

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of
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

NOTICE OF PROPOSED RULEMAKING

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By the Commission:

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## I. INTRODUCTION; BACKGROUND

1. In this Notice of Proposed Rulemaking (Notice) we propose new service rules for commercial licensing in the 746-764 MHz and 776-794 MHz bands that have been reallocated from use solely for the Broadcasting service. These proposed service rules include provisions for application licensing, technical and operating rules, and competitive bidding. The revised spectrum allocation in the *Reallocation Report and Order*<sup>1</sup> provided for the potential provision of Fixed, Mobile, and Broadcasting services on these bands. We here seek comment on the degree of flexibility that should be afforded new licensees using this spectrum, and the technical and other service rules that should govern the range of services enabled. We also seek comment on methods to assure continued protection of existing full service television stations that will continue to operate on these bands during the transition to digital television (DTV).<sup>2</sup>

2. The 746-764 MHz and 776-794 MHz bands have been used by television stations on channels 60-62 and 65-67. The Balanced Budget Act of 1997<sup>3</sup> directed the Commission to complete the reallocation of this spectrum by December 31, 1997, and to commence competitive bidding for the commercial licenses of the reallocated spectrum after January 1, 2001.<sup>4</sup> The BBA also expanded the Commission's competitive bidding authority to comprise mutually exclusive broadcast licenses, and the Commission recently implemented that authority in the *Competitive Bidding (Broadcast) Order*.<sup>5</sup>

3. In the *Reallocation Report and Order*, adopted December 31, 1997, we implemented the specific spectrum management decisions enacted by Section 3004 of the Balanced Budget Act of 1997.<sup>6</sup> We added the Fixed and Mobile allocation to the Broadcasting allocation in the 746-806 MHz band. We designated channels 60-62 and 65-67 for commercial use, and designated channels 63, 64, 68, and 69 for the exclusive use of public safety. We also declined to adopt additional

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<sup>1</sup> Reallocation of Television Channels 60-69, the 746-806 MHz Band, ET Docket No. 97-157, Report and Order, 12 FCC Rcd 22953 (1998) (*Reallocation Report and Order*).

<sup>2</sup> See Reallocation of Television Channels 60-69, the 746-806 MHz Band, ET Docket No. 97-157, Memorandum Opinion and Order, 13 FCC Rcd 21578 (1998) (*Reallocation Reconsideration*).

<sup>3</sup> See Section 337(a) of the Communications Act, 47 U.S.C. § 337(a), as added by § 3004 of the Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997).

<sup>4</sup> See Section 337(b)(2) of the Communications Act, 47 U.S.C. § 337(b)(2).

<sup>5</sup> Implementation of Section 309(j) of the Communications Act -- Competitive Bidding for Commercial Broadcast and Instructional Television Fixed Service Licenses, MM Docket No. 97-234, Reexamination of the Policy Statement on Comparative Broadcast Hearings, GC Docket No. 92-52, Proposals to Reform the Commission's Comparative Hearing Process to Expedite the Resolution of Cases, GEN Docket No. 90-234, First Report and Order, 13 FCC Rcd 15920 (1998) (*Competitive Bidding (Broadcast) Order*), recon., FCC 99-74, released Apr. 20, 1999, 1999 WL 228239 (*Competitive Bidding (Broadcast) Reconsideration*).

<sup>6</sup> Balanced Budget Act of 1997, § 3004 (adding new §§ 337(a) and 337(b) of the Communications Act).

protections for low-power TV and TV translator stations beyond those adopted in the *DTV Proceeding*.<sup>7</sup> We stated that no new applications will be considered for the provision of analog TV service in channels 60-69, but that current applicants, at a later date, would be afforded an opportunity to amend their applications to seek channels below 60. We subsequently denied petitions that sought reconsideration of our decision to grant no new licenses for TV service on these channels, and the decision to provide no additional protection to low-power TV and TV translator stations.<sup>8</sup>

## II. SERVICE RULES

### A. In General

#### 1. Permitted Services

4. The revised allocation of the *Reallocation Report and Order* permits Fixed, Mobile, and Broadcasting services on the 746-764 MHz and 776-794 MHz bands. We thus seek comment on whether our service rules should permit a licensee to use this spectrum for any use permitted within the United States Table of Frequency Allocations contained in Part 2 of the Commission's Rules (*i.e.*, Fixed, Mobile, and Broadcasting services),<sup>9</sup> subject to international requirements and coordination.<sup>10</sup>

5. Our allocation and designation decisions retained Broadcast services in the Table of Allocations, and so preserved the potential for service rules that would enable the full range of commercial broadcast services to the public -- including radio, television, and low power and translator services. The potential flexibility established for these bands by the revisions to the Table of Allocations will ultimately be realized by the service rules, respecting the statutory requirement that flexibility does not establish harmful interference or discourage investment and development of

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<sup>7</sup> See *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service (DTV Proceeding)*, MM Docket No. 87-268, Fifth Report and Order, 12 FCC Rcd 12810 (1997), *recon.*, 13 FCC Rcd 6860 (1998); Sixth Report and Order, 12 FCC Rcd 14588 (1997), *recon.*, 13 FCC Rcd 7418 (1998).

<sup>8</sup> *Reallocation Reconsideration*, 13 FCC Rcd at 21582-83 (paras. 12-14).

<sup>9</sup> The United States Table of Frequency Allocations is at 47 C.F.R. § 2.106. See generally 47 C.F.R. Part 2, Frequency Allocations and Ratio Treaty Matters; General Rules and Regulations.

<sup>10</sup> Section 303(y)(1) of the Communications Act, 47 U.S.C. § 303(y)(1), limits the Commission's authority to allocate spectrum so as to provide flexibility of use to situations in which "such use is consistent with international agreements to which the United States is a party."

We use the term "sharing" herein to refer to the use of spectrum bands by a variety of services, under licensing rules that accord each licensee exclusive use of specific spectrum blocks. Because our proposals are based on the statutory requirement that these 36 megahertz of commercial spectrum be assigned by competitive bidding, and our expectation that the spectrum will be the subject of mutually exclusive applications, we do not consider in this context the sharing of specific spectrum blocks.

new technologies.<sup>11</sup> Our service rule proceedings, depending on the record developed in response to issues described below, may or may not establish rules that enable the full range of services included in the Table.<sup>12</sup>

6. Before turning to consider the issues that arise directly from our effort to develop service rules, we emphasize the Commission's continued interest in broader aspects of spectrum management. While the allocations involved here were specifically mandated by the Balanced Budget Act, we encourage commenters to consider how innovative service rules developed for such a flexible use allocation might maximize the uses made of this spectrum. There is clear potential in this context for new technologies to affect the extent to which service rules effectively provide for flexible use. New technologies may blur both technical and regulatory distinctions, and shift the balance between licensee discretion and the extent of technical and operational regulations. We seek comment on how our rules might include provision for such developments. Commenters may wish to review spectrum management and service rule approaches presented at the Commission's *en banc* hearing on spectrum management, in developing techniques that might be applied to the spectrum under consideration here.<sup>13</sup> Commenters who consider this issue should address what impact their suggested approaches would have on television broadcasters also using the band, both during the transition to DTV and to the extent the service rules may provide for new broadcast services.

7. Whether the service rules developed will provide for sharing between broadcast and fixed and mobile wireless services, including the prospect of audio, video, or data services that may not closely resemble existing broadcasting configurations, depends in part on our resolution of several issues that are not raised by flexible use allocations of narrower scope. These issues include the managing of interference between technically dissimilar services (at least in the familiar configurations of broadcast and wireless service), and the application of regulatory mechanisms suited to the range of services on these bands. To the extent that commenters suggest that our technical service rules enable services that closely resemble existing broadcast services, we start from the presumption that such services would be fully subject to Part 73 of our Rules. We ask that commenters consider whether there are any reasons that particular elements of Part 73 should not similarly be applied to such services when provided on these spectrum blocks. A prospective licensee could, however, also seek to offer a point-to-multipoint datacast service that would distribute data such as financial and market reports or video or music streams to the general public, and intend to recoup its costs and profit by inserting commercial messages or some other non-subscription mechanism. Such a service might, in its technical configuration, more closely resemble the existing fixed and mobile wireless services provided on other spectrum bands. As an initial matter we would expect such services are more appropriately regulated by the framework of Part 27.

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<sup>11</sup> Section 303(y) of the Act is considered at paras. 11-15.

<sup>12</sup> See para. 11.

<sup>13</sup> The transcript for that hearing is available at <<http://www.fcc.gov/enbanc/040699/eb040699.html>>.

8. Another respect in which broadcast and non-broadcast services operate in different regulatory contexts are the distinctive approaches to accessibility. Section 713 of the Act,<sup>14</sup> for example, directs the Commission to establish captioning regulations applicable to video programming;<sup>15</sup> Section 255,<sup>16</sup> effective on enactment of the Telecommunications Act of 1996, establishes an accessibility obligation for both equipment manufacturers and service providers, but in the telecommunications sector, not broadcasting. We ask whether and how these differing accessibility requirements should affect the development of service rules for these spectrum bands. We also seek comment on the implications of our service rule proposals, including technical and regulatory aspects, for implementation of third generation wireless technology in this spectrum.

9. The full flexibility of use being considered for these bands, for example, may also require us to develop auction procedures that recognize and reconcile the characteristic regulatory elements of broadcast and wireless licenses (*i.e.*, the community of license and geographic area referents for licensing), and perhaps consider distinctive approaches.<sup>17</sup> In developing service rules for the commercial spectrum involved here, and determining the extent to which they can or should accommodate both familiar broadcast services and innovative services that would be licensed under Parts 73 and 27 of our Rules,<sup>18</sup> we are required by Section 303(y) of the Act to find that such a flexible approach would not result in harmful interference among users, would not deter investment in communications services and systems, or technology development, and that the allocation would be in the public interest. We recognize that proposals involving such a range of services make it especially important that our review of such "flexible use" allocations, mandated by Section 303(y) of

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<sup>14</sup> 47 U.S.C. § 613.

<sup>15</sup> See Closed Captioning and Video Description of Video Programming, MM Docket No. 95-176, Implementation of Section 305 of the Telecommunications Act of 1996, Video Programming Accessibility, Report and Order, 13 FCC Rcd 3272 (1998), *recon.*, 13 FCC Rcd 19973 (1998).

<sup>16</sup> 47 U.S.C. § 255.

<sup>17</sup> Combinatorial auctions are discussed at paras. 22, 82. The procedures for individual broadcast auctions are set forth by public notice prior to the auction, 47 C.F.R. § 73.5001, and general procedures for wireless auctions are specified in Part 1 of the Commission's Rules, 47 C.F.R. Part 1.

<sup>18</sup> The Table of Allocations permits a range of broadcast services, but the specific service rules will determine whether and to what extent specific services can or will be licensed. If the service rules ultimately include provision for broadcast services, the technical and regulatory issues raised by sharing this spectrum may result in service rules for licensees providing broadcast service under Part 27 that differ from existing Part 73 broadcast service rules in varied respects. The term "broadcasting" is so broadly applied that its use has, among other examples, required the Commission to clarify that a limited number of non-scrambled signals, transmitted by a Direct Broadcast Satellite (DBS) licensee, would not alter the licensee's classification as a non-broadcast licensee. Revision of Rules and Policies for the Direct Broadcast Satellite Service, IB Docket No. 95-168, PP Docket No. 93-253, Report and Order, 11 FCC Rcd 9712, 9762 (para. 130)(1996). See also 47 C.F.R. Part 100.

the Act, examine the elements of that statutory review in light of the specific factual considerations raised by the scope of these proposals.

10. We therefore initially propose to permit licensees to determine the services they will provide within their assigned spectrum and geographic areas, and to subject these licensees generally to Part 27 of our Rules, which governs Wireless Communications Service. Because Part 27 was originally developed with an architecture designed to accommodate flexible use, we believe it provides an appropriate licensing framework for the common elements of regulation that are applicable to wireless and broadcast services alike.<sup>19</sup> We ask whether broadcast services on these bands, to whatever extent they are subject to Part 73 in other respects, can or should be subject to the Part 27 licensing framework to facilitate our administrative coordination of these varied uses. Exceptions to this approach, if any, would arise from modifications we may adopt to reflect (1) the particular circumstances of this spectrum; and (2) statutory and other public interest requirements, gathered in Part 73 of our Rules, that govern broadcasting. We note that broadcast use of this spectrum would necessarily be subject to broadcast-specific statutory provisions, such as Sections 312(a)(7) and 315 of the Act.<sup>20</sup> Commenters may address whether such broadcast services, if provided in the context of spectrum blocks governed generally by Part 27, should be subject to different rules than now apply under Part 73 to broadcast licensees.<sup>21</sup> We request comment on the type of services that could be offered in this commercial spectrum, and our proposal generally to subject the spectrum to Part 27 and, when applicable, to other Parts of the rules, including Part 73. We also seek comment on alternative provisions that may minimize the economic impact of the proposals, if any, on small entities.

11. We seek comment on whether this approach is consistent with Section 303(y)(2) of the Communications Act, as amended by the Balanced Budget Act of 1997.<sup>22</sup> This section grants the

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<sup>19</sup> For wireless services, a Part 27 licensee could be subject to Part 22 if providing public mobile services, to Part 90 if providing private land mobile services, and to Part 101 if providing fixed microwave services. For broadcasting services, a Part 27 licensee could be subject to Part 73.

<sup>20</sup> Section 312(a)(7), 47 U.S.C. § 312(a)(7), authorizes the Commission to revoke licenses or construction permits for "willful or repeated failure to allow reasonable access to or to permit purchase of reasonable amounts of time for the use of a broadcasting station by a legally qualified candidate for Federal elective office on behalf of his candidacy." Section 315(a), 47 U.S.C. § 315(a), requires broadcast licensees that permit a legally qualified candidate to use their station to afford equal opportunities to "all other such candidates for that office in the use of such broadcasting station. . . ."

<sup>21</sup> See 47 C.F.R. Part 73, Subpart H, Rules Applicable to All Broadcast Stations, 47 C.F.R. §§ 73.1001-73.4280.

<sup>22</sup> Section 303(y)(2) of the Communications Act, 47 U.S.C. § 303(y)(2), requires, as a condition of Commission exercise of its authority to provide for flexibility of use of spectrum, that:

(2) the Commission [first] finds, after notice and an opportunity for public comment, that--

Commission authority to allocate spectrum for flexible use if the Commission finds that such an allocation (1) is in the public interest; (2) would not deter investment in communications services and systems, or technology development; and (3) would not result in harmful interference among users. Although Section 303(y) applies on its face to the allocation of spectrum rather than the development of service and operational rules,<sup>23</sup> the allocation proceeding for the 746-806 MHz band began before enactment of Section 303(y) and neither the *Reallocation Report and Order* nor the *Reallocation Reconsideration* explicitly addressed Section 303(y). In accord with past Commission practice, inclusion of specific services in the Table of Allocations does not necessarily entail that service rules will be drafted to accommodate each such service, or that even flexible service rules will enable provision of the full range of allocated services. Indeed, we believe that considering the domestic Section 303(y)(2) factors as part of our development of service and operational rules effectively furthers the legislative purpose, because it enables us to assess the statutory factors on a record that reflects the characteristics of particular spectrum bands more specifically.<sup>24</sup> This is especially

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(A) such an allocation would be in the public interest;

(B) such use would not deter investment in communications services and systems, or technology development; and

(C) such use would not result in harmful interference among users.

<sup>23</sup> We note that the Commission stated in the *47 GHz Notice* that:

While we are proposing flexible use for the 47 GHz band, we are not proposing to change any allocations for the band. We are proposing that the band may be used for all services permitted under the existing allocations, as reflected in the U.S. Table of Allocations. Consequently, we conclude that we need not make the findings required by Section 303(y) of the Act because Section 303(y) does not apply here.

Amendment to Part 27 of the Commission's Rules To Revise Rules for Services in the 2.3 GHz Band and To Include Licensing of Services in the 47 GHz Band, WT Docket No. 98-136, Memorandum Opinion and Order on Reconsideration and Notice of Proposed Rulemaking, 13 FCC Rcd 16947, 16971-72 (para. 60) (1998) (*47 GHz Notice*).

<sup>24</sup> The allocation of spectrum bands to a specific service is a separate action from the development of service rules that prescribe and authorize provision of that service. See Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183, Implementation of Section 309(j) of the Communications Act--Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz, PP Docket No. 93-253, Report and Order and Second Notice of Proposed Rulemaking, 12 FCC Rcd 18600, 18615-16 (para. 26) (*39 GHz Report and Order*). There, the Section 303(y) requirements respecting flexible use allocations are explicitly considered, and service rules that would effectuate the mobile service allocation and provide for such operations are deferred until provisions for interference protection have been determined. The Commission also recognized in its initial adoption of service rules for the 2.3 GHz band under Part 27 that out-of-band emission limits might, at least for the foreseeable future, make mobile operations in the affected spectrum technologically infeasible. Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS"), GN Docket No. 96-228, 12 FCC Rcd 10785, 10855 (para. 138) (1997) (*Part 27 Report and Order*).

significant when, as here, we consider including broadcast services in the potential mix of wireless services. Therefore, we undertake a Section 303(y)(2) analysis in this Notice.

