in putting our nation's spectrum to work. The demand for wireless broadband is just too pressing to allow companies to sit on spectrum, and I look forward to developing rules that will put licenses in the hands of those most capable of bringing new services to market.

I am also pleased with our tentative conclusion that the full range of E911 and hearing aid compatibility rules will apply to services in this band and, I might add, in the Advanced Wireless Services band whose auction is more imminent. This is an area wherein any lingering legal uncertainty must be promptly dispelled. These broadband wireless bands must be available to and safe for all Americans.

Additionally, I want to commend and thank Commissioner Adelstein for drawing attention to the challenge of promoting the deployment of wireless networks on tribal lands. This Commission's job is to make communications by wire and radio available to *all* our people, and this auction can be tremendously important for bringing advanced telecommunications to Indian Country.

I recognize that this is the first in several steps that the Commission must take in order to conduct a successful 700MHz auction and to deliver proceeds – hopefully copious proceeds – to the U.S. Treasury. We also face important questions about how to organize public safety spectrum in this band and we still need to consider interesting proposals about how best to make use of our 700 MHz guardbands. I look forward in the coming months to working with the Chairman and my fellow Commissioners so that this auction goes off smoothly and that this spectrum can begin delivering wireless broadband services as quickly as possible.



Finally, even as we lay groundwork for our auction of the 700 MHz spectrum, I want to reiterate my belief that the Commission must continue to expand the amount of unlicensed spectrum available for promising new technologies. I look forward to resolving the “TV white spaces” and “spectrum test bed” dockets, as well as other matters that will come before us, so as to continue to provide our nation’s engineers and entrepreneurs with the resources they need to continue astounding us with their creativity and innovation.

Thanks again to the Bureau for an excellent item.

**STATEMENT OF  
COMMISSIONER JONATHAN S. ADELSTEIN**

*Re:* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones (WT Docket Nos. 06-150, 01-309, and CC Docket No. 94-102).

With this Notice, the Commission rightly seeks comment on possible changes to the service rules governing licenses in the 700 MHz band. Over four years have passed since the service rules and band plans were first adopted for this spectrum. Since then, the rapidly evolving mobile wireless industry has experienced tremendous subscriber growth, the emergence of new and exciting product offerings, and increased consolidation. In addition to these dynamic changes, the enactment of the Digital Television and Public Safety Act of 2005, with its specific benchmarks, is a significant milestone that further prompts the opportunity for the Commission to consider whether or how to revise our regulatory approach to both the Upper and Lower 700 MHz Bands. I fully support the timing of this Notice, as I have regularly commented how exceedingly important it is that we do what we can to keep the Commission on the leading edge of spectrum-based technology and policy.

The Notice we adopt today sets up an important discussion to ensure that the 700 MHz band is quickly and efficiently put to use and that parts of the spectrum do not remain an untapped well for the thirsty. I have long had a strong interest in promoting active spectrum use, and am very pleased that our item seeks comment on whether we should revise performance requirements for licensees in the 700 MHz Band. We ask important questions on whether the country would be better served by alternate performance requirements such as more specific construction benchmarks or a "keep what you use" re-licensing mechanism.

I am particularly interested in reactions to the suggestion of a "triggered keep what you use" rule, in which the Commission, rather than reclaiming unused spectrum after a period of time, would reclaim spectrum only in the event a party other than the licensee is interested in securing access to the spectrum in an unserved portion of the license area. My hope is that this discussion will lead to the Commission moving to more of a "carrot and stick" approach to performance requirements – an approach that I have long advocated – in the future by which the Commission promotes flexibility and innovation, yet expects more specific results as well.

The dialogue generated by this Notice should enable the Commission to better serve communities, particularly those in rural and other unserved areas, where licensees do not plan to use or lease the spectrum they acquired. For example, I just returned from our Indian Telecommunications Initiative workshop and roundtable in San Diego and access to spectrum was one of the big issues I heard from Tribal leaders attending the conference. I want to thank my colleagues for agreeing to add questions to this item addressing the unique challenges of wireless service on Tribal lands. The economic and social prosperity of Native American communities depends on access to state-of-the-art communications technologies, so it is important that we seek comment on flexible licensing approaches that may make it easier for community-based providers, like Tribes, to get access to wireless broadband opportunities on a more localized basis.

I also am particularly pleased that the Notice asks whether the Commission should take another look at the "substantial service" standard in the renewal of licenses in the event we continue with that approach. In our recently completed BRS/EBS reconsideration item, I emphasized the importance of adopting "safe harbors" that are meaningful. By meeting safe harbors, operators are provided with the

security that they absolutely have complied with the Commission's substantial service requirements. It is my belief that if we are to provide such a security option and allow the flexibility of a substantial service construction standard, we should make safe harbors that are meaningful and worthwhile – so I am pleased that we continue that discussion here.

