FCC 97-391

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's	)	ET Docket No. 95-183
Rules Regarding the 37.0-38.6 GHz and	)	RM-8553
38.6-40.0 GHz Bands	)	
	)	
	)	
Implementation of Section 309(j) of the	)	PP Docket No. 93-253
Communications Act -- Competitive	)	
Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz	)	

REPORT AND ORDER AND
SECOND NOTICE OF PROPOSED RULE MAKING

Adopted: October 24, 1997; Released: November 3, 1997

By the Commission:

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I. INTRODUCTION

1. In the Notice of Proposed Rule Making and Order in the above-captioned proceeding, we proposed to amend the rules for fixed, point-to-point microwave service in the 38.6-40.0 GHz ("39 GHz") band, and to adopt a conforming set of new rules for the virtually unused 37.0-38.6 GHz ("37 GHz") band in order to allow for the expansion of 39 GHz-type service.[1] Since the time we made these proposals, technological developments have sparked additional applications for the frequencies in the 36-51 GHz band that had not been proposed when we issued the *NPRM and Order*. For example, some entities have submitted proposals for non-terrestrial systems -- such as Sky Station International's proposed use of platforms located in the stratosphere to build a global stratospheric telecommunications system,[2] Motorola Satellite Systems' proposed 72-satellite NGSO/FSS M-Star system,[3] and Hughes Communications, Inc.'s proposed satellite GSO/FSS Expressay system.[4] While we seek to create a regulatory environment that will permit the construction of these projects, we also are interested in providing sufficient flexibility for terrestrial-based licensees to provide the public with innovative services. We believe that the public interest would be served by permitting the market to decide which entrepreneurial efforts will succeed.

2. In this *Report and Order*, we amend Parts 1, 2, and 101 of the Commission's Rules[5] to facilitate more effective use of the 39 GHz band, by implementing a number of improvements such as licensing by Basic Trading Areas (BTAs) and employing competitive bidding procedures as a means for choosing among mutually exclusive license applicants. In addition, we conclude that our regulatory framework should be expanded to include service rules for mobile operations in the 39 GHz band. By facilitating implementation of mobile services, 39 GHz licensees will be able to modify their service offerings quickly and efficiently to provide the services that consumers demand and that technology makes possible. Thus, 39 GHz service providers will be better positioned to respond to the dictates of the marketplace. Moreover, such flexibility will promote competition by increasing both the diversity of potential service offerings and the number of providers that can offer any service. Finally, we address those 39 GHz applications held in abeyance pursuant to the processing freeze imposed in the *NPRM*

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[1] *Notice of Proposed Rule Making and Order*, 11 FCC Rcd 4930 (1995) ("*NPRM and Order*"). At present, there are no rules for the 37 GHz band that allow licensing of non-government, fixed terrestrial service, and there are no non-government operations of any kind in that band. There is, however, some limited Federal Government use of the 37 GHz band. Specifically, a total of nine fixed links at two government installations operate in this band, authorized by the National Telecommunications and Information Administration ("NTIA"). *Id*. at 4933.

[2] Sky Station Application for Global Stratospheric Telecommunications System, File No. 96-SAT-P/LA-96 (filed March 20, 1996).

[3] Motorola Satellite Systems, Inc., Application to Construct, Launch, and Operate the M-Star System, File No. 157-SAT-P/LA-96(72) (filed September 4, 1996).

[4] Hughes Communications, Inc., Application to Construct, Launch, and Operate the Expressway System, File No. 90-SAT-P/LA-97 (filed July 14, 1997).

[5] We note that, effective August 1, 1996, the service rules for fixed microwave operations in Parts 21 and 94 were consolidated into a new Part 101. *See* Reorganization and Revision of Parts 1, 2, 21, and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fixed Radio Services, Amendment of Part 21 of the Commission's Rules for the Domestic Public Fixed Radio Services, McCaw Cellular Communications, Inc. Petition for Rule Making, WT Docket No. 94-148, CC Docket No. 93-2, RM-7861, *Report and Order*, FCC 96-51 (released Feb. 29, 1996) ("*Part 101 Report and Order*").

and Order, as modified in our subsequent *Memorandum Opinion and Order*.[6] In this *Second Notice of Proposed Rule Making*, we seek additional comments regarding the use of partitioning and disaggregation by parties utilizing bidding credits under our competitive bidding licensing rules. By these actions, we will foster the continued development of a variety of microwave operations in the 39 GHz band, which will facilitate provision of, *inter alia*, communications infrastructure for commercial and private mobile radio operations and competitive wireless local telephone service.

II. EXECUTIVE SUMMARY

3. In our decision today, we take a number of steps to simplify and streamline the licensing process for the 39 GHz band. What follows is a synopsis of the major aspects of our decision.

A. Licensing Rules

- We are allotting the 39 GHz spectrum for licensing throughout the United States by BTAs (constituting 487 service areas).[7] We are authorizing an additional six BTA-like areas, covering the following U.S. territories: American Samoa; Guam; Northern Mariana Islands; San Juan, Puerto Rico; Mayagüez/Aguadilla-Ponce, Puerto Rico; and, the United States Virgin Islands. Thus, a total of 493 authorizations will be issued for each channel block in the 39 GHz band. Incumbent 39 GHz licensees, however, will be able to retain their rectangular service areas,[8] provided they meet the build-out requirements described *infra*.

- The existing 39 GHz channeling plan -- fourteen paired 50 MHz channel blocks, with a spacing of 700 MHz between the transmit and receive frequencies -- is retained.

- We also retain the existing framework of license terms for 39 GHz licensees; the licensees who received their authorizations prior to August 1, 1996, will retain the license term specified in their authorizations, while all licensees receiving a license after that date will have a ten-year license term from the date of grant.

- For each license held, 39 GHz licensees must show that they are providing "substantial service" when they file their renewal application.

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[6] Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183, RM-8553, PP Docket No. 93-253, *Memorandum Opinion and Order*, FCC 96-486 (released Jan. 17, 1997), *petitions for reconsideration, pending.*

[7] *See* Rand McNally Commercial Atlas & Marketing Guide 36-39 (123d ed. 1992). For a listing of the counties that comprise each BTA service area employed in PCS, see *Public Notice*, Report No. CW-94-02 (Sept. 22, 1994). While Rand McNally & Company ("Rand McNally") has a copyright interest in these BTA listings, we do not anticipate that this interest will impair the efficient use of the 39 GHz band. *See infra* paras. 16-17.

[8] Until now, 39 GHz channels have been licensed on a licensee-defined, rectangular service area basis. *See* 47 C.F.R § 101.147(u).

- All 39 GHz band licensees will receive an explicit renewal expectancy if they satisfy the "substantial service" requirement.[9]

- Any entity may apply for a 39 GHz license. In addition, we are not adopting a limit on the amount of 39 GHz spectrum that can be held by a single entity.

- 39 GHz licensees will be able to offer a variety of services including point-to-point, point-to-multipoint, and mobile operations (with implementation of mobile operations occuring after the Commission completes a rulemaking proceeding addressing inter-licensee and inter-service interference issues).

- All 39 GHz licensees are permitted to partition and/or disaggregate their licenses.

B. Technical Rules

- We are eliminating the requirement that licensees meet the current standard for frequency tolerance. Protection against objectionable interference will be ensured by the existing emission limits.

- Licensees will not be required, as a general rule, to deploy Category A antennas. We are also eliminating the alternative Category B antenna option to permit use of other types of antennas. We note, however, that users of other than Category A antennas will be required to upgrade such antennas if they pose interference problems.

C. Disposition of Pending 39 GHz Applications

- We dismiss without prejudice major amendments[10] filed on or after November 13, 1995.

- We dismiss without prejudice all pending mutually exclusive applications, unless the mutual exclusivity was resolved by an amendment of right filed before December 15, 1995.

- We dismiss without prejudice all applications that had not been placed on public notice or completed the 60-day cut-off period as of November 13, 1995.

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[9] For incumbent 39 GHz licensees whose renewal date and date for meeting the build-out requirement coincide, as described *infra*, we are providing an exception. Since the build-out requirement can be met either by demonstrating substantial service or by meeting a specific benchmark, we will recognize that such licensees have provided substantial service for purposes of earning a renewal expectancy if they meet either the substantial service or specific benchmark test for build-out. When the dates for renewal and build-out do not coincide, however, the assumption that substantial service at the build-out point is the same as substantial service at renewal is not valid.

[10] *See* 47 C.F.R. § 101.29 (c)(1)-(c)(5) for discussion of major amendments.

D. Competitive Bidding

- We will award 39 GHz licenses through competitive bidding. We conclude that a series of auctions of several channels at a time is the fairest, fastest and most administratively efficient way of distributing these licenses.

- Simultaneous multiple round bidding and a simultaneous stopping rule will be used. We also adopt the Milgrom-Wilson activity rule.

- Applicants will apply for the 39 GHz auction by filing a short-form application (FCC Form 175) and paying an upfront payment. Upfront payments will be determined by the Wireless Telecommunications Bureau and announced by Public Notice prior to the auction. At the conclusion of the auction, winning bidders must supplement their upfront payments sufficient to bring the deposit up to 20 percent of their winning bid and file their long-form applications.

- Small businesses with revenues of not more than $40 million are eligible for a 25 percent bidding credit, and very small businesses with average annual gross revenues of not more than $15 million are eligible for a 35 percent bidding credit on all 39 GHz licenses. These bidding credits are not cumulative.

E. Second Notice of Proposed Rule Making

- We request comments on the use of partitioning and disaggregation by parties taking advantage of bidding credits under our competitive bidding licensing rules.

III. BACKGROUND

4. On September 9, 1994, the Telecommunications Industry Association ("TIA") filed a Petition for Rule Making seeking to increase the amount of spectrum available for operations contemplated in the 39 GHz band.[11] Currently, the 39 GHz band is allocated for non-Government, fixed, point-to-point microwave communications.[12] When we initiated this proceeding with the December 15, 1995, *NPRM and Order*, we acknowledged that the demand for use of 39 GHz spectrum was increasing dramatically due to the projected need for point-to-point spectrum by Personal Communications Services ("PCS") and cellular licensees, and by providers who require or furnish other types of point-to-point services. We proposed a regulatory framework to improve the 39 GHz band licensing process and to allow interested parties to expand their operations to the 37 GHz band. One of our main goals in initiating this proceeding was to facilitate operations that provide communications infrastructure,

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[11] TIA Petition for Rule Making, RM-8553 (filed Sept. 9, 1994) ("TIA Petition"); *see also* TIA Amendment to Petition for Rule Making, RM-8553 (filed May 4, 1995) ("TIA Amendment").

[12] *See* 47 C.F.R. §§ 2.106, 101.147(a), (u).

such as "backhaul" and "backbone" communications links.[13] We received 34 comments and 17 reply comments in response to the *NPRM and Order*.[14]

5. In the *NPRM and Order*, we also looked at permitting an array of fixed services in the 37 GHz band. Subsequently, Motorola and other satellite entities expressed their interest in this band as well, and similar interests were expressed for other high gigahertz bands. Accordingly, we decided to address the 36.0-51.0 GHz bands in a unified manner, and in a *Notice of Proposed Rulemaking* adopted earlier this year, we sought comment on our proposals for these frequency bands.[15] However, because the 39 GHz band is significantly licensed and subject to additional applications for license, we believe that it is in the public interest to refine our rules at this time to allow existing and new licensees to maximize the array of services they can provide to the public. Indeed, the record in this proceeding demonstrates that our initial view of the potential uses for 39 GHz spectrum was too narrow. In addition to providing support for existing services (*e.g.*, broadband PCS, cellular, and other commercial and private mobile radio operations), 39 GHz band providers plan to use this spectrum to satisfy needs for a host of other fixed services, such as: (1) wireless local loops, (2) call termination or origination services to long distance companies, (3) connection of the customers of a competitive access provider ("CAP") or a local exchange carrier ("LEC") to its fiber rings, (4) connection and interconnection services to private networks operated by business and government as well as other institutions, (5) Internet access, and (6) cable headend applications.[16] In some cases, 39 GHz band licensees are already using the spectrum for such purposes.[17]

6. Several satellite entities commenting in the 36-51 GHz proceeding contend that we should delay taking final action on the 39 GHz band until after the World Radio Conference - 97 (WRC-97).[18] For example, in its comments in the 36-51 GHz proceeding, Lockheed Martin Corporation (Lockheed Martin) states that our proposed band plan for spectrum between 36 - 51.4 GHz is fraught with risk of rejection through the WRC-97 process.[19] As a result, Lockheed Martin argues that it would be unreasonable for us to take further action in this proceeding without the assurance that our entire plan will receive the necessary international endorsement. Any

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[13] "Backhaul" links generally are used to interconnect a cell site with a mobile switching office. "Backbone" links generally are used to interconnect mobile switching offices with one another or with a central office.