12. We tentatively find that making the spectrum available for flexible commercial use under our Part 27 Rules is in the public interest because it will contribute to technological and service innovation, the creation of new jobs for the American workforce, the fostering of national economic growth, and the enhancement of opportunities for all Americans to utilize, and realize the benefits of, the national telecommunications infrastructure. We seek comment on this tentative finding.

13. Section 303(y)(2)(B) of the Act, by requiring that such use "not deter investment in communications services and systems, or technology development," addresses the possibility that too broad an approach to flexibility in spectrum use may have the undesired effect of deterring those investments needed to provide communications services and encourage new technologies on the newly allocated spectrum. We solicit comments from interested parties concerning what restrictions, if any, should be placed on licensee flexibility in order to ensure that the needed investments are made. Where commenters suggest that we restrict how spectrum may be used by a licensee, we are particularly interested in detailed quantitative analyses of the anticipated economic trade-offs between flexibility and investment that led to the proposed constraints.

14. The potential sharing of this spectrum between Broadcast service licensees and Fixed and Mobile wireless licensees further complicates these issues. We seek comment generally on the extent to which such sharing might affect investment in new technologies or more generally affect the development of non-broadcast services in these bands, and how those effects would affect the public. We also seek comment on ways to ensure that the technical rules for the 746-764 MHz and 776-794 MHz bands satisfy the requirement of Section 303(y)(2)(C), that flexible use allocations not result in harmful interference among users.

15. Finally, we seek comment on the extent to which, consistent with the statute, the spectrum here can and should be available for private mobile and private fixed radio services. For example, we note that the *Balanced Budget Notice* seeks comment on whether a new class of licensee called a "Band Manager" should be established to implement licensing of private land mobile services through competitive bidding.<sup>25</sup> We also note that the Land Mobile Communications Council (LMCC) has submitted supplemental comments to its pending petition for rule making (RM-9267), asking the Commission to allocate a portion of the 746-764 and 776-794 MHz spectrum bands for private mobile radio services.<sup>26</sup> Commenters in this proceeding who are interested in bidding on

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<sup>25</sup> Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, WT Docket No. 99-87, Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, RM-9332, Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz, Notice of Proposed Rule Making, FCC 99-52, paras. 88-95, released Mar. 25, 1999 (*Balanced Budget Notice*), 1999 WL 163011.

<sup>26</sup> LMCC Supplemental Comments in RM-9267, April 20, 1999.

these bands in order to provide private mobile or private fixed services, functioning as a Band Manager or through some other mechanism, should address the range of issues raised by the *Balanced Budget Notice* in this regard.

16. We seek to develop service rules that are not based on a Commission prediction of how these bands will ultimately be used, but instead reflect a record that enables us to establish maximum practicable flexibility. We will determine whether implementing the full range of allocated services is practicable on the basis of the record developed with regard to both technical rules, including, *e.g.*, the size of spectrum blocks, geographical licensing basis, and interference limits, and the application of policies and rules that are governed by the classification of the service in legal and administrative terms.

## 2. Spectrum for Each License

17. We request comment on the appropriate amount of spectrum to be provided for each licensee in the two 18 megahertz wide spectrum blocks, and the viability of licensees competing with existing fixed and mobile service providers. For example, we request comment on what size spectrum block may be needed to support, in part or fully, the provision of fixed wireless local loop services. We seek comment on whether the spectrum should be licensed as one large block, or broken down into two or more bandwidths, and whether there should be a mixture of spectrum blocks, depending on the service areas used for licensing.<sup>27</sup>

18. We seek comment on the minimum spectrum blocks needed to enable competitive commercial services. Spectrum blocks of 1 or 2 megahertz may be sufficient to provide for paging and other messaging services. Blocks of 6 or 9 megahertz may enable mobile voice service, analog or digital video services, or point-to-point microwave service. Existing analog and digital television broadcasters use 6 megahertz spectrum blocks. Commenters should also consider the relationship between the amount of spectrum per license and the ability to coordinate operations with other licensees in this spectrum, including the protection of existing broadcast operations in this band during the transition to DTV.<sup>28</sup>

19. We tentatively conclude that this spectrum should be licensed on a paired basis. While broadcasting would not require paired spectrum, it is essential that the spectrum be paired to enable a viable commercial mobile service. The separation of the 746-764 MHz and 776-794 MHz bands by 30 megahertz of spectrum is optimal for paired, two-way operations. It may be easier for a licensee who does not desire paired operation to disaggregate one of the blocks than for a paired user to acquire two individual blocks. We request comment on whether the amount of spectrum for each

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<sup>27</sup> See paras. 20-21, *infra*.

<sup>28</sup> Commission records indicate that as of November, 1998, there were 105 full power TV licensees and 1232 low power and translator TV licensees operating on these bands.

license would affect the decision to have paired spectrum, and specifically whether a decision to license blocks large enough for conventional broadcast service should affect the decision to license paired spectrum. We particularly ask commenters to address how spectrum block issues relate to the findings required by review of flexible use allocations pursuant to Section 303(y) of the Act, as the potential sharing of spectrum between broadcast and wireless services involves a flexible use allocation of spectrum reallocated and redesignated by legislative direction. Whatever initial licensing approach is chosen, we propose to permit parties to bid for multiple licenses. The channelization plan that is adopted should encourage the investment in and rapid deployment of new technologies and services.<sup>29</sup> We request comment on how the number of licensees and spectrum blocks established could affect the deployment of new services and technologies using these frequencies, and the extent to which new services offered in this spectrum would compete with other services.

### 3. Size of Service Areas for Geographic-Area Licensing

20. Part 27 spectrum is licensed based on one of two kinds of service areas.<sup>30</sup> Spectrum in the C and D frequency blocks is licensed using the 12 Regional Economic Area Groupings (REAGs). Spectrum in the A and B frequency blocks is licensed using the 52 Major Economic Areas (MEAs). REAGs and MEAs are based on the 172 Economic Areas (EAs) defined by the U.S. Department of Commerce, as modified by the Commission.

21. Licensing Part 27 spectrum using REAGs and MEAs allowed us to balance competing needs.<sup>31</sup> We have, however, licensed other wireless services occupying spectrum near the newly allocated commercial spectrum using other service areas.<sup>32</sup> We request comment on the type of service area or areas that should be used to license the 746-764 MHz and 776-794 MHz bands. We also seek comment on how the possible use of this spectrum for broadcasting might affect our decision on service areas generally, and specifically on how we could apply the concept of a station's serving the needs and interests of its community of license to a Part 27 service area, depending on our geographic area and spectrum block choices. The relation between geographic service area and spectrum block is especially germane to the sharing of these bands between Commercial Mobile Radio Service (CMRS) and conventional broadcast services, which operate using significantly different power levels. We seek comment on how such sharing would affect the overall relation

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<sup>29</sup> See Section 309(j)(4)(C) of the Communications Act, 47 U.S.C. § 309(j)(4)(C).

<sup>30</sup> Section 27.6 of the Commission's Rules, 47 C.F.R. § 27.6; see also *Part 27 Report and Order*, 12 FCC Rcd 10785, 10814-16 (paras. 54-60) (1997) .

<sup>31</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10814-15 (para. 55).

<sup>32</sup> See, e.g., Section 24.202 of the Commission's Rules, 47 C.F.R. § 24.202 (using Major Trading Areas and Basic Trading Areas); Sections 90.661 and 90.681 of the Commission's Rules, 47 C.F.R. §§ 90.661, 90.681 (using Major Trading Areas and Economic Areas); Section 22.909 of the Commission's Rules, 47 C.F.R. § 22.909 (using Metropolitan Statistical Areas and Rural Service Areas).

between service areas, spectrum channelization, and power levels, compared to service rules that would constrain or preclude broadcast use.

22. We also seek comment on the possible usefulness of combinatorial bidding procedures in this respect. Section 3002 of the Balanced Budget Act of 1997,<sup>33</sup> considered generally at para. 82, requires the Commission to explore the application of procedures that would allow prospective bidders to bid on combinations or groups of licenses in a single bid, and to enter multiple alternative bids within a single bidding round. Such combinatorial procedures might, with respect to the determination of geographic areas, permit the Commission to structure the initial licensing of this spectrum on the basis of comparatively small geographic areas, while enabling licensees to pursue multiple licenses covering larger areas directly, as part of the bidding process. We seek comment on the merits of such procedures, as well as alternatives that would rely on licensing by geographic area, by community of license, or by some combination of these approaches.

## B. Licensing Rules

### 1. Regulatory Status

23. We seek comment on whether to apply the existing licensing framework for Part 27 services to the 746-764 MHz and 776-794 MHz bands. The regulatory framework established in Part 27 for Wireless Communications Service fulfilled the Congressional mandate expressed in Section 3001 of the Omnibus Consolidated Appropriations Act of 1997 to reallocate and assign the use of the frequencies at 2305-2320 and 2345-2360 megahertz.<sup>34</sup> Part 27 was initially adopted to govern services offered on those bands, and accorded licensees the flexibility to provide any fixed, mobile or radiolocation service contained in the Table of Allocations in Part 2 of the Commission's Rules.<sup>35</sup> The regulatory framework of Part 27 includes, *inter alia*: (i) the limitation of eligibility requirements to foreign ownership restrictions set forth in Section 310 of the Communications Act; (ii) exclusion of WCS spectrum holdings from application of the CMRS spectrum cap; (iii) flexibility to partition geographic service areas and disaggregate spectrum blocks; (iv) determination of regulatory status by licensee's designation in their long-form applications; and (v) incorporation, with some exceptions, of the competitive bidding rules set forth in Part 1 of the Commission's Rules.<sup>36</sup> We have since

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<sup>33</sup> Codified at 47 U.S.C. § 309(j)(3).

<sup>34</sup> Omnibus Consolidated Appropriations Act, 1997, P.L. 104-208, 110 Stat. 3009 (1996).

<sup>35</sup> *Part 27 Report and Order*. While mobile services were permitted, we recognized that the Part 27 out-of-band emission limits, established at levels necessary to protect prospective satellite DARS licensees from interference from WCS operations, would make mobile operations in the WCS spectrum technologically infeasible "at least in the foreseeable future." *Part 27 Report and Order*, 12 FCC Rcd at 10854-57 (paras. 136-144).

<sup>36</sup> Additionally, there are technical provisions in Part 27 specific to this framework, as well as other rule parts that may apply depending on the type of service provided by the licensee.

proposed application of the Part 27 framework to development of service and operational rules for other spectrum bands.<sup>37</sup>

24. The Communications Act applies requirements to broadcasters or common carriers that are not applied to other licensees. The licensing framework for Part 27 permits applicants to request common carrier status as well as non-common carrier status for authorization in a single license, rather than require the applicant to choose between common carrier and non-common services,<sup>38</sup> and we propose that a licensee in these redesignated spectrum bands similarly be authorized to provide a variety or combination of fixed and mobile, common carrier and non-common carrier, and broadcast services. The licensee will be able to provide all allowable services anywhere within its licensed area at any time, consistent with its regulatory status and protection requirements. We tentatively conclude that this approach, as applied to the range of fixed and mobile wireless services, is likely to achieve efficiencies in the licensing and administrative process. We consider the possible inclusion of broadcasting service more problematic with respect to licensing and administrative efficiencies, and seek comment on the effect that enabling such services would have on the licensing and administrative process. In order to fulfill our enforcement obligations and ensure compliance with the statutory requirements of Titles II and III of the Communications Act, we propose to require applicants to identify whether they seek to provide common carrier services, broadcast service, or other service as permitted by our final Rules in this proceeding. Our current mobile service application form (Form 601) requires an applicant for mobile services to indicate whether it intends to provide CMRS, Private Mobile Radio Service (PMRS), or both, but does not contemplate fixed or broadcast service. We seek comment on the need to modify Form 601 or any other appropriate form(s) for an applicant seeking to provide broadcast service, either solely or in conjunction with other services under a single license.

25. Under the existing Part 27 framework, the Commission does not require applicants to describe the services they seek to provide beyond designating their regulatory status; it is sufficient that an applicant indicate its choice for regulatory status in a streamlined application process.<sup>39</sup> We propose that applicants and licensees in this 36 megahertz of commercial spectrum similarly be required only to indicate the regulatory status of any services they choose to provide, as permitted in

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<sup>37</sup> See, e.g., *47 GHz Notice*, 13 FCC Rcd at 16968 (para. 51).

<sup>38</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10845-48 (paras. 118-122).

<sup>39</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10848 (para. 121); see also Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, To Reallocate the 19.5-30.0 GHz Frequency Band, To Establish Rules and Policies for Local Multipoint Distribution Service And for Fixed Satellite Services, Petitions for Reconsideration of the Denial of Applications for Waiver of the Commission's Common Carrier Point-to-Point Microwave Radio Service Rules, CC Docket No. 92-297, Suite 12 Group Petition for Pioneer Preference, PP-22, Second Report and Order, Order on Reconsideration, And Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 12545, 12644 (para. 223) (1997) (*LMDS Second Report and Order*); see 47 C.F.R. § 101.1013.

our final rules. We also propose that licensees must notify the Commission within 30 days of service changes that alter the regulatory status of their services.<sup>40</sup> When the change results in the discontinuance, reduction, or impairment of the existing service, a different approach may apply--for example, to implement the requirement in Section 214(a) of the Act that the Commission certify that the public convenience and necessity will not be adversely affected by such actions initiated by carriers.<sup>41</sup> We also seek comment regarding whether the inclusion of broadcast services may sometimes require us to modify this approach. Conventional broadcast licensees are subject to different ownership rules and attribution standards than wireless licensees. For example, what procedures should apply when a licensee changes its offerings from broadcast to non-broadcast services?

## 2. Eligibility; Spectrum Aggregation

26. Sections 27.12 and 27.302 of the Commission's Rules<sup>42</sup> impose no restrictions on eligibility, other than the foreign ownership restrictions set forth in Section 310 of the Communications Act and discussed in the next section. Consistent with these sections of the Part 27 Rules, we propose that there be no restrictions on eligibility for a license in the 746-764 MHz and 776-794 MHz bands. We seek comment on our view that opening this spectrum to as wide a range of applicants as possible will encourage entrepreneurial efforts to develop new technologies and services, while helping to ensure the most efficient use of this spectrum. Commenters also should address whether our proposed policy of universal eligibility should apply to broadcasting.<sup>43</sup> Character qualifications and foreign ownership for broadcasters are specifically discussed below. We also ask whether there are any reasons not to apply Part 73 multiple ownership rules to Part 27 licensees providing conventional broadcasting services.

27. Another example of broadcast-specific issues involves character qualifications. While the character qualification standards applied to broadcasters have provided guidance in common carrier proceedings, we have said they are not "directly applicable" to that context.<sup>44</sup> We seek comment on

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<sup>40</sup> See Sections 101.61(b)(3) and 101.61(c)(9) of the Commission's Rules, 47 C.F.R. §§ 101.61(b)(3), 101.61(c)(9).

<sup>41</sup> 47 U.S.C. § 214(a). This is consistent with the Section 27.71 proposed in the *47 GHz Notice*.

<sup>42</sup> 47 C.F.R. §§ 27.12, 27.302. See also *Part 27 Report and Order*, 12 FCC Rcd at 10828-29 (paras. 80-83).

<sup>43</sup> See, e.g., Section 73.3555 of the Commission's Rules, 47 C.F.R. § 73.3555. We have underway a review of our broadcast ownership rules. See 1998 Biennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, MM Docket No. 98-35, Notice of Inquiry, 13 FCC Rcd 11276 (1998).

<sup>44</sup> In issuing a Notice of Apparent Liability to MCI for premature and/or unauthorized construction, the Commission stated: "Although not directly applicable to common carriers, the character qualifications standards

whether there is any reason that conventional broadcasters who share spectrum with Part 27 wireless services, including wireless common carrier offerings, should not be governed by the existing standards applied to Part 73 licensees. We also seek comment on whether there is any reason we cannot apply our current rules to decide whether an entity that has been disqualified from holding a conventional Part 73 broadcasting license pursuant to our character qualification rules should be eligible to provide non-broadcasting services pursuant to a Part 27 license.

28. Currently, Part 27 services do not count against the spectrum cap on CMRS spectrum licensees.<sup>45</sup> The 746-764 MHz and 776-794 MHz bands may be used for mobile services that are comparable to the cellular, broadband Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) spectrum for which the CMRS cap was devised. While we do not propose a spectrum cap for Part 27 services generally, we seek comment on whether the commercial spectrum, if used to provide CMRS, should count against the 45 megahertz spectrum cap that applies to certain CMRS licensees. If the CMRS spectrum cap is applied to this spectrum, we seek comment on whether the spectrum cap should be adjusted in any way. We also seek comment on whether there should be any restriction on the amount of spectrum that any one licensee may obtain in the 746-764 MHz and 776-794 MHz bands in the same licensed geographic service area. Commenters addressing this aggregation issue should consider the varying bandwidth requirements of the different types of services that could use the 36 megahertz of commercial spectrum.