In addition to seeking comment on how we can put the 700 MHz spectrum to its most active use, the Notice seeks comment on the size of the current service areas and the size of the current spectrum blocks. If we want to see better and more advanced wireless service in the future, we need to make spectrum more easily accessible. I fully support this discussion on whether we should reconfigure or subdivide the existing spectrum blocks in the 700 MHz Band in order to fulfill this goal. As many of you know, in the Advanced Wireless Services proceeding, I was very involved in our bandplan decision, which ultimately was well received by small and large entities alike, and I look forward to reviewing the record in this proceeding as well since I was not at the Commission for our initial bandplan determination.

I am very pleased that the item we adopt today builds on a number of the questions raised in the Further Notice of Proposed Rule Making in our rural wireless proceeding, an item that I strongly supported. With recent consolidation in the communications industry, it becomes even more critical that we make vibrant, spectrum-based communications opportunities available to all consumers and companies. The 700 MHz band should be a real opportunity for new and incumbent carriers to expand existing networks and develop new and exciting wireless broadband services for all communities. I am pleased that we are giving the 700 MHz band the attention it deserves by evaluating our policies to make sure we provide what is best for American consumers and do not undercut the ability of wireless innovators to get access to new or unused spectrum.

I would like to commend the staff of the Wireless Telecommunications Bureau for providing us with a very comprehensive and well drafted Notice. With the digital transition on the horizon, this Notice comes at a crucial time and asks critical questions regarding spectrum use that will impact the 700 MHz band and wireless services to come. Initiating dialogue on these matters can only serve American consumers well. I look forward to working with my colleagues and the Bureau in tackling these important issues in the upcoming months.

**STATEMENT OF  
COMMISSIONER DEBORAH TAYLOR TATE**

Re: Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones (WT Docket Nos. 06-150, 01-309, and CC Docket No. 94-102).

This Notice of Proposed Rulemaking seeks comment on how the Commission can encourage wireless carriers to offer new and better services. Spectrum that is currently occupied by UHF television broadcasters will soon be available, and I believe we need to create an environment that encourages businesses to use this spectrum to provide innovative new wireless services. The Commission seeks comment on possible changes to service rules for wireless licenses in the 700 MHz Band that will help create such an environment.

New technology creates new opportunities to bring wireless services to all Americans. Recently, I met with a group of analysts, entrepreneurs, and industry executives in Northern California and heard firsthand the demands placed on carriers to offer more services to more consumers, which in turn has created increased demand for valuable spectrum, such as the 700 MHz Band.

The 700 MHz band is also ideal for getting a signal to customers in rural areas and will bring high-speed applications like streaming video to wireless customers. I particularly look forward to hearing ideas from industry experts and consumer advocates on how the Commission can facilitate deployment of wireless services to rural areas. I also would like to applaud the tentative conclusion that services in the 700 MHz Band that meet certain criteria should be subject to 911/E911 and hearing aid-compatible handset requirements. All Americans, regardless of geographic location or physical disability, should be able to access reasonably equivalent wireless services.

I look forward to working with my colleagues to determine the most effective use of this spectrum.

**STATEMENT OF  
COMMISSIONER ROBERT M. McDOWELL**

RE: Service Rules for the 698-746, 747-762 and 777-792 MHz Bands; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones (WT Docket Nos. 06-150, 01-309, and CC Docket No. 94-102).

The Digital Television Transition and Public Safety Act of 2005 (the DTV Act) makes several fundamental changes in the statutory regime applicable to the 700 MHz band spectrum. Perhaps most importantly, the DTV Act establishes a hard deadline of February 17, 2009, for the cessation of analog broadcasting in this spectrum. The DTV Act also requires the Commission to begin the auction for the licenses associated with the recovered analog spectrum no later than January 28, 2008, and to deposit the auction proceeds no later than June 30, 2008.

Given these congressional mandates, we have our work cut out for us. In this regard, I thank the Wireless Bureau for preparing this well-written, comprehensive notice, which will bolster our ability to complete our work expeditiously. And, I thank the Chairman for bringing this item to us today. I am delighted that wireless licensees and potential licensees – whether public safety or commercial – are now in a position to finalize plans for deploying in this “prime real estate.” I look forward to actively engaging with my colleagues, and all interested parties, in the important effort to reexamine and finalize the service rules for the 700 MHz commercial band, including issues relating to E911 deployment, hearing aid compatibility and service to tribal areas.