[14] Comments were due on March 4, 1996, and reply comments were due on April 1, 1996. Attached hereto as Appendix A is a list of the parties filing in this proceeding.

[15] *See* In the Matter of Allocation and Designation of Spectrum For Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz, and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band, Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations, IB Docket No. 97-95, *Notice of Proposed Rulemaking*, FCC 97-85 (rel. March 24, 1997) (*"36-51 GHz NPRM"*).

[16] *See, e.g.*, ART Comments at 43-45; WinStar Comments at 27-28.

[17] *See, e.g.*, ALTS Comments at 2; ART Comments at 43-45; AT&T Comments at 9; Bachow Comments at 8; BizTel Comments at 11-14; Columbia Comments at 12; GEC Comments at 3; Milliwave Comments at 26-27; Spectrum Comments at 2; WinStar Comments at 37-40.

[18] WRC-97 is scheduled to start October 27, 1997, and convene for four weeks.

[19] Lockheed Martin Comments, filed May 5, 1997, at 14. Lockheed Martin also requested that copies of its comments filed in 36-51 GHz proceeding be included in this proceeding because the spectrum being addressed is covered in both rulemakings (*i.e.*, ET Docket No. 95-183 and IB Docket No. 97-95.

action now, it maintains, will adversely affect the interests of those services (particularly, satellite) that rely on international allocations.[20] In addition, some satellite commenters argue that because high density fixed services are deployed only in the 38.5 - 39.5 GHz band in other parts of the world, we should designate the 39.5 - 40.0 portion of the 39 GHz band for satellite services. Such a designation, they maintain, would be consistent with international and domestic allocations.[21]

7. We are not persuaded by these commenters that a delay in concluding this proceeding or changing the service designation for the 39.5 - 40.0 GHz band would be in the public interest. Current allocations for this segment of the 39 GHz band contain both fixed and satellite services. The actions we take here today do not alter those allocations. We further note that our actions here do not constrain our ability to later modify the Table of Allocations with respect to this segment of the band, or our overall band segmentation plan proposed in the 36-51 GHz proceeding, should future events (*e.g.*, WRC-97 decisions) require a different result.

8. Moreover, we note there is wide support for the premise that the types of fixed and satellite services likely to be offered in spectrum above 36 GHz will not be able to share the same spectrum blocks. There have been numerous presentations by various terrestrial fixed service entities supporting this notion, and this conclusion has been reiterated in the records of both this and the 36-51 GHz proceeding.[22] Similarly, various satellite entities have indirectly conceded that sharing between terrestrial and satellite is not likely in bands above 36 GHz, even though they recommend that the sharing option continue to be pursued.[23] For example, many of the comments in the 36-51 GHz proceeding express doubt about the feasibility of our proposal to establish an "underlay" license for terrestrial services in those bands that would be designated for satellite services.[24] Underlying this concern is the recognition of the potential for interference between the two types of operations. Against this backdrop, we conclude that some form of band segmentation will be required to accommodate planned services in the spectrum above 36 GHz. The current use and allocation of the 39 GHz band is consistent with this result, and therefore, we see no basis for delaying this proceeding.

9. Further, of the bands comprising our 36-51 GHz segmentation plan, the 39 GHz band is the only one involving current licensees. Indeed, we continue to authorize additional operations in the band. Over the last four years, we have licensed 55 entities to render a variety of fixed point-to-point services in more than 200 metropolitan areas throughout the country. As a result, in some of these areas all 39 GHz spectrum has been assigned. In fact, many of these authorized stations operate in the 39.5 - 40.0 GHz portion of the 39 GHz band.

10. Given the significant level of licensing in the 39 GHz band, we are presented with the challenging question of how to accommodate commercial satellite operations in the 39.5 - 40.0 segment of the band. We are not persuaded that redesignation of that portion of the 39 GHz band for satellite services only, as recommended

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[20] *Id*.

[21] *See, e.g.*, Hughes Reply Comments, filed May 5, 1997, at 14; Lockheed Martin Reply Comments, filed June 3, 1997, at 8.

[22] *See, e.g.*, Report of the Ad Hoc Millimeter Wave Group on U.S. Proposals For Agenda Item 1.9.6 of WRC-97, March 5, 1997 at §3.1.1; WinStar Opposition to RM-8811, *supra*, at 3-5, and Attachment L.

[23] *See, e.g.*, TRW Reply Comments, filed June 3, 1997, at 5; Hughes Reply Comments, *supra*, at 20; Motorola Reply Comments, filed June 3, 1997, at 14; Lockheed Martin Comments, *supra*, at 15.

[24] *Id.*

by satellite proponents, is the most prudent course of action at this time. In light of the near unanimous concern about the feasibility of terrestrial-satellite sharing, it would appear that grandfathering existing 39 GHz terrestrial licensees would not be a viable option. While relocation or repacking of existing licensees might be possible, we believe such an alternative would be extremely burdensome to terrestrial licensees presently operating within that portion of the band. For example, re-packing the existing licensees in the 39.5 - 40.0 GHz portion to some other portion of the 39 GHz band could require existing licensees to change frequencies, purchase new equipment and/or perform a major retrofit. In addition, a new terrestrial frequency plan would be required -- one based on a different transmit/receive frequency separation. Such a change would impose significant costs on equipment manufacturers and licensees. Furthermore, a change in the frequency plan would require further rulemaking, which would result in additional delay in the deployment of new services to the public.

11. In addition, this repacking alternative could impair the ability of existing licensees to provide continued service to their customers. According to several 39 GHz licensees, a broad base of customers have been established and a variety of services are being offered.[25] In addition, the 39 GHz companies are making major strides toward becoming effective competitors to incumbent local exchange carriers.[26] Given the likelihood of inter-service interference and the rapid implementation of service by 39 GHz licensees, the satellite industry's request for delayed action in this proceeding and a spectrum designation change is not persuasive. Again, should future events dictate that a different course of action with respect to the 39 GHz band is warranted, nothing that we have done here will prevent us from taking the appropriate action at that time.

IV. DECISION -- SERVICE RULES

A. Service Areas

12. *Background*. The current licensing process in the 39 GHz band allows each licensee to define its own service area. In the *NPRM and Order*, we proposed to license prospectively all channel blocks in the 39 GHz band using BTAs.[27] Alternatively, we asked whether some or all of the channel blocks should be made available for licensing over significantly larger geographic areas, or whether smaller geographic areas should be used to meet the needs of those who might desire individual links.[28]

13. *Discussion*. After careful consideration of the record, we will adopt our proposal to license new 39 GHz licenses based on pre-defined geographic areas rather than the applicant-defined rectangular areas currently authorized in the 39 GHz band. Use of pre-determined service areas will provide a more orderly structure for the licensing process. Moreover, Commission-defined service areas will foster efficient utilization of 39 GHz spectrum in an expeditious manner. Our experience in the 39 GHz band has shown that while applicant-defined service areas may give entities the opportunity to apply only for that area which they intend to serve, this opportunity does not result in expeditious licensing of the spectrum because the mutually exclusive situations are

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[25] *See, e.g.*, WinStar Reply Comments, Appendix I; TIA Reply Comments at 3.

[26] *See* Communications Daily, August 13, 1997.

[27] *See id*.

[28] *Id*.

complex and often overlapping.[29] In contrast, the use of Commission-defined service areas should facilitate rapid delivery of services to the public. For these aforementioned reasons, we therefore reject the suggestion by some commenters that we continue licensing the 39 GHz band by permitting applicants to define their own service areas.[30] For those interested in tailoring a service area to other smaller or larger markets, we note that today we also are proposing service rules to allow partitioning and disaggregation by 39 GHz licensees.

14. In choosing the most appropriate definition for 39 GHz service areas, we observe that our conclusion that this band is auctionable (explained below in Section V-A) requires us to apply the criteria of Section 309(j)(4)(C) of the Communications Act of 1934, as amended, ("Act" or "Communications Act"). This Section mandates that we consider certain factors when establishing service areas for auctionable services.[31] The first of these criteria is that the service area promote an equitable distribution of licenses and services among geographic areas. We believe that use of BTAs fulfills this objective because they are intended to represent the natural flow of commerce, comprising areas within which consumers have a community of interest.[32] As a result, we believe that BTAs are representative of the geographic areas in which the types of services envisioned for the 39 GHz band are likely to be provided. The second criterion we are required to consider is whether the service area is appropriate to provide economic opportunity for a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women. We believe that BTAs are sufficiently large to accommodate the array of services proposed for the 39 GHz band in a manner which provides opportunities for a variety of licensees. For example, broadband PCS licensees use BTAs or Major Trading Areas ("MTAs," which are regional aggregations of BTAs), as their primary service areas, and may seek to use 39 GHz band spectrum for backbone and backhaul. Thus, the BTA-sized service areas for support spectrum will be compatible with the primary service areas defined for broadband PCS providers.[33] We also believe that other services, such as telephony, would find sufficient population within BTAs to support the pursuit of various business opportunities. In addition, we believe that other services anticipated for 39 GHz spectrum, such as wireless local loop, competitive access, local exchange, and Internet access, are of a local nature for which use of BTAs also would be appropriate.[34] Moreover, we believe that use of BTAs as the service area definition for the 39 GHz band will also satisfy the third criterion of Section 309(j)(4)(C), which requires that

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[29] *See, e.g.*, Implementation of Sections 3(n) and 332 of the Communications Act, GN Docket No. 93-252, PR Docket No. 93-144, PR Docket No. 89-553, *Third Report and Order*, 9 FCC Rcd 7988, 8044 (1994) (*Third SMR Order*) ("Assigning channel blocks in Commission-defined service areas eliminates the need for many of the complicated and burdensome licensing procedures that have hampered SMR development in the past.").

[30] *See* ANS Comments at 2; TIA Comments at 9-10; Bachow Comments at 11-12; TGI Comments at 11.

[31] *See* 47 U.S.C. § 309(j)(4)(C) (stating that "consistent with the public interest, convenience, and necessity, the purposes of this chapter, and the characteristics of the proposed service, [the Commission shall] prescribe area designations and bandwidth assignments that promote (i) an equitable distribution of licenses and services among geographic areas, (ii) economic opportunity for a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women, and (iii) investment in and rapid deployment of new technologies and services.")

[32] As we discussed in the *NPRM and Order*, Rand McNally is the copyright owner of the *Basic Trading Area and Major Trading Area Listing*, which lists the counties contained in each BTA, as embodied in Rand McNally's *Trading Areas System* diskette and geographically represented in the map contained in Rand McNally's *Commercial Atlas & Marketing Guide*. *See NPRM and Order*, 11 FCC Rcd at 4942.

[33] *See, e.g.*, Commco Comments at 9; DCR Comments at 6; AT&T Comments at 4-5.