### 3. Foreign Ownership Restrictions

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adopted in the broadcast context can provide guidance in the common carrier area as well.” MCI Telecommunications Corporation, Petition for Revocation of Operating Authority, Order and Notice of Apparent Liability, 3 FCC Rcd 509, 515 n.14 (1988), Order, 3 FCC Rcd 3155 (1988), Supplemental Order, 4 FCC Rcd 7299 (1988), *appeal dismissed for lack of standing*, 901 F.2d 1131 (Table), 1990 WL 58394 (D.C. Cir. 1990).

<sup>45</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10832-34 (paras. 87-91). See Section 20.6(a) of the Commission's Rules, 47 C.F.R. § 20.6(a); see also Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, WT Docket No. 96-59, Amendment of the Commission's Cellular/PCS Cross-Ownership Rule, GN Docket No. 90-314, Report and Order, 11 FCC Rcd 7824, 7869-76 (paras. 94-107) (1996) (*PCS Competitive Bidding Report and Order*). The Commission has initiated a review of spectrum cap policy. 1998 Biennial Regulatory Review--Spectrum Aggregation Limits for Wireless Telecommunications Carriers, WT Docket No. 98-205, Cellular Telecommunications Industry Association's Petition for Forbearance from the 45 MHz CMRS Spectrum cap, Amendment of Parts 20 and 24 of the Commission's Rules--Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, WT Docket No. 96-59, Implementation of Sections 3(n) and 332 of the Communications Act, GN Docket No. 93-252, Notice of Proposed Rulemaking, FCC 98-308, released Dec. 10, 1998, 1998 WL 853048.

29. Sections 310(a) and 310(b) of the Communications Act<sup>46</sup> impose foreign ownership and citizenship requirements that restrict the issuance of licenses to certain applicants. Section 27.12 of the Commission's Rules, which implements Section 310 of the Act,<sup>47</sup> would by its terms apply to applicants for licenses in the 746-764 MHz and 776-794 MHz bands. An applicant requesting authorization only for non-common carrier or non-broadcast services would be subject to Section 310(a) but not to the additional prohibitions of Section 310(b). An applicant requesting authorization for broadcast or common carrier services would be subject to both Section 310(a) and Section 310(b).

30. The statutory foreign ownership restrictions will still be applicable to the extent the restrictions apply to a particular service being offered in this commercial spectrum. In response to the World Trade Organization (WTO) Basic Telecommunications Agreement, the Commission recently liberalized its policy for applying its discretion with respect to foreign ownership of common carrier radio licensees under Section 310(b)(4).<sup>48</sup> The Commission now presumes that ownership by entities from countries that are WTO members serves the public interest. Ownership by entities from

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<sup>46</sup> 47 U.S.C. §§ 310(a), 310(b). Section 310(a) provides:

- (a) The station license required under this Act shall not be granted to or held by any foreign government or the representative thereof.

Section 310(b) provides:

- (b) No broadcast or common carrier or aeronautical en route or aeronautical fixed radio station license shall be granted to or held by--

- (1) any alien or the representative of any alien;
- (2) any corporation organized under the laws of any foreign government;
- (3) any corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country;
- (4) any corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country, if the Commission finds that the public interest will be served by the refusal or revocation of such license.

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

<sup>48</sup> We did not amend our rules for broadcast licenses, which are not covered by the WTO Basic Telecommunications Agreement.

countries that are not WTO members continues to be subject to the “effective competitive opportunities” test established by the Commission.<sup>49</sup>

31. In the filing of an application under the Multipoint Distribution Service (MDS), satellite, and Local Multipoint Distribution Service (LMDS) rules, the Commission requires any applicant electing non-common carrier status to submit the same information that common carrier applicants submit to address the alien ownership restrictions under Section 310(b) of the Act.<sup>50</sup> We propose to follow the same approach in the case of applicants for the 746-764 MHz and 776-794 MHz spectrum. Broadcasters, common carriers, and non-common carriers would not be subject to varied reporting obligations, but would all be required to file changes in foreign ownership information to the extent required by Part 27 of our Rules. In light of Part 27 licensees' potential ability to provide broadcast, common carrier, and non-common carrier services,<sup>51</sup> Commission rules would require all licensees, even non-common carriers, to report alien ownership on a consistent basis, to better enable the Commission to monitor compliance. By establishing parity in reporting obligations, however, we would not establish a single substantive standard for compliance. We, of course, do not and would not disqualify an applicant requesting authorization exclusively to provide non-common carrier and non-broadcast services from a licensee simply because its citizenship information would disqualify it from a common carrier or broadcast license. We request comment on this proposal.

#### 4. Performance Requirements

32. Section 27.14(a) of the Commission's Rules requires Wireless Communications Service (WCS) licensees to provide “substantial service” to their service area within 10 years of being licensed; a failure to meet this requirement results in forfeiture of the license and the licensee's ineligibility to regain it.<sup>52</sup> The performance requirement arises from Section 309(j)(4)(B) of the Act,

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<sup>49</sup> See Rules and Policies on Foreign Participation in the U.S. Telecommunications Market and Market Entry and Regulation of Foreign-Affiliated Entities, IB Docket Nos. 97-142 and 95-22, Report and Order and Order on Reconsideration, 12 FCC Rcd 23891, 23935-47 (paras. 97-132) (1997).

<sup>50</sup> 47 U.S.C. § 310(b). See Revisions to Part 21 of the Commission's Rules Regarding the Multipoint Distribution Service, CC Docket No. 86-179, Report and Order, 2 FCC Rcd 4251, 4253 (para. 16) (1987) (*MDS Report and Order*); Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures, IB Docket No. 95-117, Report and Order, 11 FCC Rcd 21581, 21599 (para. 43) (1996) (*Satellite Rules Report and Order*); *LMDS Second Report and Order*, 12 FCC Rcd at 12650-51 (para. 243).

<sup>51</sup> *Satellite Rules Report and Order*, 11 FCC Rcd at 21599 (para. 43); *LMDS Second Report and Order*, 12 FCC Rcd at 12651 (para. 243).

<sup>52</sup> 47 C.F.R. § 27.14(a). This section defines substantial service as “service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal.” *Part 27 Report and Order*, 12 FCC Rcd at 10843-45 (paras. 111-115) (adopting 47 C.F.R. § 27.14(a)).

which states that competitive bidding procedures will include such provisions.<sup>53</sup> The *Part 27 Report and Order* provided several examples of “safe harbors” that would demonstrate substantial service.<sup>54</sup>

33. We have stated that the construction requirement provides licensees with the flexibility to offer the full range of services under the allocations table and accommodate new and innovative services.<sup>55</sup> We propose generally to subject licensees in the 36 megahertz of commercial spectrum to the same standard, and we propose and seek comment on the following “safe harbors” for the 746-764 MHz and 776-794 MHz bands: (1) For a licensee that chooses to offer fixed services or point-to-point services, the construction of four permanent links per one million people in its licensed service area at the 10-year renewal mark would constitute substantial service; (2) For a licensee that chooses to offer mobile services or point-to-multipoint services, a demonstration of coverage to 20 percent of the population of its licensed service area at the 10-year renewal mark would constitute substantial service.

34. We also seek comment on distinct issues raised by applying this proposal to potential broadcast use of the spectrum. Broadcast permittees operating pursuant to Part 73 are required to construct their facilities within three years.<sup>56</sup> We request comment on whether there are any reasons not to apply these rules to broadcasters on these bands.

35. We tentatively conclude that the existing Part 27 build-out requirements applied to wireless licensees, and the Part 73 construction requirements applied to Broadcast permittees, fulfill our obligations under Section 309(j)(4)(B) of the Act.<sup>57</sup> We also tentatively conclude that the auction rules that we propose to apply to these services, together with the service rules that we are

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<sup>53</sup> Section 309(j)(4)(B) states that the competitive bidding methodologies implementing each class of licenses subject to auction: (B) [shall] 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>54</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10844 (para. 113).

<sup>55</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10843 (para. 112).

<sup>56</sup> See Section 73.3598 of the Commission's Rules, 47 C.F.R. § 73.3598; 1998 Biennial Regulatory Review -- Streamlining of Mass Media Applications, Rules, and Processes, MM Docket No. 98-43, Policies and Rules Regarding Minority and Female Ownership of Mass Media Facilities, MM Docket No. 94-149, Report and Order, 13 FCC Rcd 23056, 23087-93 (paras. 77-90) (1998).

<sup>57</sup> *Part 27 Report and Order* at 10844-45 (paras. 114-115) (citing 47 U.S.C. § 309(j)(4)(B)); see also *Melcher v. FCC*, 134 F.3d 1143 (D.C.Cir. 1998)(reasonable to prohibit incumbent local exchange carriers from holding Local Multipoint Distribution Service (LMDS) licenses in same area they provide telephone service, for three year period after LMDS auction).

proposing and our overall competition and universal service policies, constitute effective safeguards and performance requirements for licensing this spectrum. We would also intend to reserve the right to review our construction requirements in the future if we receive complaints related to Section 309(j)(4)(B), or if a reassessment is warranted because spectrum is being warehoused or otherwise is not being used despite demand. We also will reserve the right to impose additional, more stringent construction requirements on licenses in the future in the event of actual anticompetitive or universal service problems. We solicit comment on these proposals and views regarding performance requirements.

## 5. Disaggregation and Partitioning of Licenses

36. We propose to permit licensees in the 746-764 MHz and 776-794 MHz bands to partition their service areas and to disaggregate their spectrum. We tentatively conclude that geographic partitioning and spectrum disaggregation can result in efficient spectrum use and economic opportunity for a wide variety of applicants, including small business, rural telephone, minority-owned, and women-owned applicants, as required by Section 309(j)(4)(C) of the Communications Act.<sup>58</sup> We also tentatively conclude that our proposed approach will provide a means to overcome entry barriers through the creation of smaller licenses that require less capital, thereby facilitating greater participation by rural telephone companies and other smaller entities, many of which are owned by minorities and women.<sup>59</sup>

37. Section 27.15 of the Commission's Rules<sup>60</sup> provides that licensees may apply to partition their licensed geographic service areas or disaggregate their licensed spectrum at any time following the grant of their licenses.<sup>61</sup> The Commission has decided to permit geographic partitioning of any service area defined by the partitioner and partitionee, to permit spectrum disaggregation without restriction on the amount of spectrum to be disaggregated, and to permit combined partitioning and disaggregation.<sup>62</sup> We request comment on our proposal that licensees in the 746-764 MHz and 776-794 MHz bands be eligible to the same extent to partition service areas and disaggregate spectrum.

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<sup>58</sup> 47 U.S.C. § 309(j)(4)(C).

<sup>59</sup> See *Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees; Implementation of Section 257 of the Communications Act – Elimination of Market Entry Barriers*, WT Docket No. 96-148, Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 21831, 21843-44 (paras. 13-17) (1996) (*Partitioning and Disaggregation Report and Order*).

<sup>60</sup> 47 C.F.R. § 27.15.

<sup>61</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10836-39 (paras. 96-103).

<sup>62</sup> *Id.* at 10836-37, 10839 (paras. 97-99, 102), (citing *Partitioning and Disaggregation Report and Order*, 11 FCC Rcd at 21847-48 (paras. 23-24)).

38. Pursuant to Section 27.15, the partitioning licensee must include with its request a description of the partitioned service area and a calculation of the population of the partitioned service area and the licensed geographic service area.<sup>63</sup> Section 27.15 also contains provisions against unjust enrichment.<sup>64</sup> We propose to adopt these provisions, as well as the remaining provisions governing partitioning and disaggregation in Section 27.15, for licensees in the 746-764 MHz and 776-794 MHz bands.

39. We also propose to adopt the methods that the Commission adopted in the *Part 27 Report and Order* for parties to partitioning, disaggregation, or combined partitioning and disaggregation agreements to meet construction build-out requirements.<sup>65</sup> Specifically, we propose to allow parties to partitioning agreements to choose between two options for satisfying the construction requirements. Under the first option, the partitioner and partitionee would each certify that it will independently satisfy the substantial service requirement for its respective partitioned area. If a licensee fails to meet its substantial service requirement during the relevant license term, the non-performing licensee's authorization would be subject to cancellation at the end of the license term. Under the second option, the partitioner certifies that it has met or will meet the substantial service requirement for the entire market. If the partitioner fails to meet the substantial service standard during the relevant license term, however, only its license would be subject to cancellation at the end of the license term. The partitionee's license would not be affected by that failure.

40. Our proposal to offer two options to partitioning parties is based on our belief that Part 27 licensees may be motivated to enter into partitioning arrangements for different reasons and under various circumstances. For example, a Part 27 licensee might be motivated to partition its license in order to reduce its construction costs. In that case, the original licensee would have less population to cover in order to meet its substantial service requirement. Thus, it may find the first option most attractive for its purposes. Under another scenario, a Part 27 licensee that has met or is close to meeting its substantial service requirement may be approached by another entity interested in serving a niche market in a portion of the service area. Under these circumstances, the second option may seem most attractive to the parties.

41. Finally, we propose to allow parties to disaggregation agreements to choose between two options for satisfying the construction requirements. Under the first option, the disaggregator and disaggregatee would certify that they each will share responsibility for meeting the substantial service requirement for the geographic service area. If parties choose this option, both parties' performance

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<sup>63</sup> 47 C.F.R. § 27.15(b)(1).

<sup>64</sup> 47 C.F.R. § 27.15(c)(1)(2); *see also* 47 C.F.R. § 1.2111.

<sup>65</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10836 (para. 96) (“We also conclude that the specific rules pertaining to partitioning and disaggregation in WT Docket No. 96-148 shall apply to WCS licensees.”); *see also Partitioning and Disaggregation Report and Order*, 11 FCC Rcd at 21857, 21865 (paras. 42, 62-63).

will be evaluated at the end of the relevant license term and both licenses could be subject to cancellation. The second option would allow the parties to agree that either the disaggregator or the disaggregatee would be responsible for meeting the substantial service requirement for the geographic service area. If parties choose this option, and the party responsible for meeting the construction requirement fails to do so, only the license of the non-performing party would be subject to cancellation.

## 6. License Term; Renewal Expectancy

42. Part 27 of the Commission's Rules limits license terms to 10 years from the date of original issuance or renewal.<sup>66</sup> Section 27.14(c) establishes a right to a renewal expectancy.<sup>67</sup> The Communications Act, however, states that the license term for a broadcast station shall not exceed eight years.<sup>68</sup> In addition, the statute specifies renewal criteria for broadcast stations.<sup>69</sup> We seek comment on the appropriate license term for all licensees in the proposed 746-764 MHz and 776-794 MHz bands, including those potentially offering broadcast service. We seek comment on whether it would be appropriate to have different license terms, depending on the type of service offered by the licensee, and on the distinctions between the statutory and Part 73 renewal criteria for conventional broadcast stations and our renewal expectancy for, *e.g.*, datacasting and other wireless services. We also seek comment on how we would administer such an approach, particularly if licensees provide more than one service in their service area, or decide to change the type of service they plan to offer.

43. We propose, in the event that a license is partitioned or disaggregated, that any partitionee or disaggregatee be authorized to hold its license for the remainder of the original licensee's term, and that the partitionee or disaggregatee may obtain a renewal expectancy on the same basis as other Part 27 licensees (or, if subject to Part 73, on the same basis as other Part 73 licensees). We further propose that all licensees meeting the substantial service requirement will be deemed to have met this facet of the renewal expectancy requirement regardless of which of the Part 27 construction options the licensees chose. We tentatively conclude that this approach is appropriate because a licensee, through partitioning, should not be able to confer greater rights than it was awarded under the terms of its license grant.<sup>70</sup> We also seek comment on whether a non-

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<sup>66</sup> Section 27.13 of the Commission's Rules, 47 C.F.R. § 27.13.

<sup>67</sup> Section 27.14(c) of the Commission's Rules, 47 C.F.R. § 27.14(c).

<sup>68</sup> Section 307(a) of the Communications Act, 47 U.S.C. § 307(a).

<sup>69</sup> Section 309(k) of the Communications Act, 47 U.S.C. § 309(k).

<sup>70</sup> See Sections 27.15(a), 27.15(d), 27.324(b)(4) of the Commission's Rules, 47 C.F.R. §§ 27.15(a), 27.15(d), 27.324(b)(4); see also *Part 27 Report and Order*, 12 FCC Rcd at 10840 (para. 106).

broadcast renewal applicant involved in a comparative renewal proceeding<sup>71</sup> should include at a minimum the showing that the Commission adopted in Section 27.14(c) of the Commission's Rules to claim a renewal expectancy, and similarly, what showing a broadcast renewal applicant should include to claim the renewal expectancy established by Section 309(k) of the Act.<sup>72</sup>

## 7. Public Notice

44. Section 309(b) and Section 309(d) of the Communications Act require public notice for initial applications and substantial amendments filed by broadcasters or radio common carriers.<sup>73</sup> These requirements state that no such application shall be granted earlier than 30 days following the issuance of public notice by the Commission, and that the Commission may not require petitions to deny such applications to be filed earlier than 30 days following the public notice. The same provision also grants the Commission the authority to impose public notice requirements for other licenses, even though public notice is not required by the statute. However, the administrative procedures for spectrum auctions adopted by Section 3008 of the Balanced Budget Act of 1997<sup>74</sup> permit the Commission to shorten notice periods in the auction context to a five-day petition to deny period and a seven-day public notice period, notwithstanding the provisions of Section 309(b) of the Communications Act.

45. In the *Part 1 Third Report and Order*<sup>75</sup> the Commission exercised this statutory authority, and amended Section 1.2108(b) and Section 1.2108(c) of the Commission's Rules<sup>76</sup> to provide for a five-day period for filing petitions to deny and a seven-day public notice period for all auctionable services. We tentatively conclude below that services in the 746-764 MHz and 776-794 MHz spectrum will be auctionable services, so that the seven-day public notice period is applicable. We note, however, that in the *Part 1 Second Further Notice* the Commission has sought comment on whether longer periods should be generally applicable for some services.<sup>77</sup>

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<sup>71</sup> See Section 27.14(b) of the Commission's Rules, 47 C.F.R. § 27.14(b); see also *Part 27 Report and Order*, 12 FCC Rcd at 10840, 10843-44 (paras. 106, 113).

<sup>72</sup> 47 U.S.C. § 309(k).

<sup>73</sup> 47 U.S.C. §§ 309(b), 309(d).

<sup>74</sup> 47 U.S.C. § 309 nt.

<sup>75</sup> Amendment of Part 1 of the Commission's Rules – Competitive Bidding Proceeding, WT Docket No. 97-82, Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, 4660-4685 MHz, ET Docket No. 94-32, Third Report and Order and Second Further Notice of Proposed Rulemaking, 13 FCC Rcd 374, 431 (para. 98) (1997) (*Part 1 Third Report and Order*) (*Part 1 Second Further Notice*).

<sup>76</sup> 47 C.F.R. §§ 1.2108(b), 1.2108(c).

<sup>77</sup> *Part 1 Second Further Notice*, 13 FCC Rcd at 431 (para. 98).

46. In light of the potential for sharing of this spectrum between broadcast and wireless services, and the differences between their regulatory requirements, we seek comment on whether we should exercise our statutory discretion to require a minimum period of 15 days for public notice of applications of wireless common carriers and broadcast stations, in instances where our Rules establish a notice requirement, and a minimum period of 10 days for the filing of petitions to deny the applications of wireless common carriers and broadcast stations.<sup>78</sup> Commenters should address whether imposing a 15-day notice requirement would be an undue burden on such applicants, and whether it would be administratively useful by enabling us to ensure that any applicant filing for both common carrier and non-common carrier authorizations in a single license is in compliance with (1) the licensing requirements for common carriers and broadcasters established in Title III of the Communications Act; and (2) any related requirements we may adopt. Commenters also should address whether we should allow all licensees to make subsequent status changes under reduced notification requirements.<sup>79</sup>

### C. Operating Rules

47. We propose to subject licensees in the 746-764 MHz and 776-794 MHz bands to the Part 27 rules that govern operations, except for modifications that we may adopt for this spectrum as a result of this proceeding. We seek comment generally on the applicability of these rules to this spectrum. We also seek comment on whether any operating rules contained in other Parts of the Commission's Rules should be adopted for the 746-764 MHz and 776-794 MHz bands. In addition, we ask commenters to suggest any alternatives to such regulations governing a licensee's operations in order to minimize the potential significant economic impact, if any, from such rules on small entities.

#### 1. Applicability of General Common Carrier Obligations

48. Title II of the Communications Act imposes a variety of obligations on the operations of common carriers that are not otherwise imposed on wireless communications services. Non-common carrier wireless licensees, for example, are not subject to statutory requirements that rates be just and reasonable, or the statutory prohibition against unjust and unreasonably discriminatory rates, facilities, and other aspects of common carrier service. In addition to the alien ownership restrictions and the licensing requirements for public notice in Title III of the Communications Act, discussed

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<sup>78</sup> In implementing Balanced Budget Act amendments to Section 309(j) that establish Commission authority to auction commercial broadcast licenses, the Commission established a petition to deny period of ten days for broadcast applications obtained through the competitive bidding process. *Competitive Bidding (Broadcast) Order*, 13 FCC Rcd at 15985 (para. 165).

<sup>79</sup> See *LMDS Second Report and Order*, 12 FCC Rcd 12,649 (paras. 238-239).

above,<sup>80</sup> there are a number of statutory operational requirements that apply generally to common carriers concerning the filing of tariffs, maintaining of records, liabilities, and discontinuance of service, among others. We have forbore from applying many of those requirements in certain situations.<sup>81</sup> Under Section 332(c)(1)(A) of the Communications Act, the Commission exercised its authority to forbear from certain of the obligations in implementing the provisions establishing CMRS and Private Mobile Radio Service.<sup>82</sup> Thus, common carriers that are providing mobile services under Part 27 and which are classified as CMRS must adhere to the Title II requirements specified in Section 20.15(a) of the Commission's Rules,<sup>83</sup> but, as specified in Section 20.15(b), CMRS providers are not required to file contracts of service, seek authority for interlocking directors, submit applications for new facilities or discontinuance of existing facilities,<sup>84</sup> and, as specified in Section 20.15(c), CMRS providers are prohibited from filing "tariffs for interstate service to their customers, or for interstate access service."<sup>85</sup> The Commission has also extended the deadline for CMRS providers to support service provider local number portability (LNP) until November 24, 2002.<sup>86</sup> Moreover, the Commission has forbore from requiring CMRS providers to file tariffs for most international services, and from applying Section 226 of the Act, relating to telephone operator services.<sup>87</sup>

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<sup>80</sup> See paras. 29-31, 44-46, *supra*.

<sup>81</sup> Thus, for example, the Commission in 1997 determined to forbear from imposing tariff filing requirements on providers of interexchange access services other than incumbent local exchange carriers, and initiated a broader proceeding to consider detariffing of competitive local exchange carriers generally. Hyperion Telecommunications, Inc. Petition Requesting Forbearance, CCB/CPD No. 96-3, Complete Detariffing for Competitive Access Providers and Competitive Local Exchange Carriers, CC Docket No. 97-146, Memorandum Opinion and Order and Notice of Proposed Rulemaking, 12 FCC Rcd 8596 (1997).

<sup>82</sup> Implementation of Sections 3(n) and 332 of the Communications Act – Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Second Report and Order, 9 FCC Rcd 1411, 1463-90 (paras. 124-213) (1994)(*CMRS Second Report and Order*), *recon. pending*.

<sup>83</sup> 47 C.F.R. § 20.15.

<sup>84</sup> *CMRS Second Report and Order*, 9 FCC Rcd at 1475-93, 1510-11 (paras. 164-219, 272) (authorizing forbearance from 47 U.S.C. §§ 203, 204, 205, 211, 212, 214).

<sup>85</sup> Section 20.15(c) of the Commission's Rules, 47 C.F.R. § 20.15(c).

<sup>86</sup> Cellular Telecommunications Industry Association's Petition for Forbearance from Commercial Mobile Radio Services Number Portability Obligations, WT Docket No. 98-229, Memorandum Opinion and Order, FCC 99-19, released Feb. 9, 1999, 1999 WL 58618.

<sup>87</sup> Personal Communications Industry Association's Broadband Personal Communications Services Alliance's Petition for Forbearance For Broadband Personal Communications Services, Biennial Regulatory Review - Elimination or Streamlining of Unnecessary and Obsolete CMRS Regulations, Forbearance from Applying Provisions of the Communications Act to Wireless Telecommunications Carriers, WT Docket No. 98-100, Further

49. The Communications Act provides the Commission with expanded authority to forbear from additional provisions of the Communications Act.<sup>88</sup> Under this authority, the Commission has required the “complete detariffing”<sup>89</sup> of interstate, interexchange services offered by non-dominant interexchange carriers.<sup>90</sup> In addition, as part of the Commission's biennial review of regulations, pursuant to Section 11 of the Act,<sup>91</sup> the Commission has eliminated Part 41 requirements as they apply to franks for interstate and international services as issued by common carriers regulated by the Act to common carriers regulated by Act, as well as to common carriers not regulated by the Act; and also as they apply to any franks for interstate and international services as may be issued by wireless common carriers regulated by the Act to common carriers not regulated by the Act and to others.<sup>92</sup> These forbearance actions will apply to common carriers operating under Part 27. The Commission has also eliminated prior approval requirements for most *pro forma* transfer applications

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Forbearance from Title II Regulation for Certain Types of Commercial Mobile Radio Service Providers, GN Docket No. 94-33, GTE Petition for Reconsideration or Waiver of a Declaratory Ruling, MSD-92-14, Memorandum Opinion and Order and Notice of Proposed Rulemaking, 13 FCC Rcd 16857 (1998), *recon. pending*. The Commission there initiated a Notice of Proposed Rulemaking seeking comment on further forbearance from application of Section 226 and other regulations or provisions of the Act to wireless telecommunications carriers.

<sup>88</sup> 47 U.S.C. § 160.

<sup>89</sup> “Complete detariffing” refers to a policy of neither requiring nor permitting non-dominant interexchange carriers to file tariffs pursuant to Section 203 of the Communications Act for their interstate, domestic, interexchange services. *See, e.g.*, Policy and Rules Concerning the Interstate, Interexchange Marketplace, Implementation of Section 245(g) of the Communications Act of 1934, As Amended, CC Docket No. 96-61, Order on Reconsideration, 12 FCC Rcd 15014, 15016 (para. 2 n.5) (*Detariffing Reconsideration Order*).

<sup>90</sup> Policy and Rules Concerning the Interstate, Interexchange Marketplace, Implementation of Section 245(g) of the Communications Act of 1934, As Amended, CC Docket No. 96-61, Second Report and Order, 11 FCC Rcd 20730 (1996) (*Detariffing Second Report and Order*). Following a stay of the *Detariffing Second Report and Order* by the Court of Appeals for the District of Columbia Circuit, and upon the petitions of a number of parties who claimed that the public disclosure requirement contained in that Order would lead to some of the same ills that prompted the Commission to order complete detariffing, the Commission eliminated the public disclosure requirement. *Detariffing Reconsideration Order*, 12 FCC Rcd at 15,047-54 (paras. 59-73). Acting on petitions for reconsideration of that Order, the Commission subsequently concluded that consumers should have ready access to information concerning the rates, terms, and conditions governing the provision of interstate, interexchange services offered by non-dominant carriers. The Commission therefore reinstated the public disclosure requirement that was originally established in the *Detariffing Second Report and Order*, and also required carriers that have Internet Websites to post this information on-line. Policy and Rules Concerning the Interstate, Interexchange Marketplace, Implementation of Section 245(g) of the Communications Act of 1934, As Amended, CC Docket No. 96-61, Second Order on Reconsideration and Erratum, FCC 99-47, released March 31, 1999 (*Detariffing Second Reconsideration Order*), 1999 WL 176557.

<sup>91</sup> 47 U.S.C. § 161.

<sup>92</sup> 1998 Biennial Regulatory Review — Elimination of Part 41 Telegraph and Telephone Franks, CC Docket No. 98-119, Report and Order, FCC 98-344, released Feb. 3, 1999, 1999 WL 46911.

involving telecommunications carriers.<sup>93</sup> In the *47 GHz Notice*, which proposed service rules for spectrum bands allocated to both fixed and mobile services, though not broadcast services, we sought comment on whether the exercise of forbearance authority in the *CMRS Second Report and Order*, under Section 332(c)(1)(A) of the Act, should be extended to fixed service carriers.<sup>94</sup>

50. We similarly seek comment in this context on whether we should exercise our authority under Section 10 of the Act to forbear from applying to non-CMRS licensees of this spectrum the specific Title II requirements that the Commission previously has determined not to apply to CMRS licensees. Specifically, we seek comment on application of each of the three conditions specified by Section 10 of the Act in the context of services in the 746-764 MHz and 776-794 MHz bands. Under the first two parts of the test, we request in particular comment on the definition of “consumer,” what information we should consider when performing these evaluations, and examples of applying these tests in evaluating whether forbearance is appropriate. With respect to the third condition, we seek comment on the appropriate market that would apply to fixed, common carrier licensees in the 746-764 MHz and 776-794 MHz bands. We note that we have not forbore from regulation of fixed wireless services in service rule proceedings for the 24, 28, and 39 GHz bands.<sup>95</sup> We therefore also ask commenters to address how, if at all, that should affect our forbearance decisions in this proceeding. For instance, should such determinations more appropriately be made,

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<sup>93</sup> Federal Communications Bar Association's Petition for Forbearance from Section 310(d) of the Communications Act Regarding Non-Substantial Assignments of Licenses and Transfers of Control Involving Telecommunications Carriers Licensed by the Wireless Telecommunications Bureau, Memorandum Opinion and Order, 13 FCC Rcd 6293 (1998). *See also* Biennial Regulatory Review -- Amendment of Parts 0, 1, 13, 22, 24, 26, 27, 80, 87, 90, 95, 97 and 101 of the Commission's Rules to Facilitate Development and Use of the Universal Licensing System in the Wireless Telecommunications Services, WT Docket No. 98-20, Report and Order, FCC 98-234, released Oct. 21, 1998, 1998 WL 735878. *But see* Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules To Redesignate the 27.5-29.5 GHz Frequency Band, To Reallocate the 29.5-30.0 GHz Frequency Band, To Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, CC Docket No. 92-297, Petitions for Further Reconsideration of the Denial of Application for Waiver of the Commission's Common Carrier Point-to-Point Microwave Radio Service Rules, Fourth Report and Order, 13 FCC Rcd 11655, 11669-71 (paras. 27-29) (1998) (Partition and disaggregation agreements subject to formal assignment process). *See also* 1998 Biennial Regulatory Review -- Streamlining of Mass Media Applications, Rules, and Processes, MM Docket No. 98-43, Notice of Proposed Rulemaking, 13 FCC Rcd 11349, 11376-79 (paras. 72-82) (1998) (Section 310(d), 47 U.S.C. § 310(d), requires prior Commission approval of transfer or assignment ?in any manner;” revisions to rules governing common carrier transfers and assignments distinguished as based on statutory forbearance authority.)

<sup>94</sup> The statutory sections affected by that Order are 47 U.S.C. §§ 203, 204, 205, 211, 212 and 214.

<sup>95</sup> *See, e.g.*, Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band, to Reallocate the 29.5 - 30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Services and for Fixed Satellite Services, CC Docket No. 92-297, and Suite 12 Group Petition for Pioneer's Preference, PP-22, Third Notice of Rulemaking and Supplemental Tentative Decision, 11 FCC Rcd 53, 65-66 (para.109) (1995) (*LMDS Third Notice*); *39 GHz Report and Order*, 12 FCC Rcd at 18636 (para. 76) (Common carriage permitted without discussion of forbearance).

or necessarily be made, in service rule proceedings for individual bands, or should the Commission develop standards for determining the weight to be accorded (1) the circumstances of specific services and (2) the broader considerations of regulatory consistency?

51. In light of the fact that it may take longer for the Commission to conduct a forbearance analysis than to adopt service rules for the 746-764 MHz and 776-794 MHz bands, we propose during the interim: (1) to adopt a discontinuance provision that is consistent with common carrier obligations set forth in Subpart E of Part 1 and in Part 61 through Part 64 of the Commission's Rules;<sup>96</sup> and (2) to apply other parts of the Commission's Rules to ensure compliance of fixed common carriers with Title II of the Communications Act.

52. Section 214(a) of the Communications Act<sup>97</sup> requires that no common carrier may discontinue, reduce, or impair service without Commission approval. We propose that if a fixed, common carrier Part 27 licensee voluntarily discontinues, reduces, or impairs service to a community or part of a community, it must obtain prior authorization as provided under Section 63.71 of the Commission's Rules,<sup>98</sup> but an application would be granted within 30 days after filing if no objections were received. We propose that if a non-common carrier Part 27 licensee voluntarily discontinues, reduces, or impairs service to a community or part of a community, it must give written notice to the Commission within seven days.<sup>99</sup> We also propose, however, that neither a fixed, common carrier, nor non-common carrier Part 27 licensee need surrender its license for cancellation if discontinuance is a result of a change in status from common carrier to non-common carrier or the reverse.<sup>100</sup>

53. We further propose that if the service provided by a fixed common carrier Part 27 licensee is involuntarily discontinued, reduced, or impaired for a period exceeding 48 hours, the licensee must promptly notify the Commission, in writing, as to the reasons for the discontinuance, reduction, or impairment of service, including a statement indicating when normal service is to be resumed.<sup>101</sup> We propose that when normal service is resumed, the licensee must promptly notify the Commission. We seek comment on these proposals.

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<sup>96</sup> 47 C.F.R. Part 1, Subpart E, Parts 61-64.

<sup>97</sup> 47 U.S.C. § 214(a).

<sup>98</sup> 47 C.F.R. § 63.71.

<sup>99</sup> This is consistent with the modification of Section 101.305(c) of the Commission's Rules, 47 C.F.R. § 101.305(c), adopted for LMDS. *LMDS Second Report and Order*, 12 FCC Rcd at 12655 (para. 254).

<sup>100</sup> See *LMDS Second Report and Order*, 12 FCC Rcd at 12655 (para. 255).

<sup>101</sup> See *LMDS Second Report and Order*, 12 FCC Rcd at 12654-55 (paras. 252-255).