[34] *See* ART Comments at 48, n.64.

we establish service areas in a manner which will promote investment in and rapid deployment of new technologies and services. Accordingly, we agree with the commenters who advocate the use of BTAs for licensing the 39 GHz band.[35]

15. We disagree with those commenters who contend that the service areas for the 39 GHz band should be based on larger geographic areas.[36] We believe that BTAs offer a sufficiently large service area to allow applicants flexibility in designing a system to maximize population coverage and to take advantage of economies of scale necessary to support a successful operation.[37] Moreover, to the extent that 39 GHz licensees desire to provide service over a larger geographic region, the rules we adopt today will allow them to aggregate BTAs. We do not believe, however, nor does the record indicate, that the majority of licensees will seek to provide service over vast geographic regions. Thus, we believe that larger service areas would be inappropriate for the 39 GHz band.

16. Finally, although GTE expressed some concern that any Rand McNally licensing agreement should be reasonable,[38] we do not believe that the existence of Rand McNally's copyright interest in the BTA listings will present an impediment to use of these areas by 39 GHz band licensees. We expect that potential licensees and Rand McNally will execute a licensing agreement similar to those already undertaken in other contexts. In particular, Rand McNally has already licensed the use of its copyrighted MTA/BTA listing and maps for a number of services, such as PCS, 800 MHz Special Mobile Radio (SMR) service, and Local Multipoint Distribution Service ("LMDS"), and the company has also reached an agreement with the American Mobile Telecommunications Association ("AMTA") for a blanket copyright license for the conditional use of copyrighted material in the 900 MHz SMR service.[39] These agreements authorize the conditional use of Rand McNally's copyrighted material in connection with these particular services, require interested persons using the material to include a legend on reproductions (as specified in the license agreement) indicating Rand McNally's ownership, and provide for a payment of a license fee to Rand McNally.

17. While the services to be provided in the 39 GHz band do not appear to be covered by any blanket copyright license agreement, we will take the approach we used in MM Docket No. 94-131 and leave it to the

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[35] *See, e.g.,* ART Comments at 47-48; BizTel Comments at 15; Commco Comments at 9; GTE Comments at 4; TDS Comments at 5-6; U S West Reply Comments at 6.

[36] *See, e.g.,* Winstar Comments at 12, Milliwave Reply Comments at 17 ("WinStar's arguments in support of MTAs have convinced Milliwave that at least a portion of the [38 GHz] spectrum should be licensed on this basis. The 39 GHz channels are good candidates. . .").

[37] *See, e.g.,* TDS Comments at 5.

[38] GTE Comments at 4.

[39] *See, e.g.,* Amendment of Commission's Rules to Establish New Narrowband Personal Communications Services, GN. Docket No. 90-314, ET Docket No. 92-100, *First Report and Order*, 8 FCC Rcd 7162 (1993); Amendment of the Commission's Rules to Establish New Personal Communications Services, Gen. Docket No. 90-314, *Second Report and Order*, 8 FCC Rcd 7700 (1993); Implementation of Sections 3(n) and 332 of the Communications Act -- Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Third Report And Order*, 9 FCC Rcd 7988 (1994).

parties to negotiate an arrangement with Rand McNally to make use of its listings.[40] The 39 GHz licensees and other parties interested in using the copyrighted materials may, of course, negotiate their own licensing arrangement with Rand McNally, but we encourage interested parties and Rand McNally to explore the possibility of entering into blanket license agreements, similar to those referenced above, to cover the 39 GHz band. We note that a 39 GHz BTA authorization grantee who does not obtain a copyright license through a blanket license agreement (or some other arrangement) with Rand McNally for use of the copyrighted material may not rely on the grant of a BTA-based authorization from the Commission as a defense to any claim of copyright infringement brought by Rand McNally against such grantee. The MTA/BTA Listings, the MTA/BTA Map and the license agreements noted above are available for public inspection at the Wireless Telecommunications Bureau, Reference Room, Room 5322, 2025 M Street, N.W., Washington, D.C., 20554.

B. Permissible Operations in the 39 GHz Band

18. *Background*. In the *NPRM and Order*, we raised questions about expanding the array of services provided in the 39 GHz band to include point-to-multipoint and mobile operations.[41] These services are permitted under the Table of Allocations for this spectrum band, however, we have not previously promulgated rules which would govern point-to-multipoint and mobile operations. The only type of service authorized under our current service rules is point-to-point operations. The 39 GHz band is currently being licensed and used for non-Government, terrestrial-based, fixed, point-to-point microwave service. In addition, there are no satellite operations in the 39 GHz band. Accordingly, our efforts to improve the licensing and service rules for non-Government service in this band are not affected by any existing assignments under different allocations. We take note of the fact that the 39 GHz band contains the following allocations:

- Domestically, the 38.6-39.5 GHz portion of the band is allocated for non-Government use to provide fixed and mobile services and FSS (space-to-Earth) on a primary basis. In addition to these primary allocations, the 39.5-40.0 GHz portion of the band is allocated on a shared basis between Government and non-Government users on a primary basis for FSS (space-to-Earth) and Mobile-Satellite Service ("MSS") (space-to-Earth). Government use of 39.5-40.0 GHz is limited to military systems.

- Internationally, the 39 GHz band is allocated on a co-primary basis for fixed and mobile services and FSS (space-to-Earth), and on a secondary basis for use by the Earth-Exploration Satellite service (space-to-Earth). The 39.5-40.0 GHz portion of the band is also allocated on a primary basis for MSS (space-to-Earth).

19. Accordingly, in the *NPRM and Order*, we requested public comment on whether we should also establish service rules which would permit point-to-multipoint and mobile services. Many parties commenting in this proceeding have encouraged us to allow them flexibility to determine the best uses of the 39 GHz band; in particular, they have requested authority to provide point-to-multipoint and mobile service, as the technology

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[40] *See* Amendment of Part 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Services, MM Docket No. 94-131, *Report and Order*, 10 FCC Rcd 9589 (1995) (*MDS Report and Order*). *See also* Rand McNally Comments at 2.

[41] *See NPRM and Order*, 11 FCC Rcd at 4937-38.

to provide these services becomes available.[42] We have considered these comments in connection with the recent amendment to Section 303 of the Communications Act concerning criteria we must consider when permitting flexible use of the electromagnetic spectrum, which was enacted after the *NPRM and Order* and the comment period had been completed in this proceeding.

1. Point-to-Multipoint Operations

20. *Discussion.* Given the fact that the 39 GHz service is still in its early stages of development, we believe that it is imperative that we not take any regulatory actions that would hamper the service's continued development and growth potential. We note, as a general matter, that the type of services proposed for the 39 GHz band by the commenters can be offered on both a point-to-point and point-to-multipoint basis.[43] Although a few commenters contend that we should defer allowing point-to-multipoint operations in this band until specific technical rules are adopted to protect against interference to point-to-point users (such as equipment specifications),[44] there is no evidence in the record that point-to-point and point-to-multipoint operations are inherently incompatible in the same band or licensing area. Therefore, we will adopt 39 GHz rules for point-to-multipoint operations.

2. Mobile Operations

21. *Discussion.* We have considered the comments of several parties requesting that we establish rules to permit mobile operations in this band. WinStar argues that such flexibility would give licensees the opportunity to make use of technological advances, and would confer the benefits of these advances to subscribers.[45] Milliwave believes that making the 39 GHz band available for a wide array of services, including mobile, will foster innovation and competition in a changing telecommunications market, stimulate infrastructure investment, job creation, and efficient spectrum use.[46] ART suggests that although there does not appear to be an immediate demand for mobile services in the 39 GHz band, such use should not be precluded. To ensure adequate interference protection in a mobile (and point-to-multipoint) environment, ART urges the Commission to license 39 GHz spectrum under the General Wireless Communications Service ("GWCS") rules until rules are adopted for the proposed Licensed Millimeter Wave Service.[47]

22. Parties opposing authorization of mobile services in the 39 GHz band argue that there are no technical parameters to protect both fixed and mobile operations from mutual interference. In particular, TIA argues that mobile equipment now available in the marketplace is designed such that it would receive interference

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[42] *See, e.g.,* ART Comments at 44; Altron Comments at 2; Milliwave Comments at 27; Spectrum Comments at 3; Bachow Comments at 9; Columbia Comments at 12-15; GEC Comments at 3; WinStar Reply Comments at 9-10.

[43] *See, e.g.,* Harris Comments at 4; INNOVA Comments at 2.

[44] *See, e.g.,* ANS Comments at 2; TIA Comments at 23.

[45] WinStar Comments at 40.

[46] Milliwave Comments at 27 and n.48 (citing Chairman Hundt's remarks before the Washington Research Group on February 2, 1996).

[47] ART Comments at 44.

from fixed stations, that coordination is difficult between fixed stations and mobile facilities, that international spectrum harmony would be disrupted, and that manufacturing economies of scale would be disrupted.[48] TIA also argues that advocates for mobile services fail to present documentation that mobile systems would work in the band.[49] ANS and PCIA argue that fixed and mobile operations cannot co-exist because there is significant threat of interference.[50] Harris argues that co-location of fixed and mobile service systems, and the expected increased density of 39 GHz transmitters, combined with their expected evolution toward point-to-multipoint configuration, makes sharing with mobile services unrealistic.[51] BizTel, while promoting flexible service concepts, nevertheless argues that it is questionable whether mobile services could exist on a co-primary basis with fixed uses. It further argues that any mobile service use should be authorized on a secondary basis only.[52]

23. After careful review of the record evidence, we have decided to permit implementation of mobile operations in the 39 GHz band. Permitting such flexibility will enable providers to modify their offerings quickly and efficiently to provide the services that consumers demand and that technology makes possible. Thus, providers will be better positioned to respond to the dictates of the marketplace. Moreover, such flexibility will promote competition by increasing both the diversity of potential service offerings and the number of providers that can offer any service. Thus, the requirements of Section 303(y) are fulfilled because both technological development and investment therein will be stimulated. Moreover, this broad view of the character of 39 GHz service comports with the development of the industry thus far because parties are developing a wide variety of fixed services and, as discussed earlier in this section, some parties may be developing, or planning to develop, mobile services technology capable of operating without interference to fixed facilities in this band. Accordingly, we are convinced that establishing rules for mobile operations will best serve the public interest. In addition, we observe that in a number of other contexts we have authorized licensees to provide both mobile and fixed operations within the same service -- *e.g.*, GWCS, the Commercial Mobile Radio Services ("CMRS"), and the Interactive Video and Data Service ("IVDS").[53]

24. For the most part, the objections that have been raised to mobile operations in this proceeding are misplaced. Since the service is licensed on an exclusive, area-wide basis, (whether by incumbents' rectangular service areas or by new licensees' BTAs), the issue of technical compatibility of fixed and mobile operations within a service area is one that can and should be resolved by the licensee. To the extent that a licensee has the technological wherewithal to provide one or the other, or both, types of services, the licensee will do so in a manner that the market directs. Governmental direction in this service is unnecessary except to the extent that

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[48] TIA Comments at 22-23.

[49] TIA Reply Comments at 17.

[50] ANS Comments at 2; PCIA Comments at 4.

[51] Harris Comments at 4.

[52] BizTel Comments at 14, n.9.

[53] *See* In the Matter of Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, 4660-4685 MHz, ET Docket No. 94-32, *Second Report and Order*, 11 FCC Rcd 624 (1995) (creating GWCS) ("*GWCS Second R&O*"); Amendment of the Commission Rules to Permit Flexible Service Offering in the Commercial Mobile Radio Service, WT Docket No. 96-6, *First Report and Order and Further Notice of Proposed Rule Making*, FCC 96-283 (released Aug. 1, 1996) ("*CMRS Order*"); In the Matter of Amendment of Part 95 of the Commission's Rules to Allow Interactive Video and Data Service Licensees to Provide Mobile Service to Subscribers, WT Docket No. 95-47, *Report and Order*, 11 FCC Rcd 6610 (1996) ("*IVDS Report and Order*").

the operations of one licensee may interfere with that of another. Even if mobile operations are not now compatible with fixed operations within a licensee's service area, if adequate protections against inter-licensee interference are in place, a failure to authorize mobile use in this spectrum might delay implementation of a dual (mobile and fixed) operation when it does become feasible. Accordingly, we agree that 39 GHz licensees should have the flexibility to provide mobile services.

25. We recognize that inter-licensee interference issues are magnified under this approach. For example, a mobile unit operating in a fixed microwave environment on the same frequency calls for a different interference analysis and a more difficult resolution than the operation of two or more fixed microwave systems on the identical frequency in the same vicinity. In addition, the Department of Defense has stated that it has plans to implement satellite downlinks at 39.5-40.5 GHz in the future.[54] NASA has also identified 39.5 - 40.0 GHz as a possible space research band to accommodate future earth-to-space wideband data requirements.[55] Such plans, however, should not affect the continued development of the 39 GHz band for non-Government use. We believe that it is likely that military satellite systems will be able to share with non-Government terrestrial and/or fixed satellite systems, provided that the Government receiving Earth stations are limited in number. We intend to address these interference issues in a future, separate proceeding that will focus on developing inter-licensee and inter-service standards and criteria. Until these standards and criteria are adopted we will not permit mobile operations in the 39 GHz band.

3. The Balanced Budget Act Requirements for Flexible Use

26. The Balanced Budget Act authorizes us to allocate spectrum so as to provide flexible use, if such use is consistent with international agreements to which the United States is a party and we find that: (1) such an allocation would be in the public interest; (2) such use would not deter investment in communications services and systems, or technical development; and (3) such use would not result in harmful interference among users.[56] In the *NPRM and Order*, we sought comment on whether we should allow point-to-multipoint and mobile operations in addition to the traditional point-to-point services authorized in the 39 GHz band.[57] As discussed *supra*, we find that the flexible use approach adopted herein is consistent with the new statute. Accordingly, we will permit point-to-point, point-to-multipoint and mobile operations on the 39 GHz band. However, as explained *supra*, we will defer mobile use until a future rulemaking proceeding can establish interference criteria. Accordingly, we find, as required by Section 303(y) of the Communications Act, as amended by the Balanced Budget Act, that no harmful interference will be caused by allowing both point-to-point and point-to-multipoint operations in the 39 GHz band. We conclude further, based on the above-mentioned comments in the record, that point-to-multipoint use will not deter investment in communications services and systems, or in technology development. To the contrary, permitting point-to-multipoint use will stimulate creative technology development and facilitate investment therein. It is in the public interest to afford 39 GHz licensees flexibility in the design

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[54] Memorandum from SCA, Nelson V. Pollack, Air Force IRAC Representative, Department of the Air Force, to Chairman, IRAC (Apr. 9, 1996).

[55] *See* letter from Nobert Schroeder, Acting Chairman IRAC, to Fred Thomas, FCC Liaison Representatives, IRAC (May 21, 1997).

[56] 47 U.S.C. §303(y), as amended by the Balanced Budget Act of 1997, Pub. L. No. 105-33, § 3005, 111 Stat. 251 (1997).

[57] Although our current international and domestic allocations for this band include satellite operations, 47 C.F.R. §2.106, we did not propose to authorize such use in the 39 GHz band in the *NPRM and Order*.

of their systems to respond readily to consumer demand for their services, thus allowing the marketplace to dictate the best uses for this band. Accordingly, we find that the requirements of Section 303(y) of the Communications Act, as amended, are fulfilled to justify point-to-multipoint use of the 39 GHz band as part of a flexible use approach. While at this time, we are not determining the specific provisions for interference protection with regard to mobile use, we will adopt such requirements before permitting mobile operations in this band.

C. Channeling Plan

27. *Background.* The existing 39 GHz channeling plan consists of fourteen paired 50 MHz channel blocks, with a spacing of 700 MHz between the transmit and receive frequencies. Within this framework, 39 GHz licensees have the flexibility to subdivide their channels in the manner they deem most appropriate to meet service demands. As discussed in the *NPRM and Order*, TIA, however, has proposed that licensees who subchannelize their 50 MHz channel blocks be required to conform to an underlying grid of 1.25 MHz subchannels.[58] TIA argued that this restriction would ease frequency coordination at channel edges and at geographic boundaries.[59]

28. *Discussion.* We will retain our current channel plan and we decline to adopt TIA's proposal regarding subchannelization. Adopting a standard subchannelization plan at this early stage in the development of the 39 GHz service would potentially hamper licensees' efforts to meet their customer demands and could unnecessarily impose technical and economic costs on equipment users and limit the range of services potentially available. Moreover, given the short propagation transmission characteristics at these frequencies, lack of a subchannelization plan is not likely to cause any significant coordination problems in the 39 GHz band. Furthermore, because we anticipate that one of the uses for the 39 GHz band is provision of CMRS infrastructure, we are concerned that adoption of a subchannelization plan may frustrate such use if it is inconsistent with the channeling plan for particular CMRS providers. Thus, we believe that the existing approach that allows 39 GHz licensees to freely subdivide their channel blocks will not only avoid this unintended result but also facilitate the most flexible and efficient use of 39 GHz spectrum. As we observed in the *NPRM and Order*, however, our decision not to adopt a standard subchannelization plan does not preclude the industry from developing its own voluntary standards in this area.[60]

D. Licensing Rules

1. Eligibility

29. *Background*. The issue of eligibility restrictions was first raised by TIA's original proposal that applicants receive a license for a single channel only after demonstrating their need for multiple paths within the service area.[61] Additional channels would be authorized only if the existing channels were operating at or near

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58 TIA Petition at 7.

59 *Id*.

60 *NPRM and Order*, 11 FCC Rcd at 4941.

61 TIA Petition at 9.

expected capacity.[62] Thus, our primary focus in the *NPRM and Order* was on the question of whether eligibility should be restricted to those entities who could demonstrate need for 39 GHz spectrum and the means for meeting that need. While we recognized that such restrictions are designed to weed out applicants who are financially unqualified or engaging in speculation, we tentatively concluded that use of competitive bidding would operate more effectively and efficiently in ensuring that this spectrum was put to its highest valued use.[63] Accordingly, we declined to recommend any eligibility restrictions.[64]

30. *Discussion*. Two commenters argue that eligibility restrictions should be imposed for somewhat different reasons than those suggested by the *NPRM and Order*. Specifically, ALTS and BizTel contend that eligibility restrictions should be imposed as a safeguard against potential anticompetitive abuses by LECs.[65] ALTS states that we should "establish safeguards to prevent incumbent LECs from obtaining all of the desirable channel blocks in a given market and to ensure an opportunity for CLECs to obtain licenses."[66] BizTel states that it is contrary to the public interest, and possibly an antitrust violation, for the Commission to allow a LEC with monopoly power to obtain a 39 GHz license covering any portion of its home operating territory. BizTel argues that allowing such LEC participation in bidding would "frustrate the most viable alternatives available today for deployment of competitive local telecommunications services."[67] BizTel asserts that, at a minimum, any LEC with monopoly power should be required to certify full compliance with the "Competitive Checklist" set forth at Section 271(c)(2)(B) of the Communications Act, as a prior condition to participating in the 39 GHz auction for licenses covering any portion of its home territory.[68] Other commenters propose that the Commission

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[62] *Id*.

[63] *NPRM and Order*, 11 FCC Rcd at 4975-76.

[64] Because we also sought comment on an alternative licensing framework not based on competitive bidding, we requested comment on a series of potential eligibility restrictions. Specifically, we proposed to strengthen and codify the policy guidance given in a 1994 Public Notice, Mimeo No. 44787 (released Sept. 16, 1994), so that all applicants for channels in the 39 GHz band would be required to make a showing that the applicant had given detailed consideration to non-RF solutions; that an immediate requirement existed; that frequency re-use was impossible; that all previously authorized channel blocks within the licensed service area were constructed, operational, and loaded to 100 percent capacity; and that certain technical efficiency standards were met. *NPRM and Order*, 11 FCC Rcd at 4981-82. Finally, licensees would be required to construct their facilities and to be passing communications traffic on all of assigned channel blocks throughout their licensed service areas by the end of the eighteenth month after initial license grant. *Id*. If construction were not timely completed, the licensee's authority to construct additional links would be automatically cancelled and forfeited, and the licensee would be required to notify the Commission of those links that had been constructed so that those links could be grandfathered. *Id*. at 4982.

[65] ALTS Comments at 2; BizTel Comments at 20-22; BizTel Reply Comments at 12, n.20.

[66] ALTS Comments at 2.

[67] BizTel Comments at 21.

[68] BizTel Reply Comments at 12, n.20. The "Competitive Checklist" of Section 271(c)(2)(B) of the Act requires that access or interconnection provided by a Bell operating company to other telecommunications carriers must meet certain requirements, such as: (1) nondiscriminatory access to network elements, poles, ducts, conduits, and rights-of-way owned or controlled by the Bell operating company at just and reasonable rates, (2) local loop transmission from the central office to the customer's premises, unbundled from local switching or other services, (3) local transport from the trunk side of a wireline LEC switch unbundled from switching or other services, (4) nondiscriminatory access to 911 and E911 services, directory assistance services, and operator call completion services, and (5) white pages directory listings for customers of the other carrier's telephone exchange service. 47 U.S.C. 271(c)(2)(B).

substitute its own assessment of the appropriate array of uses and users of 39 GHz spectrum for that of the marketplace.[69]

31. In opposition, a number of other commenters contend that there is no reason to restrict eligibility of the LECs.[70] U S West, for example, argues that neither ALTS nor BizTel provides evidence to support their assertion that LECs will impede competition.[71] According to U S West, the result of eliminating LECs from bidding for spectrum within their respective home operating territories could be that there would be no incentive for quick and economical deployment of wireless local loop in the rural areas of their service region.[72] Further, Pacific argues that the "Competitive Checklist" is associated with the ability of a LEC to offer inter-LATA services and has no relevance to eligibility for 39 GHz licenses. Pacific also states that a safeguard against the warehousing of spectrum by a LEC is to apply the same construction requirement on a LEC that applies to other 39 GHz licensees.[73]

32. In addressing this eligibility issue, we inquire whether open eligibility poses a significant likelihood of substantial competitive harm in specific markets, and, if so, whether eligibility restrictions are an effective way to address that harm. This approach results in reliance on competitive market forces to guide license assignment absent a compelling showing that regulatory intervention to exclude potential participants is necessary. Such an approach is appropriate here because it best comports with our statutory guidance. When granting the Commission authority in Section 309(j)(3) to auction spectrum for the licensing of wireless services, Congress acknowledged our authority "to [specify] eligibility and other characteristics of such licenses."[74] However, Congress specifically directed that we exercise that authority so as to "promot[e] . . . economic opportunity and competition."[75] Congress also emphasized this pro-competitive policy in Section 257, where it articulated a "national policy" in favor of "vigorous economic competition" and the elimination of barriers to market entry by a new generation of telecommunications providers.[76] This approach is also consistent with our analysis in the

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69 *See, e.g.,* TGI Comments at 10 (proposing to reserve a portion of the 39 GHz band for non-CMRS applications); Ameritech Comments at 7-8 (proposing to restrict eligibility to existing mutually exclusive applicants in the BTA). Some commenters also proposed that the Commission reserve channels for link-by-link licensing.*See* Ameritech Comments at 7-9; Comsearch Reply Comments at 1-2; Pacific Comments at 5; TDS Comments at 6-9.

70 *See, e.g.,* Pacific Reply Comments at 9; U S West Reply Comments at 4-5; WinStar Comments at 37, n.123.

71 U S West Reply Comments at 4.

72 *Id.* at 5.

73 Pacific Reply Comments at 8-9.

74 47 U.S.C. § 309(j)(3).

75 *Id.*

76 47 U.S.C. § 257.