54. Section 312(g) of the Communications Act provides that the license of any broadcasting station that fails to transmit broadcast signals for any consecutive 12-month period expires as a matter of law at the end of that period.<sup>102</sup> In addition, Section 73.1750 of the Commission's Rules states that a licensee of a broadcast station shall notify the Commission of permanent discontinuance of operation at least two days before operation is discontinued.<sup>103</sup> We ask whether any considerations may suggest that we should adopt different provisions for broadcast services provided over this spectrum under Part 27. For example, how should we should treat a prolonged discontinuance of broadcast service licensed under Part 27 that would require termination of the license under Section 312(g), when a counterpart wireless service licensee, or an overall licensee who has chosen to use a portion of its spectrum block for broadcasting, would still have several years in which to demonstrate performance?

## 2. Equal Employment Opportunity

55. Part 27 does not include an explicit Equal Employment Opportunity (EEO) provision. Nor do Parts 24 (PCS) or Part 26 (General Wireless Communications Service). We note that there are specific EEO provisions for fixed service providers in Parts 21 and 101, including both common carrier and non-common carrier LMDS licensees;<sup>104</sup> and for common carrier mobile service providers in Parts 22 and 90, though these latter provisions do not apply to PMRS providers because they are not common carriers.<sup>105</sup> In addition, Part 25 contains EEO rules for entities that use an owned or leased fixed satellite service facility to provide more than one channel of video programming directly to the public,<sup>106</sup> and Part 73 contains rules for broadcasters.<sup>107</sup>

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<sup>102</sup> Section 312(g) of the Communications Act, 47 U.S.C. § 312(g).

<sup>103</sup> 47 C.F.R. § 73.1750.

<sup>104</sup> *See, e.g.*, 47 C.F.R. § 101.311.

<sup>105</sup> Sections 22.321, 90.168 of the Commission's Rules, 47 C.F.R. §§ 22.321, 90.168.

<sup>106</sup> Section 25.601 of the Commission's Rules, 47 C.F.R. § 25.601.

<sup>107</sup> Section 73.2080 of the Commission's Rules, 47 C.F.R. § 73.2080, was struck down as unconstitutional as respects the outreach portions of the Commission's EEO program requirements for broadcast stations and remanded to the Commission for a determination whether the non-discrimination rule is within its statutory authority. *See Lutheran Church-Missouri Synod v. FCC*, Case No. 97-1116, 141 F.3d 344, *reh'g denied*, 154 F.3d 487 (D.C. Cir. 1998).

56. We have initiated a rulemaking on our Part 73 EEO rules,<sup>108</sup> and seek comment on whether there are any reasons not to apply Part 73 rules to conventional broadcasters operating in these spectrum bands and licensed under Part 27. As to non-broadcast services on these bands, we seek comment on whether we should include a separate EEO provision in Part 27 and, if so, which of our EEO rules we should adopt. Commenters should address the advisability of having different EEO requirements depending on the service a licensee provides. If commenters support adopting EEO requirements, we request comment on what statutory authority should be invoked to support these requirements and how these rules should be tailored.

#### **D. Technical Rules**

57. The application of general provisions of Part 27 would include rules related to equipment authorization, frequency stability, antenna structures and air navigation, international coordination, environmental requirements, quiet zones, and disturbance of AM broadcast antenna patterns.<sup>109</sup> We seek comment on applying these rules to the spectrum that is the subject of this Notice, and specifically on any rules that would be affected by our proposal to apply elements of the Part 27 framework, whether separately or in conjunction with Part 73 requirements, to conventional broadcast services. We also seek comment on proposals to adopt the rules concerning in-band interference control, out-of-band and spurious emission limits, special considerations for use of channels 66 and 67, and Radiofrequency (RF) safety requirements, which are discussed below. We propose that all of these technical rules would apply to all licensees in the 746-764 MHz and 776-794 MHz bands, including licensees who acquire their licenses through partitioning or disaggregation.

##### **1. In-Band Interference Control**

58. We do not have reliable information at this time on the technical parameters for services that will be provided in the 746-764 MHz and 776-794 MHz bands. Our allocation and designation decision permits the range of uses in the Allocation Table, and we cannot be certain what wireless services will be operating in adjacent spectrum. A broad range of technologies may share this spectrum, and the nature of the services and technologies can affect the potential for interference between licensees using the same spectrum in adjacent service areas. We are particularly interested in potential interference issues should the range of uses extend to full power broadcast service.

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<sup>108</sup> Review of the Commission's Broadcast and Cable Equal Employment Opportunity Rules and Policies, MM Docket No. 98-204, and Termination of the EEO Streamlining Proceeding, MM Docket No. 96-16, Notice of Proposed Rulemaking, 13 FCC Rcd 23004 (1998).

<sup>109</sup> Sections 27.51, 27.54, 27.56, 27.57, 27.59, 27.61, 27.63 of the Commission's Rules, 47 C.F.R. §§ 27.51, 27.54, 27.56, 27.57, 27.59, 27.61, 27.63; *see also Part 27 Report and Order*, 12 FCC Rcd at 10848-65 (paras. 123-161).

59. We have permitted flexibility in services and technologies in other frequency bands. Examples include cellular service, PCS, and WCS. In these cases, we generally have controlled co-channel interference between licensees in adjacent geographic regions by establishing field strength limits at the edge of the service areas and by encouraging the licensees to coordinate their operations.<sup>110</sup> We also note that, in the absence of a consensus on appropriate power flux density or field strength, the Commission has recently concluded two rulemaking proceedings concerning Fixed services at 28 GHz and 39 GHz.<sup>111</sup> In those two proceedings, the Commission relied principally upon the use of coordination procedures to avoid harmful interference between co-channel operations of licensees in adjacent service areas. In deciding to use a coordination requirement instead of a field strength limit in the 39 GHz proceeding, the Commission noted a lack of consensus regarding the appropriate power flux density or field strength limit and expressed concern about adopting a limit without such information.<sup>112</sup>

60. We tentatively conclude that either a coordination or field strength method, when properly applied, can provide a satisfactory means of controlling harmful interference or determining the interaction between systems, although there may be reasons to prefer one over the other in the 746-764 MHz and 776-794 MHz bands. For example, a general coordination requirement may minimize the potential for interference to coordinated facilities but may also impose unnecessary coordination costs for facilities with a low potential for interference and increase the potential for undesirable strategic or anti-competitive behavior. A field strength limit, on the other hand, may reduce the need for coordination by giving licensees the ability unilaterally to deploy facilities in boundary areas as long as the limit is met, but by itself may provide insufficient assurance against interference to such facilities. Even with a boundary limit, some degree of coordination and joint planning between bordering licensees appears likely to be needed to ensure efficient use across the boundary.

61. While we have considered a range of approaches to managing interference in other service rule proceedings, the spectrum bands reallocated pursuant to Section 337 of the Act present an additional consideration. Section 337(d)(1) requires the Commission to establish “interference limits at the boundaries of the spectrum block and service area.”<sup>113</sup> One possible interpretation of this provision is that the Commission is directed to adopt field strength limits, or some similarly generic requirement, even if it considers that a coordination approach establishes sufficient, and more flexible, protection against interference.

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<sup>110</sup> See, e.g., Sections 24.236 and 24.237 of the Commission's Rules, 47 C.F.R. §§ 24.236, 24.237 (Broadband PCS).

<sup>111</sup> *LMDS Second Report and Order; 39 GHz Report and Order*.

<sup>112</sup> *39 GHz Report and Order*, 12 FCC Rcd at 18633 (para. 68).

<sup>113</sup> 47 U.S.C. § 337(d)(1).

62. Parties are therefore asked to provide their analysis of the advantages and disadvantages of both approaches, or approaches that combine a boundary limit and a coordination procedure. Comments should address the advantages of different approaches in managing the electromagnetic environment at geographic boundaries in the 746-764 MHz and 776-794 MHz bands, the kinds of incentives each may create for undesirable strategic or anti-competitive behavior, and the effects on licensee costs.

63. We also seek comment regarding whether to permit licensees in adjacent service areas to coordinate their operations and agree to an alternative field strength along their shared border. We are aware that through coordination many steps can be taken to limit or prevent interference, such as use of robust technologies, partitioning the use of frequencies, taking advantage of terrain shielding and other propagation effects, and use of directional antennas. We invite comment on this approach to control of interference in the context of the 746-764 MHz and 776-794 MHz bands, both generally and if used in conjunction with power flux density or field strength standards. If commenters suggest that power flux densities or field strength standards should be established as interference limits, in conjunction with a coordination process, we ask that they propose specific values for such limits. Commenters should also address any special sharing considerations that might be appropriate in an environment where disparate services might be using the same spectrum in adjacent service areas.

64. Regarding whether a general coordination approach should be used, comments are invited on specific aspects of procedures, such as those contained in Section 101.103 of the Commission's Rules,<sup>114</sup> that should apply. While we suggest that Section 101.103 can serve as a useful framework for coordination in the 746-764 MHz and 776-794 MHz bands, our objective is to ensure that licensees receive protection from harmful interference with the minimum regulation necessary. If we adopt a general coordination approach, we tentatively conclude that the coordination concepts of Section 101.103 generally should be applied to licensees in the 746-764 MHz and 776-794 MHz bands and should be incorporated into Part 27 of the Rules for these bands. We seek comment on the best way to effect this incorporation, including comment on which provisions of Section 101.103 may be appropriate for incorporation into Part 27. We also note that for 28 GHz LMDS and 39 GHz licensees, the need for coordination is triggered based on the station's distance from the licensee's service area boundary.<sup>115</sup> For purposes of our considering a coordination approach for the 746-764 MHz and 776-794 MHz bands, we seek comment on what the appropriate distance should be to trigger this coordination, and whether there should be any other criteria, in addition to distance to the service area boundary, that would trigger a need to coordinate.

65. We seek comment on what, if any, limits for equivalent isotopically radiated power (EIRP) are necessary or appropriate under either a coordination or field strength limit approach. We

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<sup>114</sup> 47 C.F.R. § 101.103.

<sup>115</sup> *LMDS Second Report and Order*, 12 FCC Rcd at 12661-64 (paras. 273-281); *39 GHz Report and Order*, 12 FCC Rcd at 18632-33 (paras. 66-69). See Section 101.103 of the Commission's Rules, 47 C.F.R. § 101.103.

observe that transmitters used in the private land mobile service, cellular radio service, and fixed microwave services typically employ substantially different output powers. The substantial differences between these services, however, are minor in comparison to the output powers of full power broadcast services. Accordingly, if commenters believe that power limits are necessary, we invite comments as to what those limits should be and the basis for the suggested limits. We also solicit views as to whether we should establish limits on output power for all transmitters, or just mobile equipment.

66. Finally, Section 27.64 of the Commission's Rules<sup>116</sup> states generally that Part 27 stations operating in full accordance with applicable Commission rules and the terms and conditions of their authorizations are normally considered to be non-interfering, and provides for Commission action, after notice and hearing, to require modifications to eliminate significant interference. In view of the variety of services that might be provided by Part 27 licensees on these bands, including broadcasting, we solicit comment on whether we should apply this rule for this spectrum. We also seek comment regarding whether interference protection can be guaranteed and whether Section 27.64 of our Rules, if retained, should be changed to direct adjacent service area licensees to cooperate to eliminate or ameliorate interference. This alternative would require each licensee ultimately to assume responsibility for protecting its own receiving system from interference from transmitters in adjoining areas that meet our standards. We also seek comment on whether we should apply any changes with respect to Section 27.64 to the 2.3 GHz band.

## 2. Out-of-Band and Spurious Emission Limits

67. Generally, different types of technical parameters would be used to limit out-of-band and spurious emissions to ensure interference protection of services outside the licensee's assigned spectrum, depending on whether the system involves fixed, mobile, or other communications. Because we may permit licensees in the 746-764 MHz and 776-794 MHz bands to use the spectrum for the various services in the Table of Allocations, it would appear we should develop technical operating parameters that can accommodate each type of communications, as we did in adopting separate and different emissions limits in Section 27.53 of the Commission's Rules for the 2.3 GHz band.<sup>117</sup>

68. In addition to the characteristics of different technical approaches, Section 337(d)(4) of the Act emphasizes the general importance of avoiding harmful interference from television

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<sup>116</sup> 47 C.F.R. § 27.64.

<sup>117</sup> Section 27.53 of the Commission's Rules, 47 C.F.R. § 27.53; *see also Part 27 Report and Order*, 12 FCC Rcd at 10854-57 (paras. 136-144). We were required to adopt a more stringent level of attenuation in order to adequately protect adjacent-band satellite DARS reception, among other concerns, from WCS transmissions. *Part 27 Report and Order*, 12 FCC Rcd at 10855 (para. 138).

broadcasters to public safety licensees in adjacent bands.<sup>118</sup> Section 337(d)(4) refers explicitly to the spectrum bands reallocated and reserved for public safety services, and we have already adopted service rules for the public safety bands.<sup>119</sup> The potential for new broadcasting services on the commercial 746-764 MHz and 776-794 MHz bands, however, raises the further issue of whether a more stringent approach to interference may be required on the commercial bands to ensure that public safety licensees in adjacent bands do not experience harmful interference. We note that there are special considerations for the protection of the Global Navigation Satellite System (GNSS)<sup>120</sup> from the second harmonic of stations that would operate on current TV channels 65, 66, and 67. This issue is specifically addressed in paras. 73 and 74 *infra*. We therefore seek comment on the relation of Section 337(d)(4) to protection of public safety licensees from interference caused by broadcast services that may be permitted to operate on the 36 megahertz of commercial spectrum.

69. We propose to require licensees in the proposed commercial spectrum to attenuate the power below the transmitter power (P) by at least  $43 + 10 \log_{10}(P)$  watts or 80 decibels, whichever is less, for any emission on all frequencies outside the licensee's authorized spectrum. We adopted this level in Section 27.53 for certain Part 27 operations, noting that this attenuation is commonly employed in other services and that it has been found adequate to prevent adjacent channel interference as a general matter.<sup>121</sup> To implement sharing between conventional broadcast and other commercial services, different interference limits may be indicated. We request comment on this proposal and any other emission limits that commenters believe are appropriate.

### 3. RF Safety

70. Section 27.52 of the Commission's Rules<sup>122</sup> subjects licensees and manufacturers to the RF radiation exposure requirements specified in Sections 1.1307(b), 2.1091, and 2.1093 of the Commission's Rules, which list the services and devices for which an environmental evaluation must

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<sup>118</sup> 47 U.S.C. § 337(d)(4).

<sup>119</sup> Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Establishment of Rules and Requirements for Priority Access Service, WT Docket No. 96-86, First Report and Order and Third Notice of Proposed Rulemaking, FCC 98-191, released Sept. 29, 1998, 1998 WL 667599 (*Public Safety Spectrum Report and Order*), recon. pending.

<sup>120</sup> The GNSS is a satellite system that provides worldwide position determination, time, and velocity capabilities for multi-modal use. As currently envisioned, the GNSS will encompass aviation, maritime, and terrestrial use.

<sup>121</sup> Section 27.53(a)(3) of the Commission's Rules, 47 C.F.R. § 27.53(a)(3); see also *Part 27 Report and Order*, 12 FCC Rcd at 10857 (para. 144) (citing Sections 22.359(iii), 22.917(e), 24.238 of the Commission's Rules, 47 C.F.R. §§ 22.359(iii), 22.917(e), 24.238).

<sup>122</sup> 47 C.F.R. § 27.52.

be performed.<sup>123</sup> In adopting the rule, the Commission concluded that routine environmental evaluations for RF exposure are required by applicants desiring to use the following types of transmitters: (1) fixed operations, including base stations and radiolocation transmitters, when the effective radiated power (ERP) is greater than 1,000 watts; (2) all portable devices; and (3) mobile devices, if the ERP of the station, in its normal configuration, will be 1.5 watts or greater.<sup>124</sup>

71. With regard to RF safety requirements, we propose to treat services and devices in the 746-764 MHz and 776-794 MHz bands in a comparable manner to other services and devices that have similar operating characteristics. We tentatively conclude that the requirements in Section 27.52 that the Commission adopted for licensees in the 2.3 GHz band will apply to the same extent to licensees in the 746-764 MHz and 776-794 MHz bands. As the Commission has previously stated, the Commission is providing guidance on acceptable methods of evaluating compliance with the Commission's exposure limits in OET Bulletin No. 65, which has replaced OST Bulletin No. 65.<sup>125</sup>

72. The Commission adopted the 1,000 watts ERP threshold for 2.3 GHz to recognize the flexibility with respect to use, power, location, and other factors that was accorded licensees operating in that band, and determined that this power limit was appropriate to ensure compliance with the Commission's RF exposure standards for most situations.<sup>126</sup> Moreover, the Commission found the 1,000 watts ERP threshold consistent with its existing rules for transmitters and devices of comparable use and similar operating frequencies. For the same reasons, we propose to adopt the 1,000 watts ERP threshold for operations in the 746-764 MHz and 776-794 MHz bands. Consistent with the modifications the Commission adopted for the 2.3 GHz band, we also propose to modify

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<sup>123</sup> 47 C.F.R. §§ 1.1307(b), 2.1091, 2.1093. The RF radiation exposure limits are set forth in 47 C.F.R. §§ 1.1310, 2.1091, and 2.1093, as modified in Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, ET Docket No. 93-62, Report and Order, 11 FCC Rcd 15123 (1996); First Memorandum Opinion and Order, 11 FCC Rcd 17512 (1997); Second Memorandum Opinion and Order, 12 FCC Rcd 13494 (1997) (*RF Guidelines Second Reconsideration Order*).