LMDS R&O.[77] Finally, implementation of this approach is consistent with the court's treatment of eligibility issues in *Cincinnati Bell*. In that decision, the Court looked to statistical data and general economic theory as support for predictive judgments by the Commission such as that eligibility restrictions are required.[78]

33. In the case of the 39 GHz band, it is unlikely that substantial anticompetitive effects would result from LEC eligibility for two primary reasons. First, increased LEC provision of services other than those provided in local exchange markets, such as point-to-point backhaul and backbone transmission, will not diminish the generally competitive environment in which those services are now available. Second, even presuming that 39 GHz licenses will enable effective provision of services that can compete with local exchange service, such as wireless local loop, incumbent LECs should have little or no incentive to acquire those licenses with the anticompetitive intent of foreclosing entry by other firms and preserving market power. An incumbent strategy of preserving expected future profits by buying 39 GHz licenses cannot succeed because there are numerous other sources of actual and potential competition. As explained above, there are many non-LEC license holders in the 39 GHz band currently, and these licensees will be able to provide services that compete with wireline local exchange. In addition, our overall 36-51 GHz band plan contemplates making available considerable additional spectrum, including substantial unencumbered spectrum, for flexible terrestrial use at frequencies close to those covered by this Order. These future licenses should enable provision of whatever competitive services can be provided with the 39 GHz licenses. Further, entry by other wireless licensees is possible as well, such as CMRS firms now authorized to provide fixed services. Moreover, the 1996 Act has set the stage for new facilities-based, wireline entrants such as interexchange carriers and competitive LECs, and non-facilities-based wireline entrants utilizing the new local competition provisions. Finally, we have now provided for one additional potential competitive option in every region of the country in the form of the 1150 MHz LMDS licensee. We have imposed an eligibility restriction preventing in-region LECs (and cable television companies) from acquiring these large LMDS licenses for three years, guaranteeing that each license will be acquired by a firm new to provision of local exchange in the service area.[79] Therefore, these licensees also constitute potential competition for incumbent LECs providing local exchange services. Given all these competitive possibilities, it is implausible that incumbent LECs would pursue a strategy of buying 39 GHz licenses in the hope of foreclosing or delaying competition, and implausible that they would succeed if that strategy were attempted. Therefore, we find that LEC eligibility for these licenses poses no likelihood of substantial competitive harm.

34. Note that several factors, taken together, explain the distinction between our resolution of the eligibility issue here and in the case of the 1150 MHz LMDS licenses. The 1150 MHz LMDS license blocks are unusually large, making possible the provision of voice, video, data, or some combination of these services. With the possibility of providing voice cheaply as part of a set of services, the 1150 MHz LMDS license is a particularly attractive competitive option, and incumbents are particularly likely to attempt acquisition in order

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[77] 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, 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, FCC 97-82, released Mar. 13, 1997, para. 160 (*Second Report and Order*), adopting Subpart L of Part 101 of the Commission's Rules, 47 C.F.R. §§ 101.1001-1112; *appeal pending sub nom.* Melcher v. FCC, Case Nos. 93-110, et al. (D.C. Cir., filed Feb. 8, 1993); Erratum, released Apr. 7, 1997 (*First Erratum*); Erratum, released May 1, 1997 (*Second Erratum*); Order on Reconsideration, FCC 97-166, released May 16, 1997 (*First Reconsideration*).

[78] Cincinnati Bell Tel. Co. v. FCC, 69 F.3d 752 (6th Cir. 1995) (*Cincinnati Bell*), at 760.

[79] *LMDS Second Report and Order, supra.*

to prevent entry by new competitors using the LMDS license. In addition, with only one large LMDS license available per geographic area, anticompetitive preemption is quite feasible and thus the risk of such acquisition is increased. Moreover, the 39 GHz licenses being made available within the near future (*i.e.*, within a similar time frame as the LMDS spectrum), are encumbered, while LMDS licenses are largely unencumbered. Thus, we believe, 39 GHz licenses are less likely to be acquired by incumbent LECs for anticompetitive motives. Most importantly, as noted above, given the fact that we have now provided for an additional competitive option by imposing the 1150 MHz LMDS eligibility restriction, the competitive circumstances we face in this proceeding differ from those we faced in the LMDS proceeding. Our eligibility analysis and conclusion here, in fact, are consistent with our treatment of eligibility for the small, 150 MHz, LMDS licenses.[80]

35. Because we see no likely and substantial competitive harm flowing from LEC eligibility, we reject the argument that LECs should be required to certify compliance with the "Competitive Checklist" as a precondition to participation in the 39 GHz auction. We also note as a general matter that LEC eligibility can be expected to yield efficiency benefits if there are complementarities between the ultimate use(s) of 39 GHz spectrum and the existing LEC services when offered in the same service area. For example, LECs might be able to achieve savings not available to new entrants by taking advantage of their current infrastructure, and imposition of restrictions would prevent realization of such savings. Restrictions might also prevent incumbent LECs from experimenting with certain technology and market combinations, and preclude or delay desirable entry by incumbents into new markets.

2. License Term

36. *Background*. Under our previous rules, all common carrier 39 GHz licensees who were licensed before August 1, 1996 (*i.e.*, those licensed previously under Part 21 of our Rules) were subject to a fixed license term ending February 1, 2001, regardless of the grant date of their individual licenses.[81] Private carrier 39 GHz licensees authorized before August 1, 1996 (*i.e.*, those licensed previously under Part 94 of our Rules), received a five-year license which would run from the date of license grant. However, both private and common carrier licenses granted on or after August 1, 1996, the effective date of the *Part 101 Report and Order*, have a license term not to exceed ten years.[82] In addition, neither the former fixed microwave rules in Parts 21 and 94, nor the current ones in the new Part 101, expressly provide for a renewal expectancy for common carrier or private carrier 39 GHz licensees.

37. *Discussion.* Two parties argue that we should increase the term to ten years for incumbents who have received a shorter period under the rules that predated those adopted in the *Part 101 Report and Order*.[83] We decline to take this action. When we adopted the Part 101 rules, we decided to conform the license terms of common carrier and private carrier 39 GHz licensees on a going forward basis. We did not, therefore, alter the conditions under which incumbent licensees had taken their licenses, and we left in place a bifurcated approach

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[80] *Id.* at para. 181.

[81] With this former rule, we established a fixed, ten-year license cycle, so that all licenses, no matter when granted, would be subject to renewal at the same time. Consequently, licenses granted less than ten years before the fixed renewal date would have a license term of less than ten years.

[82] 47 C.F.R. § 101.67.

[83] BizTel Comments at 38 n.40; GEC Comments at 6-7.

toward renewal that would exist until the incumbents' current licensing cycle runs its course. We are unpersuaded that this approach, adopted only a year ago, should be altered.[84]

3. Performance Requirements: Renewal and Build-out

38. *Background--Renewal.* We noted in the *NPRM and Order* that both cellular and PCS licensees receive a renewal expectancy, and we proposed adopting a similar standard in this proceeding.[85] Under the PCS standard, a licensee receives a renewal expectancy upon demonstration that substantial service has been rendered during the license term and that there has been compliance with applicable Commission rules and policies and the Communications Act.[86] In the broadband PCS context, we observed that a renewal expectancy will provide the PCS community with a stable regulatory environment that is conducive to investment, thereby fostering the rapid development of that service.[87] Commenters support adopting a renewal expectancy for the 39 GHz service for similar reasons, as they recognize the benefits that such a presumption offers.[88]

39. *Background--Build-out requirements*. Incumbent 39 GHz licensees are currently subject to the build-out requirements of Part 101 of our Rules, which require that at least one link be constructed in a licensee's geographic service area within eighteen months of the date of license grant.[89] In the *NPRM and Order,* we proposed new build-out requirements for incumbent 39 GHz licensees in order to ensure that the spectrum was being used to provide service to the public. Because of our concern that such licenses be used to provide service to the public, we solicited comment on our proposal to allow incumbent 39 GHz licensees to retain their licenses only by meeting specific construction and loading requirements. We suggested three basic construction build-out options, each of which depended upon a specific number of fixed stations to be built within the licensees' geographic service area.[90] The build-out options were each intended to ensure a minimum level of service. While the proposals represented a significant departure from the current build-out rules applicable to these licensees, in the *NPRM and Order* we stated that the purpose of these proposed measures was to minimize speculation without harming existing 39 GHz licensees who are responsibly developing the spectrum they have been assigned.[91]

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[84] In addition, we note that no one has sought reconsideration of this approach.

[85] *See NPRM and Order*, 11 FCC Rcd at 4976, 4978. While we made this proposal expressly for future licensees of the 37 GHz band, we had proposed generally to conform the 39 GHz rules to those proposed for the 37 GHz band.

[86] *See* 47 C.F.R. §§ 22.940(a)(1), 24.16.

[87] *See PCS Second Report and Order*, 8 FCC Rcd at 7753.

[88] *See, e.g.,* GEC Comments at 6-7 (asserting that renewal expectancies for all 39 GHz licensees will encourage financial backers to make capital investments); WinStar Comments at 36-37 (arguing that such expectancies will inspire licensees to make investments in their systems); Commco Comments at 11 (contending that adoption of renewal expectancy provisions will provide industry with sufficient time to permit the service to evolve fully).

[89] *See* 47 C.F.R. § 101.63.

[90] *NPRM and Order,* 11 FCC Rcd at 4979-81.

[91] *Id.* at 4980.

40. We also requested comment on build-out requirements for new licensees authorized pursuant to the competitive bidding rules promulgated herein.[92] In the *NPRM and Order*, we observed that the Communications Act requires that any regulations implementing a competitive bidding system 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, and to promote investment in and rapid deployment of new technologies and services.[93] The build-out requirements that apply to other fixed, microwave services licensed on a link-by-link basis, as well as those requirements that apply to mobiles services, did not appear appropriate for a fixed, geographically licensed service like 39 GHz.[94] Accordingly, we asked for comment on what other methods we might employ to ensure that licensees are using their spectrum, servicing rural areas, and enabling the provision of new services to the public. We suggested that these goals might be accomplished if we required licensees to demonstrate substantial service in their service areas.[95] As we noted in the *NPRM and Order*, the use of a substantial service standard has precedent in our Rules -- for example, Section 24.203(b) gives certain PCS licensees the option of meeting their build-out requirement by making a substantial service showing.[96]

41. *Discussion*. The performance rules we are adopting for the 39 GHz band require each licensee to prove substantial service in order to achieve license renewal. We arrived at this approach based on two factors. First, the approach satisfies the dictates of Section 309(j)(4)(B) of the Communications Act, which requires the Commission to adopt effective safeguards and performance requirements for licensees in connection with any competitive bidding system. We believe that the requirements we establish herein will fulfill this obligation, because a license will be assigned in the first instance through competitive bidding, with the result that it will be assigned efficiently to an entity that has shown, by its willingness to pay market value, its willingness to put the license to its best use.

42. Second, the approach we are taking with regard to performance rules is also based on the record in this proceeding, which strongly supports giving 39 GHz licensees a significant degree of flexibility in meeting their performance requirement. As described above, the types of service available from 39 GHz providers is tremendously varied, and the service promises to develop in ways we cannot predict at this time. Thus, an inflexible performance requirement might impair innovation and unnecessarily limit the types of service offerings 39 GHz licensees can provide. Permitting licensees to demonstrate that they are meeting the goals of a performance requirement with a showing tailored to their particular type of operation avoids this pitfall.[97]

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92 *Id.* at 4976.

93 *Id.* (citing 47 U.S.C. § 309(j)(4)(B)).

94 We indicated that construction deadlines in a link-by-link licensing environment appear to be an ill fit for geographically licensed services. Similarly, we observed that construction deadlines in a mobile environment, which typically require the provision of service to a percentage of the population in the service area, would be inappropriate for a fixed service. *See id.*

95 *See id.*

96 *See id.;* 47 C.F.R. § 24.203(b) (setting forth build-out requirements for PCS licensees of 10 MHz channel blocks).

97 A showing tailored to a particular type of operation (*e.g.*, a point-to-multipoint system) might consist of a demonstration of the level of loading on the system, which would give greater weight to a high capacity link than is recognized by the specific build-out option.

Moreover, our examples of presumed substantial service, based on a specific number of links per population standard, provides licensees with a degree of certainty of regarding their license requirements. Accordingly, we believe that the performance requirements we establish herein will permit flexibility in system design and market development, yet provide a clear and expeditious accounting of spectrum use by licensees to ensure that service is indeed being provided to the public.

43. We decline to adopt any of the build-out proposals we made for incumbent 39 GHz licensees in the *NPRM and Order*. The first option would have required licensees to meet a specific build-out benchmark. We have considered a number of possibilities for such a benchmark, and we have rejected those that appear infeasible. Our principal proposal fell into this category. We had proposed to require any licensee to construct and put in operation at least four links per 100 square kilometers of their service area within 18 months of adoption of a Report and Order in this proceeding.[98] We are persuaded by several commenters' arguments that such a build-out requirement would be unduly restrictive and burdensome, thus unnecessarily limiting licensees' service options.[99] For the same reasons, we reject a variant of our principal proposal, which would have combined the alternatives discussed below with an 18-month requirement to construct a certain number of links per 100 kilometers.[100]

44. The other two alternatives we had proposed for providing licensees with specific build-out benchmarks are also problematic. One alternative provided for a specific number of links, increasing over time, per geographic area served by each licensee. This alternative does not adequately take into account the differences among licensees. Under this requirement, a licensee in a sparsely populated BTA would have to build an operation that could provide the same level of service as a licensee of a metropolitan BTA. Such an approach would result in either an overly burdensome requirement for the licensee of the smaller market or a very lenient and almost meaningless requirement for the licensee of the metropolitan BTA. Moreover, since market size is a reasonable proxy for gauging the appropriate comparative levels of spectrum use, we agree with the consensus of the commenters that any build-out standard should therefore be based on market population or population density.[101] This approach is, in fact, an underpinning of standards that have been adopted for CMRS services such as PCS and SMR.[102]

45. The second alternative would have required licensees to construct a specific number of link installations based on the market's population.[103] In the case of 39 GHz, however, the services to be offered generally will be customized for each subscriber, and, for the most part, each subscriber will have equipment dedicated to its location. Moreover, 39 GHz licensees are not likely to install equipment until they receive an order. We further note that some commenters argue that adoption of a concrete standard would discourage

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98 *NPRM and Order*, 11 FCC Rcd at 4979.

99 *See, e.g.*, ART Comments at 12-13; Biztel Comments at 31; Cambridge Partners, Inc. Reply Comments at 3; Microwave Partners Reply Comments at 8-9; Milliwave Reply Comments at 8-10.

100 *See NPRM and Order*, 11 FCC Rcd at 4980.

101 *See, e.g.*, ART Comments at 15-16; TIA Comments at 20; Biztel Reply Comments at 12-13; Microwave Partners Reply Comments at 9.

102 *See* 47 C.F.R. §§ 24.203 and 90.665.

103 *NPRM and Order* 11 FCC Rcd at 4980.

growth, stymie new development, and deter investment in the 39 GHz arena.[104] Accordingly, we are concerned that a requirement for a fixed number of links may interfere with the market decisions of a particular licensee and its customers.[105]

46. We conclude that a showing of substantial service, the approach we proposed for new 39 GHz licensees, should be applied to both incumbent and new licensees in the band. This approach will permit flexibility in system design and market development, while ensuring that service is being provided to the public. Although a finding of substantial service will depend upon the particular type of service offered by the licensee, one example of a substantial service showing for a traditional point-to-point licensee might consist of four links per million population within a service area. This revised performance standard should ensure that meaningful service will be provided without unduly restricting service offerings.[106]

47. One of the principal problems that commenters identified with our build-out proposals was that they required too much too soon. We recognize that licensees must be given a reasonable amount of time to meet a performance requirement. Parties, particularly incumbent licensees, also argued that different build-out standards were unfair and would place an unreasonable burden on their ability to respond to market demands.[107] Accordingly, we have decided that in order to impose the least regulatory burden on licensees as possible, but to remain consistent with our statutory responsibilities, we will combine the showing traditionally required for build-out and the showing required to acquire a renewal expectancy into one showing at the time of renewal. We believe this will give licensees a sufficient opportunity to construct their systems. We believe that applying a similar performance requirement to all licensees at the license renewal point will help establish a level playing field without compromising the goals of ensuring efficient spectrum use and expeditious provision of service to the public.[108]

48. We believe that the deadline for compliance that we are adopting should negate concerns about a performance requirement being imposed too early in the license term. To establish a viable operation, we recognize that licensees must have sufficient time in which to develop market plans, secure necessary financing, develop and incorporate new technology in their systems, accommodate equipment manufacturers' production schedules, and build a customer base. Our approach takes these practicalities into account. We recognize that existing licensees who obtained their licenses before August 1, 1996, will receive a somewhat shorter period from the date of this decision to meet the construction threshold (*i.e.*, about four years). Extending the build-out deadline past renewal, however, would not be prudent nor would it appear to be consistent with the objectives

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104 *See* DTC Comments at 10; BizTel Comments at 31-32.

105 The second alternative proposed in the *NPRM and Order* gave, as an example, a requirement that a licensee in the top 10 markets install a minimum of 15 links for each licensed channel block; 10 links for markets 11-25; and 5 links for all other markets. *Id*.

106 *See* No Wire L.L.C. Comments at 5; Cambridge Partners, Inc. Reply Comments at 5 n.11.

107 *See, e.g.,* ART Comments at 14; Microwave Partners Comments at 9-11; WinStar Comments at 53, 56; TIA Comments at 20; Ameritech Reply Comments at 8; BizTel Comments at 23-27.

108 Many of the commenters expressed a similar view. *See, e.g.*, ART Comments at 24; Altron Comments at 1; BizTel Comments at 23-32; DCT Comments at 2-15; GEC Comments at 4; Spectrum Comments at 1-2, Milliwave Reply Comments at 12-13.

of Section 309(j) of the Communications Act.[109] Moreover, these incumbents already have had at least a year, and in some cases more than two years, in which to set in motion their business plans. Thus, we do not believe this approach will adversely affect incumbent 39 GHz licensees.[110]

49. We concur with those commenters who advocate adopting a renewal expectancy for all licensees in the 39 GHz band. As with cellular and broadband PCS licensees, affording 39 GHz providers the opportunity to earn a renewal expectancy will facilitate investment for their industry, provide stability over the long run, and better serve the public by reducing the possibility that proven operators will be replaced with less effective licensees. Like broadband PCS, we anticipate that such benefits to the 39 GHz community will promote the rapid development of the service.[111] For such benefits to flow to the public in the most effective manner possible, the opportunity for a renewal expectancy should be available to all 39 GHz licensees, not just those licensed under the rules amended by this decision. Thus, we are not limiting this opportunity to newly licensed 39 GHz providers. The build-out/renewal requirements established herein will, if met, serve to give the incumbent licensee a renewal expectancy as well.

50. We are not persuaded by the arguments of some commenters that a build-out requirement should not be imposed because potential users of the 39 GHz band, such as broadband PCS licensees, are subject to other construction requirements.[112] As we discussed *supra*, we do not believe that use of the 39 GHz spectrum will be limited to such uses. Moreover, our decision herein to adopt a requirement of substantial service by renewal will ensure that our 39 GHz rules do not work at cross purposes with build-out requirements to which broadband PCS licensees and others already are subject.

3. Spectrum Aggregation Limit

51. *Background.* In the *NPRM and Order*, we sought general comment on whether there should be a limit on the aggregation of 39 GHz channels within a single BTA.[113] We also requested comment on whether the 39 GHz service represents a discrete market. In the event that we concluded that this service did constitute a discrete market, we indicated that a spectrum aggregation limit might be advisable to ensure that there would

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[109] Even if we keyed a five-year build-out deadline to the date of licensing, the possibility would still remain that some licensees would be required to meet this deadline after their license terms had ended. As we observed above at paragraph 36, common carrier 39 GHz licensees who were licensed before August 1, 1996, are subject to a fixed license term ending February 1, 2001. Therefore, all those licensed from February 2, 1996, to July 31, 1996, have a license term of slightly less than five years.

[110] Our records indicate that there is a private operational fixed service (POFS) licensee (All Medical Communications Technologies, Inc. (AMCT)) holding an area-wide authorization that is renewable on March 28, 2000. Since AMCT has an area-wide license, it will be subject to the same build-out threshold as other incumbent 39 GHz licensees. We do not see a need to provide any exceptions merely because AMCT's license term ends in less than five years. This licensee will still have a substantial amount of time -- over three years from the date of this decision -- to meet the requirement, and it has already had some time in which to place its system in operation. Moreover, providing additional time would create the anomalous situation of requiring a licensee to meet a construction deadline that occurred after the license term ended.

[111] *See PCS Second Report and Order*, 8 FCC Rcd at 7753 (finding that a renewal expectancy was necessary to ensure adequate investment in PCS infrastructure, which would, in turn, provide a stable environment to foster the rapid development of the service).

[112] *See, e.g.,* AT&T Comments at 6-8; Pacific Comments at 6.

NPRM and Order, 11 FCC Rcd at 4983.

be an adequate number of licenses available to meet the needs of broadband PCS licensees and other competitors in the wireless marketplace.[114]

52. *Discussion.* We agree with those commenters who oppose a 39 GHz spectrum aggregation limit.[115] The record strongly supports the conclusion that 39 GHz licensees will participate in a number of broad markets, consisting of a host of short-range fixed communications provided by many operators who employ a range of different, but substitutable, technologies (both radio and wire). Therefore, we are not concerned with guaranteeing a particular number of 39 GHz competitors or with creating competition within the 39 GHz band. Moreover, as we noted above, there is no evidence that the 1400 megahertz of spectrum in the 39 GHz band is particularly important for, or unusually suited for, the creation of competition in two markets where market power still exists -- local telecommunications services and multi-channel video program delivery. Therefore, an aggregation limit is not needed in order to foster competition in these two markets. Indeed, a 39 GHz spectrum aggregation limit that was applicable to 39 GHz licensees might limit the ability of a licensee to bring efficient competition to these markets.[116]

53. Although we believe that some of the 39 GHz spectrum will be used to satisfy CMRS and private mobile radio infrastructure needs, we are persuaded by the commenters that a great portion of this spectrum likely will be used to provide other wireless services, *e.g.*, local area network ("LAN")-to-LAN, local access for long distance providers, wireless augmentations to CAPs' networks, and other high capacity data transmission networks.[117] This is evidenced by current 39 GHz operations, which are not supporting CMRS communications infrastructure but generally tend to be local private line and local bypass services. Since this arena is already being served by multiple providers using a variety of technologies, it is clear that disaggregated ownership of 39 GHz spectrum is not necessary for the competitive provision of those services.

54. We also note that even the current users of the 39 GHz band are still in the early stages of developing their services, and that the particular uses of this spectrum are still being defined by the marketplace. As indicated above, 39 GHz spectrum can be used for almost any fixed, short-range communication -- the internal parts of almost any communications system (mobile or fixed) -- or the "last mile" of any fixed system, whether for voice, data, video, or more than one of the foregoing. At this time, we believe that it would be inappropriate for us to view the output of 39 GHz spectrum as falling into any one of these categories or to find that some limit on spectrum aggregation in order to foster competition in that category is necessary. Accordingly, we do not believe that it is appropriate to restrict the amount of 39 GHz spectrum that may be licensed to any one service or entity.

55. Moreover, we conclude that there may be benefits to the public in terms of efficiencies and types of services provided if we permit aggregation of 39 GHz spectrum. For example, spectrum aggregation would allow a licensee to expand its operation and thereby lower the per unit cost of equipment and its per capita cost

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[114] *See id.*

[115] ART Comments at 27-28; Biztel Comments at 3.

[116] Many of the considerations that lead us not to adopt eligibility restrictions for 39 GHz spectrum also incline us against adopting a spectrum aggregation limit.