<sup>124</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10861 (para. 154 n.344), noting that 1,000 watts ERP equates to 1,640 watts EIRP. In the *RF Guidelines Second Reconsideration Order*, the Commission increased the exclusion threshold for mobile devices operating above 1.5 GHz from 1.5 watts to 3 watts ERP. *RF Guidelines Second Reconsideration Order*, 12 FCC Rcd at 13514 (para. 51).

<sup>125</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10862 (para. 154 n.346). OET Bulletin No. 65 (Edition 97-01) was issued on August 25, 1997. It is available for downloading at the FCC Web Site: [www.fcc.gov/oet/rfsafety](http://www.fcc.gov/oet/rfsafety). Copies of OET Bulletin No. 65 also may be obtained by calling the FCC RF Safety Line at (202) 418-2464.

<sup>126</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10862 (para. 154 n.345), noting that, in a pending petition for reconsideration of the *RF Guidelines Report and Order*, the Commission was considering whether to revise the threshold for requiring routine evaluation of mobile devices above 1.5 GHz from 1.5 watts to 3 watts. This change was made in the *RF Guidelines Second Reconsideration Order*.

Sections 1.1307(b), 2.1091, and 2.1093 of the Commission's Rules<sup>127</sup> to include services and devices applicable to the 746-764 MHz and 776-794 MHz bands. We invite comment on our proposals and any alternatives.

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<sup>127</sup> 47 C.F.R. §§ 1.1307(b), 2.1091, 2.1093.

#### 4. Special Considerations for Use of Channels 65, 66 and 67

73. In the *Public Safety Spectrum Second Notice* on the use of channels 63, 64, 68, & 69 by Public Safety<sup>128</sup> we sought comment on the potential for interference to GLONASS<sup>129</sup> and GPS<sup>130</sup> satellites from public safety systems operating in the 794-806 MHz band (TV channels 68-69).<sup>131</sup> Specifically, we sought comment on the effects of second harmonic transmissions<sup>132</sup> to GPS and GLONASS receivers from public safety systems operating in this newly allocated band. The second harmonic transmissions of commercial services operating on TV channels 65-67 also fall within the bandwidth identified by NTIA as being used by the GPS (1563.42-1587.42 MHz).<sup>133</sup> Therefore, the use of the band 776-794 MHz by commercial services raises many of these same concerns. NTIA recommends that stringent standards be adopted to ensure that equipment that operates in these bands does not cause radio frequency interference to the Global Navigation Satellite System (GNSS)<sup>134</sup> when used for precision approach and landing. We recognize that this issue will be of critical importance to both navigation and commercial interests and therefore we desire to obtain as complete a record as possible before making a decision. We believe that additional information is needed before we arrive at a final decision with respect to this matter. Therefore, we seek comment

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<sup>128</sup> See Development of Operational, Technical and Spectrum Requirements For Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010; Establishment of Rules and Requirements of Priority Access Service, WT Docket No. 96-86, Second Notice of Proposed Rulemaking, 12 FCC Rcd 17706 (1997) (*Public Safety Spectrum Second Notice*).

<sup>129</sup> GLONASS is the Russian Federation Global Orbiting Navigation Satellite System which will use the 1598-1605 MHz portion of the Radionavigation-Satellite Service (space-to-Earth) allocation at 1559-1610 MHz, when the GLONASS system reaches its final frequency configuration after 2005.

<sup>130</sup> GPS (Global Positioning System) is also in operation, and it will be the United States component of the Global Navigation Satellite System (GNSS). GPS utilizes the lower portion of the Radionavigation-Satellite Service (space-to-Earth) allocation from 1559-1610 MHz on a primary basis, and is maintained by the United States Department of Defense.

<sup>131</sup> See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17778-17779.

<sup>132</sup> Radio transmitters produce energy not only on the desired frequency (such as 794 MHz) but also lesser amounts of energy on multiples of the desired frequency, known as harmonics. In this example, the second harmonic (twice the desired frequency) would be 1588 MHz. Although most of the power generated is on the desired frequency, very sensitive receivers can detect the smaller amounts of power generated on the harmonic frequencies.

<sup>133</sup> See letter from William T. Hatch, Acting Associate Administrator, Office of Spectrum Management, NTIA, to Chief, Office of Engineering and Technology, FCC, May 11, 1999.

<sup>134</sup> GNSS as currently envisioned will consist of the GPS and GLONASS systems that provide radionavigation satellite services worldwide.

on the impact of imposing the out-of-band emission limits recommended by NTIA on the design of commercial equipment for use in the 776-794 MHz band.

74. Specifically, in its May 11, 1999 letter<sup>135</sup> NTIA notes that the protection of spectrum used to support the GNSS is consistent with the U.S. commitment to the "continuous availability of GPS" announced in the Presidential Decision Directive of March 29, 1996, and enacted by Congress in the Defense Authorization Act of 1998.<sup>136</sup> NTIA also notes that Congress further directed the Administration to "protect the integrity of the Global Positioning System frequency spectrum against interference and disruption" in the Defense FY99 Appropriations Conference Report,<sup>137</sup> and in the Commercial Space Act of 1998.<sup>138</sup>

75. To protect these systems NTIA specifically advocates that out-of-band emissions be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband emissions and -80 dBW/700 Hz for narrowband emissions<sup>139</sup>, and that these limits be applied to all spurious emissions, including second harmonics in the 1559-1610 MHz range. These limits are based on international recommendations by RTCA and ETSI for mobile earth terminals in the Mobile Satellite Service (MSS).<sup>140</sup> Additionally, we note that potential full power broadcast use of this spectrum could pose additional difficulties for the GNSS system. Because conventional full power broadcast stations would operate at powers several orders of magnitude larger than those used by commercial fixed and mobile stations, additional attenuation of out-of-band emissions may be required to protect the GNSS systems. NTIA has recommended, in this case, that an emission limit of -110 dB below the average transmitter power should be included as the proposed unwanted emission limit, including harmonics, for DTV transmitters operating in the 746-764 MHz and 776-794 MHz bands. NTIA notes that the current DTV mask requires that emissions, including harmonics that are more than 6

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<sup>135</sup> NTIA's submission is exempt from the *ex parte* rules otherwise applicable to submissions received after Commission issuance of a Sunshine Agenda. See Section 1.1204(a)(5) of the Commission's Rules, 47 C.F.R. § 1.1204(a)(5).

<sup>136</sup> National Defense Authorization Act for Fiscal Year 1998 (Pub. L. 105-85, Nov. 18, 1997, 111 Stat. 1629).

<sup>137</sup> H.R. Conf. Rep. 105-746, 105th Cong., 2d Sess. 1998.

<sup>138</sup> Commercial Space Act of 1998 (Pub. L. 105-303, Oct. 28, 1998, 112 Stat. 2843).

<sup>139</sup> For purposes of NTIA's analysis, wideband interference was considered to have a bandwidth in the range of 100 kHz to 1 MHz; narrowband interference was considered to have a bandwidth less than or equal to 700 Hz.

<sup>140</sup> See RTCA Inc. Special Committee 159, Assessment of Radio Frequency Interference Relevant to the GNSS, Document No, RTCA/DO-235, January 27, 1997. The RTCA report contained two appendices – one was endorsed by the aviation community and the other by the MSS community. The MSS community arrived at a value that was less stringent (*i.e.*, -54 dBW/MHz) than that arrived at by the aviation community with respect to protection of GLONASS. See also, European Testing and Standards Institute (ETSI) standards TBR-041 and TBR-042 for Mobile Earth Terminals in the 1.6/2.4 GHz and 2.0 GHz range, respectively.

MHz from the channel edge, must be attenuated by this amount. It believes that this value is consistent with the current harmonic suppression levels that can be achieved by television transmitters and will protect GNSS precision approach landing operations.

76. The Commission is committed to ensuring that the GNSS is protected adequately against interference. We note that the standard recommended by NTIA is necessary only to protect the GNSS band at 1559-1605 MHz. Based on the information before us at this time, we tentatively propose to adopt the NTIA recommended emissions limits,<sup>141</sup> but to apply them only to emissions that fall within the GNSS band. Outside the 1559-1605 MHz GNSS band, we propose that the standard addressed earlier in the section on out-of-band spurious emissions (*i.e.*,  $43 + 10 \log P$ ) would apply. We believe that it is imperative that all parties fully understand the need for and ramifications of the NTIA proposed standard on use of the 700 MHz band for commercial wireless services. Therefore, we request comment on the standard recommended by NTIA to protect GNSS operations. We also invite comment as to whether extenuating conditions such as low antenna height, propagation losses, body suppression of signals, and wall attenuation should be taken into account in calculating the out-of-band emission requirements. In addition, we are interested in obtaining a better understanding of the levels of radio energy that currently exist in the GNSS spectrum as a result of spurious emissions from other communications systems and electronic equipment. This information will enable us to determine whether stringent limits for commercial equipment are necessary and likely to be effective in accomplishing the desired objective.

77. We observe that stringent out-of-band emissions limits are generally more difficult to meet for mobile and hand-held transmitters than for base and control stations or for fixed service stations. Typical operation of mobile units in the cellular and broadband PCS services, for example, are required to suppress out-of-band emissions by approximately 50 dB below the transmitter carrier signal.<sup>142</sup> The standard recommended by NTIA would require approximately 85-90 dB suppression for typical full-power mobile equipment and approximately 75-80 dB for handhelds and portables.<sup>143</sup>

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<sup>141</sup> We propose, however, to adopt an absolute limit of -80 dBW on the e.i.r.p. of discrete emissions of less than 700 Hz bandwidth, rather than a limit on narrowband spectral power density. *See* 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 Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band, \_\_\_\_\_, FCC 99-37, para. 78, released March 5, 1999 (*GMPCS Notice*).

<sup>142</sup> Cellular rules require that out-of-band emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice, or more than twice, the fundamental frequency by  $43 + 10 \log (P)$  dB. Broadband PCS emissions must be attenuated by at least  $43 + 10 \log (P)$  dB on any frequency outside the licensee's frequency block. This gives a value of 47.8 dB attenuation for 3 watt mobiles. *See* Sections 22.917 and 24.238 of the Commission's Rules, 47 C.F.R. §§ 22.917 and 24.238.

<sup>143</sup> For the purposes of the GLONASS standard, we have assumed the narrowband limit of -80 dBW as sufficient for commercial services bandwidths of up to 150 kHz.

We are very much concerned about whether the proposed emissions standard would severely curtail the availability of the 36 megahertz of spectrum designated by Congress for commercial use. Specifically, we request factual data and technical information as to the impact this proposal may have on the use of the 700 MHz band for commercial wireless services. We also seek information on how the proposal may affect the equipment cost, size, weight and battery life of handheld or portable equipment. We are aware that Global Mobile Personal Communications via Satellite (GMPCS) terminals have been proposed to meet the same standard we have proposed herein.<sup>144</sup> We invite comment as to whether it is feasible for commercial fixed and mobile equipment to meet the same standards as these commercial mobile satellite systems. We solicit suggestions as to any and all alternative approaches or measures that the Commission can take to alleviate the impact of the proposed standard. For example, we invite comment as to whether there may be a way to restrict mobile use near airports. We also seek comment on whether a transition plan to more stringent levels would be appropriate to protect the future GNSS.

78. In summary, we request comment on the risk of harmonic interference to GPS-assisted landings from systems licensed under the rules proposed in this Notice, and whether the emissions limits noted above that have been recommended by NTIA would provide the necessary protection for GNSS systems from anticipated commercial fixed and mobile operations in these bands. We also request specific comment on how to address potential full power broadcast use of this spectrum, and whether the limits proposed by NTIA would be a serious burden on the use of this spectrum for full power broadcasting.<sup>145</sup>

## E. Competitive Bidding

### 1. Statutory Requirements

79. Pursuant to Section 3004 of the Balanced Budget Act of 1997, codified as Section 337 of the Communications Act, the licenses for this proposed commercial spectrum are required to be granted through competitive bidding. Section 337(a)(2) directs how the commercial segment of the spectrum between 746 megahertz and 806 megahertz is to be assigned: "36 megahertz of that spectrum for commercial use [is] to be assigned by competitive bidding pursuant to section 309(j)."<sup>146</sup> Section 337(b)(2) further directs the Commission to "commence competitive bidding for the

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<sup>144</sup> See *GMPCS Notice*. Section 25.213 (b) of the Commission's Rules, 47 C.F.R. § 25.213 (b), requires that MSS equipment operating in 1610-1626.5 MHz meet essentially these levels within the band 1574.397 - 1576.443 MHz.

<sup>145</sup> In this regard, we note that the Commission also has before it a waiver request filed March 3, 1999 by Harris Corporation, seeking relaxation of the 110 dB attenuation requirement in adjacent bands while continuing to protect the GPS bands.

<sup>146</sup> 47 U.S.C. § 337(a)(2).

commercial licenses created pursuant to subsection (a) after January 1, 2001.”<sup>147</sup> The proposed commercial spectrum therefore is not to be licensed for the following purposes, which are excluded from the scope of our spectrum auction authority by Section 3002 of the Balanced Budget Act of 1997: (1) public safety radio services licenses, including (a) private internal radio services used by State and local government entities; and (b) emergency road services provided by not-for-profit organizations; (2) digital television service licenses to be provided by terrestrial broadcast licensees to replace their analog service licenses; or (3) non-commercial educational broadcast stations or public broadcast stations.<sup>148</sup>

80. Although this spectrum is dedicated by statute for commercial rather than public safety licenses, consistent with the statutory mandate in Section 337, there still is the possibility, under our proposed application of the Part 27 rules to this spectrum, that public safety entities could successfully bid for and be licensed to use the spectrum. We are concerned that the Balanced Budget Act of 1997 might: (1) preclude us from licensing a public safety entity that participated in an auction of commercial spectrum; or (2) nullify or otherwise adversely affect our authority to license the spectrum involved through competitive bidding, if public safety entities participate in such an auction. We determined in our *LMS Reconsideration Order* that Congress did not intend that individual license applicants, by asserting their interest in providing public safety services, could nullify a previous Commission determination that specific spectrum allocations were auctionable, noting that this would undermine Commission auction authority under the Budget Act.<sup>149</sup> In the present context, where the affected spectrum has been allocated and designated in response to the mandate of Section 337 of the Act, such an interpretation would also run directly counter to the explicit statutory direction to auction these 36 megahertz for commercial use.

81. Our determination that public safety applicants lack the power to unilaterally overturn Commission decisions respecting the auctionability of spectrum bands, however, did not require us to address the issue of whether public safety entities are prohibited from participation as bidders in an auction process. Our view is that such participation, subject to the same bidding and service rules applicable to commercial applicants, cannot compromise the Commission's auction authority where, as here, that authority has been directly conferred by statute. We are considering in a separate proceeding the broader issue of exemption from our general auction authority of some public safety

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<sup>147</sup> 47 U.S.C. § 337(b)(2).

<sup>148</sup> See Section 3002(a) of the Balanced Budget Act of 1997, amending Sections 309(j)(1) and 309(j)(2) of the Communications Act, 47 U.S.C. §§ 309(j)(1), 309(j)(2).

<sup>149</sup> Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, Order on Reconsideration of the Second Report and Order, FCC 99-3 (paras. 8-10), released Jan. 21, 1999 (*LMS Reconsideration Order*), 1999 WL 22950.

services.<sup>150</sup> In light of the importance attached by the Congress to ensuring the availability of reallocated spectrum to public safety uses, however, we believe these commercial bands should be open to application by any public safety entities that are qualified and prepared to bid under the same rules applied to commercial applicants. We believe this interpretation permits license applicants who intend to use commercial spectrum for public safety services to participate in auctions, at least for spectrum in the 746-764 MHz and 776-794 MHz bands, and that such participation would not be inconsistent with the Congressional mandate for the Commission's exercise of auction authority in this context. We therefore request comment on what effect the changes in Commission auction authority, made by the Balanced Budget Act of 1997, have on the possible participation of public safety entities in an auction of commercial spectrum, and on their eligibility to obtain a license through the subsequent acquisition of spectrum that was initially assigned by auction.

82. Section 3002 of the Balanced Budget Act<sup>151</sup> also directs the Commission to provide for the "design and conduct (for purposes of testing) of competitive bidding using a contingent combinatorial bidding system that permits prospective bidders to bid on combinations or groups of licenses in a single bid and to enter multiple alternative bids within a single bidding round." The Commission has contracted for the development of such procedures.<sup>152</sup> We seek comment on whether the auction of these spectrum bands, especially if our service rules provide for broadcast services, may present a suitable context for combinatorial procedures. We ask that commenters consider: (a) whether, absent the application of combinatorial rules, the existing standardized auction rules in Part 1 are adequate for the juxtaposition of broadcast and wireless bidding entities; or (b) whether modifications of standardized Part 1 auction rules, to facilitate participation by entities interested in providing broadcast service, are desirable. We especially seek comment on how, absent combinatorial rules, our auction methodology should recognize the divergence between geographic licensing applied to wireless spectrum bands, and the focus on individual communities of license in the assignment of broadcast spectrum.

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<sup>150</sup> *Balanced Budget Notice*, *supra* n. 25.

<sup>151</sup> Codified as 47 U.S.C. § 309(j)(3).

<sup>152</sup> *Part 1 Third Report and Order*, 13 FCC Rcd at 453 (para. 137); *see also* Wireless Bureau Begins Process of Designing a Combinatorial Bidding System for Future Commission Auctions, News Report No. WT 98-35 (rel. Sept. 28, 1998).

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

83. In the *Part 1 Third Report and Order*, the Commission streamlined its auction procedures by adopting general competitive bidding rules applicable to all auctionable services<sup>153</sup> and, in the same proceeding, issued a *Part 1 Second Further Notice* concerning designated entities and attribution rules, among other issues.<sup>154</sup> We propose to conduct the auction for initial licenses in the 746-764 MHz and 776-794 MHz bands in conformity with the general competitive bidding rules set forth in Part 1, Subpart Q of the Commission's Rules, and substantially consistent with the bidding procedures that have been employed in previous Commission auctions. Specifically, we propose to employ the Part 1 rules governing designated entities, application issues, payment issues, competitive bidding design, procedure and timing issues, and anti-collusion. These rules would be subject to any modifications that the Commission adopts in relation to the *Second Further Notice*, or in response to pending petitions for reconsideration of the *Part 1 Third Report and Order*. We seek comment on this proposal, and on whether any of our Part 1 Rules would be inappropriate in an auction for these spectrum blocks, especially with respect to possible inclusion of broadcast services in our auction methodology.

## 3. Provisions for Designated Entities

### a. Background

84. The Communications Act provides that, in developing competitive bidding procedures, the Commission shall consider various statutory objectives and consider several alternative methods for achieving them.<sup>155</sup> Specifically, the statute provides that, in establishing eligibility criteria and bidding methodologies, the Commission shall:<sup>156</sup>

promot[e] economic opportunity and competition and ensur[e] that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women.

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<sup>153</sup> *Part 1 Third Report and Order*, 13 FCC Rcd at 374-470 (paras. 4-169).

<sup>154</sup> *Id.* at 471-82 (paras. 170-195).

<sup>155</sup> See 47 U.S.C. §§ 309(j)(3), 309(j)(4).

<sup>156</sup> 47 U.S.C. § 309(j)(3)(B).

## b. Small Business Definitions

85. In the *Competitive Bidding Second Memorandum Opinion and Order*, the Commission stated that it would define eligibility requirements for small businesses on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold.<sup>157</sup> The *Part 1 Third Report and Order*, while it standardizes many auction rules, provides that the Commission will continue a service-by-service approach to defining small businesses. For the 36 megahertz of commercial spectrum, we propose to adopt the definitions the Commission adopted for broadband PCS for small and very small businesses,<sup>158</sup> which the Commission also adopted for 2.3 GHz and 39 GHz applicants.<sup>159</sup> We tentatively conclude that the capital requirements are likely to be similar to the capital requirements in those services. Specifically, we propose to define a small business as any firm with average annual gross revenues for the three preceding years not in excess of \$40 million.

86. We observe that the capital costs of operational facilities in the 746-764 MHz and 776-794 MHz bands are likely to vary widely based on the services provided. Accordingly, we seek to adopt small business size standards that afford licensees the greatest flexibility. Thus, in addition to our proposal to adopt the general small business standard the Commission used in the case of broadband PCS, 2.3 GHz, and 39 GHz licenses, we propose to adopt the definition for very small businesses used for 39 GHz licenses and for the PCS F Block licenses, namely, businesses with average annual gross revenues for the three preceding years not in excess of \$15 million.

87. We seek comment on the use of these standards for services licensed in the 36 megahertz of commercial spectrum, with particular focus on the appropriate definitions of small and very small businesses as they relate to the size of the geographic area to be covered and the spectrum allocated to each license. For the proposed definitions of small business and very small business, we propose to include the entity's affiliates and controlling interests when determining eligibility by gross revenue criteria.<sup>160</sup> In discussing these issues, commenters are requested to address the expected capital

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<sup>157</sup> Implementation of Section 309(j) of the Communications Act – Competitive Bidding, PP Docket No. 93-253, Second Memorandum Opinion and Order, 9 FCC Rcd 7245, 7269 (para. 145) (1994) (*Competitive Bidding Second Memorandum Opinion and Order*).

<sup>158</sup> Implementation of Section 309(j) of the Communications Act – Competitive Bidding, PP Docket No. 93-253, Fifth Memorandum Opinion and Order, 10 FCC Rcd 403 (1994).

<sup>159</sup> Sections 27.210(b)(1), 27.210(b)(2), and 101.1209(b)(1)(i) of the Commission's Rules, 47 C.F.R. §§ 27.210(b)(1), 27.210(b)(2), 101.1209(b)(1)(i).

<sup>160</sup> See, e.g., Section 80.1252 of the Commission's Rules, 47 C.F.R. § 80.1252 (designated entities in the coast station service). Section 1.2110(b) of the Commission's Rules, 47 C.F.R. § 1.2110(b), describes affiliate and controlling interest relationships in the designated entity context generally.

requirements for services in the 746-764 MHz and 776-794 MHz bands. Commenters also are invited to use comparisons with other services for which the Commission has already established auction procedures as a basis for their comments regarding the appropriate definitions for small and very small businesses. We also seek comment on whether the proposed designated entity provisions, if adopted and applied to the services in these bands, would be sufficient to promote participation by businesses owned by minorities and by women, and participation by rural telephone companies. To the extent that commenters propose additional provisions to ensure participation by minority-owned and women-owned businesses, we also invite them to address how such provisions should be crafted to meet the relevant standards of judicial review.<sup>161</sup> In all other respects, we propose to apply the competitive bidding procedures that the Commission adopted in the *Part 1 Third Report and Order*, subject to any modifications the Commission adopts in response to the *Second Further Notice* and pending petitions for reconsideration of the *Part 1 Third Report and Order*.<sup>162</sup>

### III. PROTECTION OF TELEVISION SERVICES

#### A. Background

88. We discuss in this section technical requirements for protecting incumbent broadcast licensees and planned DTV allotments against interference. In the *DTV Sixth Report and Order*,<sup>163</sup> we stated that all analog TV and DTV operations in the 746-806 MHz band would be fully protected during the DTV transition period. In the *Reallocation Notice*<sup>164</sup> we noted that new licensees in the band will have to protect both analog TV and DTV operations from interference. The Commission subsequently addressed the protection of TV and DTV operations in the 764-776 MHz and 794-806 MHz Public Safety bands (the 700 MHz band) in the *Public Safety Spectrum Report and Order*, which adopted service rules for public safety uses of this spectrum.<sup>165</sup>

89. In reaching its decisions in that proceeding, the Commission noted that land mobile and TV stations have successfully shared the 470-512 MHz band (TV channels 14-20) in 11 major

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<sup>161</sup> See *Adarand Constructors v. Peña*, 515 U.S. 200 (1995); *United States v. Virginia*, 518 U.S. 515 (1996).

<sup>162</sup> See *Part 1 Third Report and Order*, 13 FCC Rcd at 386-409 (paras. 13-57).

<sup>163</sup> See *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, 14626-27 (para. 80)(1997)(*DTV Sixth Report and Order*).

<sup>164</sup> *Reallocation of Television Channels 60-69, the 746-806 MHz Band*, ET Docket No. 97-157, Notice of Proposed Rule Making, 12 FCC Rcd 14141, 14148 (para. 17)(1997)(*Reallocation Notice*).

<sup>165</sup> See *Public Safety Spectrum Report and Order* at paras. 146-164.

metropolitan areas of the United States.<sup>166</sup> In the 470-512 MHz band, the Commission relied on minimum separation distances based on the various heights and powers of the land mobile stations to prevent harmful interference.<sup>167</sup> Since this method has been successful, the Commission decided to continue to administer protection criteria for these services in the 700 MHz band in this same manner. In making that determination, the Commission examined the previous methodology with consideration of the more recent technological changes, the physical characteristics of the 700 MHz band, and the goals Congress established in the Balanced Budget Act of 1997.<sup>168</sup>

90. We tentatively conclude that the factors and considerations examined in the *Public Safety Spectrum Report and Order* are equally relevant here, at least with respect to the use of the 746-764 MHz and 776-794 MHz bands for commercial mobile services.<sup>169</sup> We therefore propose to adopt the same criteria to protect TV and DTV operations from commercial mobile operations that were adopted in the *Public Safety Spectrum Report and Order*.<sup>170</sup> We recognize that there is a greater flexibility of use being proposed for the commercial spectrum at issue here that would allow both fixed and broadcasting services, in addition to mobile services. We tentatively conclude that the sharing criteria applicable to mobile service base stations would be sufficient to protect TV and DTV operations from fixed service operations also, but seek comment on this tentative conclusion. With respect to protection of TV and DTV operations from new broadcast operations on these frequencies, however, the *Public Safety Spectrum Report and Order* provides no guidance, since new broadcasting stations and services are not permitted on the public safety frequencies. A different approach or criteria may therefore be appropriate depending on the types of broadcasting services permitted or provided.

## B. Protection of TV Stations

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<sup>166</sup> *Public Safety Spectrum Report and Order*, at para. 148.

<sup>167</sup> See Further Sharing of the UHF Television Band by Private Land Mobile Radio Services, General Docket No. 85-172, Notice of Proposed Rulemaking, 101 FCC 2d 852, 865 (1985), *proceeding suspended*, 2 FCC Rcd 6441 (1987).

<sup>168</sup> *Public Safety Spectrum Report and Order* at paras. 150-164.

<sup>169</sup> This would include consideration of TV stations outside of this spectrum, *i.e.*, on Channel 59. The adjacent channel protection criteria established herein would apply equally to Channel 59 stations, and new licensees in the Channel 60 spectrum block will need to recognize the existence of such adjacent channel use in designing their systems and services. Moreover, use of Channel 59 may change as DTV service is relocated to the core channels. Any interference or protection criteria involving different uses of Channel 59 would necessarily be established in a later proceeding.

<sup>170</sup> To the extent that our pending reconsideration of that Order results in subsequent changes to the rules adopted in that proceeding, those changes may need to be reflected as they apply or are relevant here.

91. The *Public Safety Spectrum Second Notice* proposed a 40 dB desired to undesired (D/U) signal ratio for co-channel operations and a 0 dB D/U signal ratio for adjacent channel operations to determine the geographic separation needed between public safety base stations and the Grade B service contours of co-channel and adjacent channel TV stations.<sup>171</sup> Based on its review of the record, the Commission concluded in the *Public Safety Spectrum Report and Order* that the use of a 40 dB signal ratio for co-channel operations and a 0 dB signal ratio for adjacent channel operations was supported by our experience with using this standard to protect TV service from interference from land mobile operations in the New York metropolitan area without serious adverse consequences, and that we would, therefore, adopt such standards for calculating geographic separation requirements.<sup>172</sup>

92. The Commission concluded that the 40 dB D/U signal ratio is a reasonable value that will provide sufficient TV protection, as prescribed by the Balanced Budget Act of 1997.<sup>173</sup> Co-channel land mobile base station transmitters would be limited to producing a maximum signal strength at the hypothetical TV Grade B contour 40 dB below 64 dBu, or 24 dBu.<sup>174</sup> The Commission also adopted a 0 dB D/U signal ratio for adjacent channel operations.<sup>175</sup> Adjacent channel land mobile transmitters would be limited to a maximum signal that can equal the TV Grade B signal of 64 dBu at the TV station Grade B contour, defined here as 87.7 km (55 miles).<sup>176</sup> A typical TV receiver's adjacent channel rejection is at least 10-20 dB, which would further safeguard TV from land mobile interference. We tentatively conclude that the same criteria should be applied to commercial mobile and fixed operations in the 746-764 MHz and 776-794 MHz bands. We thus propose to adopt rules similar to those reflected in Section 90.545 of the Commission's Rules,<sup>177</sup> as adopted in the *Public Safety Spectrum Report and Order*, with the following proposed modification. Because we are not proposing any specific antenna height or transmitter power limitations for Part 27 licensees, Part 27 licensees who propose to operate stations with antenna heights or transmitter powers that exceed

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<sup>171</sup> See Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Establishment of Rules and Requirements for Priority Access Service, WT Docket No. 96-86, Second Notice of Proposed Rulemaking, 12 FCC Rcd 17706, 17803 (1997) (*Public Safety Spectrum Second Notice*).

<sup>172</sup> *Public Safety Spectrum Report and Order* at paras. 161-62.

<sup>173</sup> See 47 U.S.C. § 337(d).

<sup>174</sup> If other factors are held constant, a 40 dB D/U ratio rather than a 50 dB D/U ratio allows base stations to be located approximately 48.3 km (30 mi) closer to a co-channel TV station. See Section 90.309, Tables A & B, of the Commission's Rules, 47 C.F.R. § 90.309, Tables A & B.

<sup>175</sup> *Public Safety Spectrum Report and Order* at para. 152.

<sup>176</sup> See 47 C.F.R. § 73.610.

<sup>177</sup> 47 C.F.R. § 90.545.

those specified in Section 90.545(b) must provide to the Commission for approval a detailed technical analysis demonstrating that the required interference protection criteria are met prior to placing such stations into operation. We recognize that fixed operations can often be engineered to avoid causing interference even at relatively close distances. Accordingly, we invite comment as to the appropriate criteria that should be used to protect TV broadcasting against interference from fixed operations.

### C. Protection of DTV Stations

93. In the *Public Safety Spectrum Second Notice*, the Commission noted that its proposals were based on protecting analog TV, and asked for comments on the appropriate D/U signal ratios that should be applied to protect DTV.<sup>178</sup> In doing so, the Commission stated that DTV transmissions could exhibit a greater resistance to interference than analog transmissions and therefore DTV stations may be able to accept a lesser standard of protection.<sup>179</sup> After examining the record, the Commission decided to apply similar criteria adopted in the *Public Safety Spectrum Report and Order* for protecting reception of analog TV stations to protecting DTV reception.<sup>180</sup> Since the Commission allocated DTV channels to replicate existing TV station service areas,<sup>181</sup> it allowed public safety stations to provide the same field strength at the equivalent Grade B contour of the DTV station as they do for an analog TV station, and adjust the D/U ratio accordingly. The Commission therefore provided for a TV station to have protection ratios of 40 dB for co-channel and 0 dB for adjacent channel at its 64 dB $\mu$  field strength contour. The equivalent ratios for a DTV station that has a Grade B signal strength contour of 41 dB $\mu$  are 17 dB and -23 dB, respectively.

94. In making this determination, the Commission noted that in the *DTV Sixth Report and Order* the Commission specified a minimum geographic separation of 250 kilometers (155 miles) for co-channel operations between DTV stations and the city-center in the areas where there are existing land mobile operations.<sup>182</sup> Section 90.305(a) of the Commission's Rules provides that maximum facility land mobile base stations can be located up to 80.5 km (50 mi) from the city-center of one of

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<sup>178</sup> *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17803-04 (paras. 232-239).

<sup>179</sup> *Id.* at 17803-04 (para. 235).

<sup>180</sup> *Public Safety Spectrum Report and Order* at para. 155. A TV station's hypothetical Grade B contour is plotted based on a 64 dB $\mu$  signal strength using the F(50,50) curve. See Section 73.699 of the Commission's Rules, 47 C.F.R. § 73.699. A DTV station's equivalent contour is based on a 41 dB $\mu$  signal strength using the F(50,90) curve. See Section 73.625 of the Commission's Rules, 47 C.F.R. § 73.625.

<sup>181</sup> See *DTV Sixth Report and Order*, 12 FCC Rcd 14681-82 (para. 206).

<sup>182</sup> See *DTV Sixth Report and Order*, 12 FCC Rcd at 14663-64 (paras. 163-164). See also Section 90.303(a) of the Commission's Rules, 47 C.F.R. § 90.303(a), for the areas where TV/land mobile sharing is currently permitted.

the specified cities.<sup>183</sup> Consequently, under the geographic separation adopted in the *DTV Sixth Report and Order*, a maximum facility land mobile base station could choose to locate its station as close as 169.5 km (250 km - 80.5 km), or 105 mi. At this distance, the land mobile base station would provide a co-channel signal at the DTV station's 88.5 km (55 mi) equivalent Grade B contour that would provide less than a 40 dB D/U protection ratio to a DTV receiver. Thus, our decision to require 700 MHz land mobile systems to provide signal ratios for DTV stations that will allow approximately the same separation distance as we did for analog TV stations represented a reasonable balance between the needs of both DTV stations and public safety entities.

95. We tentatively conclude that the same criteria should be applied to commercial mobile and fixed operations in the 746-764 MHz and 776-794 MHz bands. We thus propose to adopt rules similar to those reflected in Section 90.545 of the Commission's Rules,<sup>184</sup> as adopted in the *Public Safety Spectrum Report and Order*, with the following proposed modification. As we have proposed for the protection of analog TV stations above,<sup>185</sup> Part 27 licensees who propose to operate stations with antenna heights or transmitter powers that exceed those specified in Section 90.545(b) must provide to the Commission for approval a detailed technical analysis demonstrating that the required interference protection criteria are met prior to placing such stations into operation.