[117] *See, e.g.,* ALTS Comments at 1; ART Comments at 27-29; BizTel Comments at 11-14; Columbia Comments at 2-3; Milliwave Comments at 31-32.

of providing service to subscribers. Furthermore, a 39 GHz licensee with substantial spectrum can better compete with established service providers who have large transmission capacity. In addition, we conclude that it is not likely that aggregation of 39 GHz spectrum by a single entity would lead to undue market power. We note that other service providers, such as LECs and CAPs, have some significant competitive advantages over a competitor using only 39 GHz spectrum, such as an established customer base and transmission facilities that carry much more traffic than would be possible by a 39 GHz-based facility using only, for example, 700 MHz of spectrum. In addition, other service providers are not precluded from adding fiber or radio transmission facilities to their existing networks.[118] Moreover, we have proposed to make available additional spectrum enabling more parties to compete in many of the types of services proposed by potential 39 GHz service providers,[119] and we plan to consider these proceedings in connection with our global upper-gigahertz band plan proceeding.[120] Therefore, we believe that even if a single licensee controls a significant part of the 39 GHz band in a single BTA, it could not control service prices or limit competition, given the number of providers of similar or substitutable services and the variety of transmission media at their disposal.

56. We also observe that 39 GHz licensees would be unable to overcome the competitive disadvantages of operating under a spectrum aggregation limit simply by improving engineering efficiency. While an entity with limited technical capacity may strive to use its facilities in the most efficient manner possible, those same engineering techniques and procedures may be utilized by other parties to similarly increase their efficiencies. For example, one of the most discussed means of increasing transmission capacity is the use of digital compression technology. For the most part, this technology is transferable from one transmission medium to another. Therefore, while a 39 GHz service provider might be able to gain a significant increase in engineering efficiency by employing such technology, this increase in efficiency will not give it any competitive advantage, because its competitors will have the same opportunities to deploy this technology.

57. We also do not believe that a spectrum aggregation limit is warranted to ensure that there is adequate support spectrum available for broadband PCS, cellular radio, and other commercial and private mobile radio operations. While the use of the 39 GHz band may help meet these needs, such backhaul and backbone support can also be provided by using wire-based technologies and over-the-air spectrum outside the 39 GHz band (*e.g.*, at 6, 11, 18 and 23 GHz). Given this availability of substitutable spectrum for backhaul and backbone support, coupled with the aforementioned competition that exists to 39 GHz providers of alternative types of services, we find that imposing a spectrum aggregation limit for the 39 GHz band would be contrary to the public interest.

5. Technical Rules

a. Frequency Tolerance and Efficiency Standard

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[118] *See* WinStar Comments at 41.

[119] *See also* Amendment of Parts 2, 15, and 97 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, ET Docket No. 94-124, *First Report and Order and Second Notice of Proposed Rule Making*, 11 FCC Rcd 4481 (1995); Rule Making 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, *Third Notice of Proposed Rule Making and Supplemental Tentative Decision*, 11 FCC Rcd 53 (1995).

[120] Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz, and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band, Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz Frequency Band for Government Operations, *Notice of Proposed Rule Making*, IB Docket No. 97-95, FCC 97-85, --- FCC Rcd ---, (released March 24, 1997).

58. *Background.* In the *NPRM and Order*, we tentatively concluded that only those technical rules required to minimize interference between channel blocks and between service areas are needed. Thus, as a mitigating interference factor, we proposed to adopt a 0.001% frequency tolerance for equipment operating in the 39 GHz band, instead of the 0.03% tolerance standard currently required by Section 101.107 of the Rules. In order to promote more efficient use of the spectrum, we also requested comment on adding an efficiency standard to our Part 101 rules, of 1 bit per second per hertz ("bps/Hz") for new assignments in this band.[121]

59. *Discussion.* Initially, we believed that this spectrum principally would be used to provide support facilities for various mobile services. As a result, we proposed technical standards intended to ensure a certain level of equipment efficiency and performance. The record, however, indicates that much wider uses are anticipated. For example, a number of commenters stated that 39 GHz facilities will be employed to provide wireless equal access, LAN-to-LAN communications, and other high capacity data transmission services. In order to accommodate these varied services and to provide 39 GHz licensees the necessary technical flexibility to meet these demands, we have determined that any benefits to be gained by adoption of the proposed standards are outweighed by the limitations they would place on the development of 39 GHz service. For these same reasons, we have reevaluated our existing frequency tolerance standard and determined that it is unnecessary, particularly in light of other interference safeguards in our rules. We note that in our 220-222 MHz proceeding we concluded that interim spectral efficiency standards were warranted.[122] This decision stemmed from one of our specific objectives in establishing the band, *i.e.*, to encourage the development of spectrally efficient technologies. Here, however, there is sufficient evidence that 39 GHz licensees and manufacturers are proceeding with the improvement of spectrally efficient equipment. For example, one manufacturer, [P-Com], has off-the-shelf equipment which operates at an efficiency rate of 1.25 bits per hertz, a rate which exceeds the one bit per hertz rate proposed in the *NPRM and Order*. Given the advancements that are already made in this area, and that more are likely to follow, we believe that a spectral efficiency standard for 39 GHz equipment is unnecessary.

60. With respect to setting a spectrum efficiency standard -- which is principally designed to ensure that the licensee's technical quality of service to its end users meets a certain level -- setting a mandatory standard could be harmful to the continued development and growth of the 39 GHz service.[123] If we set the standard at or below what licensees would voluntarily adopt, then the standard would have no effect. If we set it above the voluntary level, then we would be imposing a cost in excess of any benefit. Moreover, consistent with our actions in other proceedings, we believe it unwise to adopt technical rules that will require updating as technological advances are made because we believe 39 GHz licensees need maximum flexibility to respond to market forces.[124] As commenter Columbia notes, "[t]he trend toward spectrum flexibility is one of the great achievements of . . . [the FCC] and is perhaps the single most important development of the decade in encouraging innovation and

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[121] *NPRM and Order*, 11 FCC Rcd at 4984, 4987.

[122] Amendment of Part 90 of the Commission's Rules To Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service; Implementation of Sections 3(n) and 332 of the Communications Act, *Third Report and Order; Fifth Notice of Proposed Rulemaking*, PR Docket No. 89-552, GN Docket No. 93-252, FCC 97-57, (released March 12, 1997), paras. 116-119, 62 Fed. Reg. 16004 (April 3, 1997).

[123] *See, e.g.*, ART Comments at 20-23, 37-38; DCT Comments at 27; Milliwave Comments at 23-25; Winstar Comments at 60-63.

[124] *See, e.g.*, *GWCS Second R&O*, 11 FCC Rcd 624 (1995).

imaginative service to the public."[125] In contrast, TIA contends this "hands-off" approach is premature because it would, among other things, "unleash large numbers of incompatible operators in individual markets without adequate safeguards against harmful interference . . . and create uncertainty over potential market demand and related production and performance requirements because specific uses for the [band] are not prescribed."[126]

61. As a general matter, whenever spectrum is exclusively assigned and licensees cannot expect to obtain additional spectrum at a price significantly below its market value, we believe that a mandatory efficiency standard is unnecessary.[127] Under these conditions, licensees can be expected to invest voluntarily in efficient technology up to the socially optimal level, and a mandatory standard would either have no effect (if it is at or below the voluntary level) or impose unjustified costs that exceed any resulting gain. We believe that mandatory standards are beneficial if they correct for under-investment in efficiency by licensees. A licensee with a shared assignment may under-invest in efficiency because much of the gain from that investment would accrue to others.[128] But even if a licensee has an exclusive assignment, it may choose to under-invest in efficiency if it can expand capacity by obtaining spectrum at less than the market value.[129]

62. In the 39 GHz band, however, neither of these conditions exists; thus, we find that a mandatory efficiency standard is not necessary. Given that the 39 GHz assignments will continue to be exclusive, other licensees will be denied any "free ride" from a gain in increased efficiency. In other words, the benefits gained by an increase in efficiency (*e.g.*, more available spectrum) are not shared by other licensees who did not contribute, as would be the case in a shared environment. There is also little likelihood that 39 GHz licensees will be able to obtain additional 39 GHz spectrum below its market value because we expect that the remaining 39 GHz band will be subject to competing interests and that the competitive bidding process will be used to assign this spectrum. Thus, competitive forces of the marketplace should cause licensees to maximize the use of their assigned channels. While 39 GHz licensees may be able to obtain additional spectrum in other bands in the future, our use of auctions to select between future mutually exclusive applications for 39 GHz spectrum should ensure that these licensees are subject to full marketplace incentives to operate efficiently. Consequently, the use of competitive bidding procedures provides additional support for our finding that an efficiency standard is unnecessary.

63. As noted in paragraph 59, we have determined that a frequency tolerance standard is unnecessary. Our basis for this view stems from our desire to provide 39 GHz licensees flexibility in the operation of their facilities and to avoid imposing unnecessary regulations. In addition, we believe such a standard could inhibit technological advances, for equipment performance is likely to be influenced by customer demand. For those that

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[125] Columbia Comments at 12-13.

[126] TIA Reply Comments at 14-15.

[127] By "market value" we mean the value of the next highest value use. When licenses are auctioned, the price paid approximates the opportunity cost, but may be less than the full opportunity cost if potentially valuable uses are excluded by the service definition. As we move toward increasingly flexible allocations, we believe that auction prices will more closely reflect the full opportunity cost of the spectrum

[128] *See, e.g.*, Spectrum Efficiency in the Private Land Mobile Radio Bands in Use Prior to 1968, PR Docket No. 91-170, *Notice of Inquiry*, 6 FCC Rcd 4126, 4133 (1991).

[129] This situation may occur when spectrum is assigned with minimal cost to the new licensee (*e.g.*, via lottery or, in some cases, comparative hearing).

might be concerned that elimination of this standard may lead to inter-system interference, we point to our existing out of band emission requirements (emission mask) contained in Sections 101.111 of the Rules.[130] That rule requires frequencies removed in various percentage from the center frequency to be attenuated below the mean power of the transmitter. This means that the frequencies at the outer edges of an assigned 50 MHz channel or the edge of an aggregated group of 50 MHz channels power levels will be significantly reduced such that interference to an adjacent channel licensee is unlikely. Thus, we believe that strict adherence to Section 101.111 will be as effective in controlling inter-system interference as the imposition of a frequency tolerance standard. As observed in the *NPRM and Order*, "the effect of requiring operations to stay within the emission mask at all time would . . . reduce the frequency tolerance to levels more restrictive than the recommended [frequency tolerance].[131] In addition, concerns for inter-system interference should be further eased, as we are requiring neighboring and adjacent channel licensees to engage in frequency coordination before implementation of their planned operations.[132]

b. Antenna Requirements

64. *Background.* In the *NPRM and Order*, we proposed that for any new assignments in the 39 GHz band not acquired through competitive bidding, we would restrict licensees to the use of Category A antennas, which provide a more focused antenna pattern than Category B antennas, thus allowing for greater frequency reuse.[133] Additionally, in the event that a BTA licensee was prevented from providing communications in its service area because an incumbent licensee of a grandfathered link is using a Category B antenna, we proposed to require the incumbent licensee to replace that antenna with one meeting the Category A antenna standard or cease transmission on the interfering link. We also proposed that in the case of licenses for grandfathered links in the 39 GHz band, all rule changes would only apply to facilities that are constructed after January 1, 1998, and to replacement equipment which is installed after that date. We believed that the January 1, 1998 date for implementing these requirements would allow manufacturers adequate time to make any necessary changes to their equipment production lines and to deplete inventory.

65. *Discussion.* There is evidence in the record that our proposal to require 39 GHz licensees to employ only Category A antennas is too restrictive because parties are contemplating a variety of system configurations that would require different types of antennas, *e.g.*, sectorized or wide beam units, characteristics of which would be incompatible with the standards of a Category A antenna.[134] These models represent a more cost-effective and technically suitable alternative to traditional narrowbeam Category A antennas when deployed in a point-to-multipoint configuration. As the deployment of 39 GHz facilities increases, we expect other system configurations to be developed in which narrowbeam antennas may not be the optimal solution. While DCT argues that Category A antennas should be required because they are inherently more efficient and less prone to

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130 *See* 47 C.F.R. § 101.111.

131 *NPRM and Order*, 11 FCC Rcd 4985, n. 190.