#### **D. TV Protected Service Contour Alternatives**

96. In the *Public Safety Spectrum Second Notice*, the Commission raised the issue of whether to protect TV reception based on a geographic separation table or to use a case-by-case approach and protect TV stations based on their actual Grade B contour. The Commission listed two possible approaches for specifying the TV protected Grade B service contour: (1) use a standard 88.5 km (55 mi) Grade B service contour, as we did previously; or (2) use the individual Grade B service contour based on the actual parameters of the TV license.<sup>186</sup> Under the first approach, the minimum separation distances could be displayed in a table, thus simplifying communication system planning. This approach would also give broadcasters who are operating at less than the "standard" parameters some flexibility to modify their facilities during the transition period without raising interference concerns. The Commission noted, however, that in the event of a less than maximum antenna height and full power station, the use of a standard Grade B service

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<sup>183</sup> See 47 C.F.R. § 90.305(a).

<sup>184</sup> 47 C.F.R. § 90.545.

<sup>185</sup> See para. 92, *supra*.

<sup>186</sup> See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17802-04 (paras. 232-239). The TV Grade B service contour is where the D/U signal ratio is applied. Thus, to determine the minimum geographic separation needed between public safety base stations and TV stations you add the two distances together (the distance of the public safety base station to the contour that meets the appropriate D/U signal ratio and the distance of the Grade B service contour from the TV station).

contour and geographic separation tables could unnecessarily inhibit public safety use of the spectrum by prohibiting stations that meet the D/U signal ratio requirement at the predicted Grade B field strength contour.<sup>187</sup> To address this concern, the Commission discussed an alternative that bases protection on the actual operating parameters of a TV station (*e.g.*, it provides more of a case-by-case approach to examining interference).<sup>188</sup> Finally, the Commission discussed an additional option of permitting new licensees in this spectrum to reach agreements with licensees of protected TV stations that would be located closer than that permitted under the geographic separation requirements.<sup>189</sup>

97. In the *Public Safety Spectrum Report and Order* the Commission concurred with the comments that a geographic separation distance table based on a standard 88.5 km Grade B service contour (equivalent Grade B for DTV) would be the most convenient form.<sup>190</sup> The Commission remained concerned, however, that limiting TV/land mobile separation to distances specified in a table may prevent public safety entities from fully utilizing the spectrum in a number of major metropolitan areas until after the transition period ends. The Commission believed that it was necessary to provide alternative methods that will give flexibility to public safety entities to locate base stations closer than the distance specified in the separation table without causing excessive interference to TV/DTV stations.<sup>191</sup> Therefore, the Commission concluded that public safety applicants should be allowed to submit engineering studies showing how they propose to meet the appropriate D/U signal ratio at the existing TV station's authorized or applied for Grade B service contour or equivalent contour for DTV stations instead of the hypothetical contour at 88.5 km.<sup>192</sup> This would permit public safety applicants to take into account intervening terrain and engineering techniques such as directional and down-tilt antennas in determining the necessary separation to provide the required protection. Public safety applicants who used the engineering techniques must, however, consider the actual TV/DTV parameters and not base their study on the 88.5 km hypothetical or equivalent Grade B contour.<sup>193</sup> Finally, public safety applicants would also be allowed to "short space" (*i.e.*, locate closer than the Table permits) if they obtain the approval of the

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<sup>187</sup> See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17802-04 (paras. 233-237).

<sup>188</sup> See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17804-05 (paras. 238-239).

<sup>189</sup> See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17805 (para. 240).

<sup>190</sup> *Public Safety Spectrum Report and Order* at para. 158.

<sup>191</sup> *Id.*

<sup>192</sup> *Id.*

<sup>193</sup> *Id.*

TV stations they are required to protect.<sup>194</sup> Thus, under the rules adopted by the Commission, public safety applicants could select one of three ways to meet the TV/DTV protection requirements: (1) utilize the geographic separation specified in the Table; (2) submit an engineering study to justify other separations, which is subject to Commission approval; or (3) obtain concurrence from any applicable TV/DTV station. We propose that these same alternatives be available to Part 27 licensees and we seek comment on this approach.

98. Also, in the *Public Safety Spectrum Second Notice* the Commission requested comment on whether the size of the reference TV contour should be increased because some TV stations have facilities exceeding those upon which the 88.5 km (55 mi) contour was based.<sup>195</sup> The Commission stated that a TV station with parameters of 5 megawatts with an antenna height above average terrain (HAAT) of 610 meters could have a Grade B contour distance of 107 km (66.5 mi).<sup>196</sup> In order to protect certain TV/DTV stations, which have extremely large contours due to unusual height situations, the Commission incorporated an additional factor that must be used by all public safety base, control, and mobile stations to protect these few TV/DTV stations and afford the land mobile stations the necessary protection from the TV/DTV stations.<sup>197</sup> We propose that this additional factor also be applicable to all Part 27 licensees operating in these bands. We thus propose to adopt a rule similar to that reflected in Section 90.545(c)(2)(iii) of the Commission's Rules,<sup>198</sup> as adopted in the *Public Safety Spectrum Report and Order*, to address this situation.

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<sup>194</sup> *Id.*

<sup>195</sup> *See Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17804 (para. 238).

<sup>196</sup> *Id.* (para. 236 n405). *See* 47 C.F.R. §§ 73.683-73.684.

<sup>197</sup> *Public Safety Spectrum Report and Order* at para. 159.

<sup>198</sup> 47 C.F.R. § 90.545.

## E. Other Issues

99. In the *DTV Sixth Report and Order*, the Commission raised the possibility that, in negotiating among themselves for changes in allotments and assignments, TV licensees could include agreements for compensation.<sup>199</sup> We propose to permit new licensees in this spectrum similarly to reach agreements with licensees of protected TV stations, including holders of construction permits, compensating them for converting to DTV transmission only before the end of the DTV transition period, accepting higher levels of interference than those allowed by the protection standards, or otherwise accommodating new licensees in these bands. We believe that these measures would benefit the public by accelerating the transition to DTV and clearing the 746-806 MHz band for other new services.

100. Finally, because we have proposed to license this spectrum for broadcasting, as well as for the fixed and mobile uses, we also request comment on interference protection standards for any new broadcast operations that may be licensed in this spectrum.<sup>200</sup> We further request comment on whether we should establish geographic separations standards for any TV broadcasting in this spectrum, authorized pursuant to this or a successor rulemaking proceeding, from current analog TV or new DTV stations authorized before this proceeding, whether we should treat any broadcast licenses on a case-by-case basis; or whether there are other approaches we should use to consider interference to and from broadcast operations.

## IV. PROCEDURAL MATTERS

### A. Initial Regulatory Flexibility Analysis

101. As required by Section 603 of the Regulatory Flexibility Act of 1980 (RFA),<sup>201</sup> the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules proposed in this Notice. We request written public comment on the analysis. In order to fulfill the mandate of the Contract with America Advancement Act of 1996 regarding the Final Regulatory Flexibility Analysis, we ask a number of questions in our IRFA regarding the prevalence of small businesses in the affected industries. Comments must be filed in accordance with the same filing deadlines as comments filed in this

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<sup>199</sup> *DTV Sixth Report and Order*, 12 FCC Rcd at 14667 (para. 172).

<sup>200</sup> Stations transmitting broadcast signals are likely to produce interference effects to analog TV and DTV stations that differ from those of land mobile or fixed stations.

<sup>201</sup> 5 U.S.C. § 603.

proceeding, but they must have a separate and distinct heading designating them as responses to the IRFA.

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

102. This Notice of Proposed Rulemaking contains either a proposed or modified information collection. As part of its continuing effort to reduce paperwork burdens, the Commission invites the general public to take this opportunity to comment on the information collections contained in the Notice of Proposed Rulemaking as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Public and Agency comments on the information collections contained in the Notice of Proposed Rulemaking are due 60 days after publication of the summary of the Notice of Proposed Rulemaking in the Federal Register. These comments should be submitted to Les Smith, Federal Communications Commission, Room 1-A804, 445 12th Street, S.W., Washington, D.C. 20554, or via the Internet to [lesmith@fcc.gov](mailto:lesmith@fcc.gov). Comments on the information collections contained in the Notice of Proposed Rulemaking 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.

### **C. Ex Parte Presentations**

103. For purposes of this permit-but-disclose notice and comment rulemaking proceeding, members of the public are advised that *ex parte* presentations are permitted, except during the "Sunshine Agenda" period, provided they are disclosed under the Commission's Rules.<sup>202</sup>

### **D. Pleading Dates**

104. Pursuant to Sections 1.415 and 1.419 of the Commission's Rules,<sup>203</sup> interested parties may file comments on or before **July 19, 1999**, and reply comments on or before **August 13, 1999**. Comments and reply comments should be filed in WT Docket No. 99-168. All relevant and timely comments will be considered by the Commission before final action is taken in this proceeding. To file formally, interested parties must file an original and four copies of all comments, reply comments, and supporting comments. If interested parties want each Commissioner to receive a personal copy of their comments, they must file an original plus nine copies. Interested parties should send comments and reply comments to the Office of the Secretary, Federal Communications Commission,

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<sup>202</sup> See generally 47 C.F.R. §§ 1.1202, 1.1203, 1.1206(a).

<sup>203</sup> 47 C.F.R. §§ 1.415, 1.419.

445 12th Street, S.W., Washington, D.C. 20554, with a copy to Stan Wiggins, Policy Division, Wireless Telecommunications Bureau, 445 12th Street, S.W., Washington, D.C. 20554. Parties are also encouraged to file a copy of all pleadings on a 3.5-inch diskette in WordPerfect 5.1 format.

105. Comments may also be filed using the Commission's Electronic Comment Filing System (ECFS).<sup>204</sup> Comments filed through the ECFS can be sent as an electronic file via the Internet to <<http://www.fcc.gov/e-file/ecfs.html>>. Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and a reference to WT Docket No. 99-168. Parties may also submit an electronic comment by Internet E-Mail. To obtain filing instructions for E-Mail comments, commenters should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov), and should include the following words in the body of the message, "get form <your E-Mail address>."

106. Comments and reply comments will be available for public inspection during regular business hours at the FCC Reference Center, 445 12th Street, S.W., Washington, D.C. 20554. Copies of comments and reply comments are available through the Commission's duplicating contractor: International Transcription Services, Inc., 2100 M Street, N.W., Suite 140, Washington, D.C. 20037.

### **E. Further Information**

107. For further information concerning this rulemaking proceeding, contact Stan Wiggins or Ed Jacobs at (202) 418-1310, Policy Division, Wireless Telecommunications Bureau, Federal Communications Commission, Washington, D.C. 20554.

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<sup>204</sup> See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (1998).

**V. ORDERING CLAUSES**

108. Accordingly, IT IS ORDERED that these actions ARE TAKEN pursuant to Sections 1, 4(i), 7, 10, 201, 202, 208, 214, 301, 303, 307, 308, 309(j), 309(k), 310, 311, 315, 317, 324, 331, 332 and 336 of the Communications Act of 1934, 47 U.S.C. §§ 151, 154(i), 157, 160, 201, 202, 208, 214, 301, 303, 307, 308, 309(j), 309(k), 310, 311, 315, 317, 324, 331, 332, 336.

109. IT IS FURTHER ORDERED that NOTICE IS HEREBY GIVEN of the proposed regulatory changes described in this Notice, and that comment is sought on these proposals.

110. IT IS FURTHER ORDERED that the Commission's Office of Public Affairs, Reference Operations Division, SHALL SEND a copy of this Notice, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with Section 603(a) of the Regulatory Flexibility Act of 1980, Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. §§ 601-612 (1980).

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas  
Secretary

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**APPENDIX****INITIAL REGULATORY FLEXIBILITY ANALYSIS****A. Need for, and Objectives of, the Proposed Rules**

This rulemaking is being initiated to adopt certain service, licensing, and competitive bidding rules for the 746-764 and 776-794 MHz segments of the 746-806 MHz band. The Congress directed the Commission, in the Balanced Budget Act of 1997, to allocate 36 megahertz of this band for commercial use, and to license that spectrum by competitive bidding. In the *Reallocation Report and Order*, the Commission reallocated 36 megahertz of this band to commercial use and determined that the potential range of commercial services would include all services permitted under the U.S. Table of Allocations -- Fixed, Mobile, and Broadcasting services. In this Notice, we propose to license the 746-764 MHz and 776-794 MHz commercial bands under a flexible framework established in Part 27 of the Commission's Rules. We expect that provisions of Part 27 will be modified to reflect the particular characteristics and circumstances of services offered through the use of spectrum on these bands. Depending on the extent and nature of provisions in the service rules that enable broadcast services, these modifications may also reference or incorporate rules in other Parts of the Commission's Rules, such as Part 73 governing broadcast services. We believe that this flexible approach will encourage new and innovative services and technologies in this band without significantly limiting the range of potential uses for this spectrum.

Our objectives for the Notice are: (1) to auction licenses for these commercial spectrum blocks as directed by the Balanced Budget Act; (2) to accommodate the introduction of new uses of spectrum and the enhancement of existing uses; (3) to implement the Section 303(y) requirement that flexible use allocations not create harmful interference or discourage investment; (4) to facilitate the awarding of licenses to entities that value them the most. The Commission seeks to develop a regulatory plan for these commercial spectrum blocks that will allow for efficient licensing and intensive use of the band, eliminate unnecessary regulatory burdens, enhance the competitive potential of the band, and provide a wide variety of radio services to the public.

**B. Legal Basis for Proposed Rules**

The proposed action is authorized under Sections 1, 4(i), 7, 10, 201, 202, 208, 214, 301, 303, 307, 308, 309(j), 309(k), 310, 311, 315, 317, 324, 331, 332 and 336 of the Communications Act of 1934, 47 U.S.C. §§ 151, 154(i), 157, 160, 201, 202, 208, 214, 301, 303, 307, 308, 309(j), 309(k), 311, 310, 315, 317, 324, 331, 332, 336.

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

For the purposes of this Notice, the RFA defines a "small business" to be the same as a "small business concern" under the Small Business Act,<sup>205</sup> unless the Commission has developed one or more definitions that are appropriate to its activities.<sup>206</sup> Under the Small Business Act, a "small business concern" is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) meets any additional criteria established by the Small Business Administration (SBA).<sup>207</sup>

The proposals in this Notice affect applicants who wish to provide services in the 746-764 and 776-794 MHz bands. Pursuant to 47 C.F.R. § 24.720(b), the Commission has defined "small entity" for Blocks C and F broadband PCS licensees as firms that had average gross revenues of less than \$40 million in the three previous calendar years. This regulation defining "small entity" in the context of broadband PCS auctions has been approved by the SBA.<sup>208</sup> With respect to applicants for licenses in the 746-764 and 776-794 MHz bands, we propose to use the small entity definition adopted in the Broadband PCS proceeding.

The Commission, however, has not yet determined or proposed how many licenses will be awarded, nor will it know how many licensees will be small businesses until the auction is held. Even after that, the Commission will not know how many licensees will partition their license areas or disaggregate their spectrum blocks, if partitioning and disaggregation are allowed. In view of our lack of knowledge of the entities which will seek licenses in the 746-764 and 776-794 MHz bands, we therefore assume that, for purposes of our evaluations and conclusions in the IRFA, all of the prospective licenses are small entities, as that term is defined by the SBA or our proposed definitions for these bands.

We invite comment on this analysis.

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<sup>205</sup> 15 U.S.C. § 632.

<sup>206</sup> See 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 5 U.S.C. § 632).

<sup>207</sup> 15 U.S.C. § 632.

<sup>208</sup> See Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, Fifth Report and Order, 9 FCC Rcd 5532, 5581-82 (para. 115)(1994).

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

Entities interested in acquiring spectrum in the 746-764 and 776-794 MHz bands will be required to submit license applications and high bidders will be required to apply for their individual licenses. The proposals under consideration in this item also include requiring commercial licenses to make showings that they are in compliance with construction requirements, file applications for license renewals, and make certain other filings as required by the Communications Act and Commission regulations. In addition to the general licensing requirements of Part 27 of the Commission's Rules, other parts may be applicable to commercial licensees, depending on the nature of service provided. For example, commercial licensees proposing to provide broadcast services on these bands may be required to comply with all or part of the broadcast-specific regulations in Part 73 of the Commission's Rules. We request comment on how these requirements can be modified to reduce the burden on small entities and still meet the objectives of the proceeding.

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

We have reduced burdens wherever possible. With specific regard to the potential for use of these bands by dissimilar services such as broadcast and commercial fixed and mobile, we have sought comment on different approaches to minimizing the burdens of interference management, consistent with the statutory mandate to protect both public safety uses and television service. To minimize any negative impact, we have also proposed certain incentives for small entities which will redound to their benefit. These provisions include partitioning and spectrum disaggregation. We have also sought comment on combinatorial auction procedures, which may enable small entities to participate in the licensing process with more flexibility. The regulatory burdens we have retained, such as filing applications on appropriate forms, are necessary in order to ensure that the public receives the benefits of innovative new services, or enhanced existing services, in a prompt and efficient manner. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing any significant economic impact on small entities. We seek comment on significant alternatives commenters believe we should adopt.

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

None.