132 *See* paras. 44-48, *infra.*

133 *NPRM and Order*, 11 FCC Rcd at 4987. Category A and B antennas are defined in Section 101.115(c) of the Commission's Rules. *See* 47 C.F.R. § 101.115(c).

134 *See, e.g.*, ART Comments at 38-41; WinStar Comments at 63.

cause interference (DCT Comments at 29), we conclude that the need to provide 39 GHz licensees the technical flexibility to meet service demands outweighs any benefits that would ensue by adopting the requirement. Therefore, we decline to require licensees in the 39 GHz band to use Category A antennas initially. We conclude that 39 GHz licensees should be given the flexibility to employ antennas other than Category A types, provided they do not cause interference problems.[135] Should the use of an antenna other than a Category A become the source of an interference problem, however, we will require that the licensee immediately resolve such interference by replacing the antenna with a Category A model or one with better performance characteristics.[136]

c. Frequency Coordination and Power Flux Density ("PFD") Limit

66. *Background*. In the *NPRM and Order*, we noted that existing 39 GHz licensees are using the frequency coordination procedures of former Section 21.100(d) (now Section 101.103(d)) of our Rules to avoid interference between operations in the band. To further facilitate coordination between licensees in adjoining areas, we proposed to establish a maximum field strength limit that would apply at the boundaries of each service area.[137] Under this proposal, licensees' operations not exceeding this limit would avoid the need to complete the formal coordination process. Also, licensees could negotiate higher or lower limits or enter into other mutually beneficial agreements to facilitate efficient spectrum use near their common boundaries. Due to our lack of technical data in the 39 GHz band, we did not propose a specific PFD or field strength limit. We therefore requested industry recommendations on a reasonable limit. We also sought comment on what effect, if any, our adoption of a PFD or field strength limit would have on the appropriateness of removing the existing EIRP limit.[138]

67. *Discussion*. As an initial matter, we note that the National Spectrum Management Association (NSMA)[139] stated in its initial comments that it was evaluating processes and technical criteria necessary to formalize a frequency coordination process for the 39 GHz band. On September 4, 1996, NSMA filed Supplemental Comments providing a report on the progress made in developing frequency coordination policies and procedures for precluding harmful interference among co-channel operators in the band.[140] According to

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135 *See, e.g.*, INNOVA Comments at 3-5; TIA Comments at 26.

136 Under Section 101.115(d), the Commission may require a licensee to replace an antenna that does not meet the Standard A performance criteria, at the expense of the licensee using such antenna, upon a showing that said antenna causes or is likely to cause an interference problem to existing or proposed systems where a higher performance antenna is not likely to involve such interference. 47 C.F.R. § 101.115(d).

137 This limit, if exceeded, would trigger requirements to coordinate formally with potentially affected licensees.

138 *NPRM and Order*, 11 FCC Rcd at 4987.

139 NSMA is a non-profit U. S.-Canadian professional society dedicated to developing consensus industry recommendations for the conduct of frequency coordination among commercial and private FCC and Industry Canada applicants, permittees and licensees engaged in the provision of a broad range of wireless services.

140 According to the submission, a licensee planning an installation would be required to coordinate with a neighboring service area co-channel operator if it is determined that the planned operation exceeds defined trigger criteria. These yet to be determined trigger criteria will signify the potential for harmful interference and the need to frequency coordinate between facilities located anywhere within adjacent service areas of co-channel licensees. These criteria will be defined in terms of an interference distance, based on either the transmitting station mainbeam EIRP or a power flux density threshold.

NSMA, however, further studies must be concluded to complete formal recommendations relating to its overall 39 GHz frequency coordination process, including issues related to harmful interference that may result from adjacent channel operations. Despite the incomplete state of NSMA's evaluations, it recommends that the Commission delegate to it the principal responsibility for promulgating recommendations regarding technical procedures and criteria for 39 GHz Fixed Service frequency coordination.

68. NSMA's Supplemental Comments indicate considerable progress toward developing a process that will minimize interference in the 39 GHz band. However, there is additional work to be done which we believe should be completed before taking final action on NSMA recommendations and considering revisions to our rules. As to measures we will take in the interim, we are persuaded by the record that adoption of a PFD limit or field strength limit now would not further our goal of facilitating the growth and development of the 39 GHz spectrum.[141] In this connection, we note that there is a lack of consensus regarding the parameters necessary to establish a reasonable and practical PFD or field strength limit. As a result, we are concerned that establishing a service area boundary PFD or field strength limit without such information may stifle the development of advanced 39 GHz technology. Thus, we decline to adopt such a standard at this time, and consequently, we need not reevaluate the current EIRP at this time. As NSMA continues to evaluate means to control inter-licensee interference, we will also be exploring this issue in a future, separate proceeding. Meanwhile, we conclude that it is in the public interest to continue to use the frequency coordination procedures outlined in Section 101.103(d) of our Rules. We describe these procedures, *infra*, as modified to implement certain improvements supported by the record of this proceeding. Despite the fact that licensees will not be able to rely on PFD or field strength limits to avoid the formal coordination process, we believe that our modified coordination procedures will provide licensees substantial flexibility in system design while ensuring that inter-system interference will be kept to a minimum. Our experience with other services employing frequency coordination procedures shows that those services have been successfully implemented with little delay and rarely result in unresolved frequency interference cases. For example, this process has been in use in the common carrier point-to-point microwave industry for over 20 years with few interference complaints. Given the support in the record[142] and the past success of the process in other services, we believe 39 GHz licensees will continue to benefit from this program.

69. Under our frequency coordination procedures, 39 GHz licensees will be subject to the requirements of Section 101.103(d) of our Rules, with certain modifications. As a result, they must provide values for the appropriate parameters listed in that subsection to each neighboring BTA licensee authorized to use adjacent and co-channel frequencies. Likewise, they must provide the same information to each potentially-affected, adjacent-channel licensee in the same BTA.[143] Coordinating parties also must supply technical information related to their subchannelization plan and system geometry. Based on the propagation characteristics of this spectrum, coordination between neighboring systems need only encompass operations located within 16 kilometers of BTA boundaries. Currently, Section 101.103(d) of our Rules gives each party that receives a coordination notification 30 days in which to respond. The record in this proceeding indicates that 30 days is an inappropriate time frame for operations in the 39 GHz band because licensees often offer service that requires much shorter installation

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141 *See, e.g.*, ART Comments at 42-43; Comsearch Comments at 8-9; DCT Comments at 28; NSMA Comments at 1-8.

142 *See, e.g.*, ART Comments at 42; Bachow Comments at 12-13; DCT Comments at 28; NSMA Comments at 2; TIA Comments at 27-28; Milliwave Reply Comments at 22.

143 New licensees who acquire BTAs encumbered by existing licensees authorized rectangular service areas must coordinate with incumbent licensees as well.

deadlines. In order to facilitate such rapid service installation schedules, we will require that recipients of coordination notifications respond within 10 days. Each licensee must complete this coordination process prior to initiating service within its service area. Finally, participating parties should resolve any problems that develop during this process. Only unresolved frequency conflicts should be reported to the Commission. In such cases we will resolve the conflicts. We believe that the coordination approach we are adopting does not preclude licensees from entering into private agreements that mitigate interference problems. These agreements may include an arrangement to conduct a one-time blanket coordination as opposed to coordinating each individual link as they are planned for activation, or arrangements for one party to compensate another financially for modifying its operation to accommodate new installations.

5. Partitioning and Disaggregation

70. *Background*. In the *NPRM and Order*, we proposed a partitioning[144] scheme (similar to that adopted in broadband PCS[145]), which we believed would encourage participation by rural telephone companies.[146] In addition to seeking comment on partitioning for rural telephone companies, we also sought comment on whether the scope of partitioning should be broadened to include all applicants seeking to utilize the 39 GHz band, similar to what we offered in the Multipoint Distribution Service (MDS) context.[147] In particular, we sought comment on methods available to meet the needs of those who might desire individual links, smaller geographic service areas, or smaller spectrum blocks. We presented the question of whether we should allow some form of partitioning or spectrum disaggregation to facilitate market entry by entities with these specialized needs.[148]

71. *Discussion*. We conclude that partitioning and disaggregation should be permitted in the 39 GHz band. We further conclude that the option of partitioning should not be limited to rural telephone companies but should be made available to all entities eligible to be licensees in the 39 GHz band, including incumbent 39 GHz licensees. We thus concur with commenters who support partitioning,[149] and note that no parties opposed this proposal. We believe that the availability of these options will enhance 39 GHz licensees' flexibility with respect

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144 Partitioning is the assignment of all the spectrum within specific geographic portions of a licensee's service area.

145 *Competitive Bidding Fifth Report and Order*, 9 FCC Rcd at 5597.

146 *NPRM and Order*, 11 FCC Rcd at 4972-73. Section 3(37) of the Communications Act states that "[t]he term 'rural telephone company' means a local exchange carrier operating entity to the extent that such entity -- (A) provides common carrier service to any local exchange carrier study area that does not include either -- (i) any incorporated place of 10,000 inhabitants or more, or any part thereof, based on the most recently available population statistics of the Bureau of the Census; or (ii) any territory, incorporated or unincorporated, included in an urbanized area, as defined by the Bureau of the Census as of August 10, 1993; (B) provides telephone exchange service, including exchange access, to fewer than 50,000 access lines; (C) provides telephone exchange service to any local exchange carrier study area with fewer than 100,000 access lines; or (D) has less than 15 percent of its access lines in communities of more than 50,000 on the date of enactment of the Telecommunications Act of 1996." 47 U.S.C. § 153(37).

147 *See* Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act - Competitive Bidding, MM Docket No. 94-131, PP Docket No. 93-253, *Report and Order*, 10 FCC Rcd 9589, 9612 (1995) (*MDS Report and Order)*.

148 *NPRM and Order*, 11 FCC Rcd at 4942-43. By disaggregation, we mean the assignment of discrete portions or "blocks" of licensed spectrum to another entity.

149 *See* 47 C.F.R. § 309(j); DCR Comments at 7-8 (partitioning); Pacific Comments at 6 (partitioning); GTE Comments at 5; U S West Reply Comments at 6.

to system design and service offerings. We also believe that partitioning and disaggregation opportunities further the objectives of Section 309(j) of the Communications Act by facilitating the development of niche markets and the arrival of new entrants, including small businesses, rural telephone companies and businesses owned by members of minority groups and women. In addition, these tools will promote efficient use of 39 GHz spectrum.

72. As a result, 39 GHz licensees acquiring their licenses under the new rules established herein will be permitted to acquire partitioned and/or disaggregated licenses in either of two ways: (1) they may form bidding consortia to participate in auctions, and then partition or disaggregate the licenses won among consortia participants after grant; or (2) they may acquire partitioned or disaggregated 39 GHz licenses from other licensees through private negotiation and agreement either before or after the auction. A licensee planning to partition or disaggregate its license must first be granted the license, and the licensee and partitionee and/or disaggregatee will be required to file an assignment application. We will require that a licensee disaggregate by frequency pairs. This requirement is necessary for administrative purposes: the database necessary to track authorizations could otherwise become too cumbersome and complex and processing could become delayed or prone to error.

73. Overall, we believe that partitioning and disaggregation will promote competition in the 39 GHz service and expedite the delivery of service to the public, particularly in rural areas. Moreover, partitioning and disaggregation will help to eliminate market entry barriers pursuant to Section 257 of the Communications Act by creating smaller, less capital intensive service areas that may be more accessible to small entities. We consider partitioning and disaggregation effectively to be types of assignments, which will, therefore, require prior approval by the Commission. In authorizing partitioning and disaggregation, we will follow existing assignment procedures.[150] The licensee must file FCC Form 702 Assignment of License signed by both the licensee and qualifying entity. The qualifying entity will also be required to file an FCC Form 430 Licensee Ownership unless a current FCC Form 430 is already on file with the Commission. In addition, any 39 GHz BTA licensees taking advantage of bidding credits and seeking to utilize these options may be subject to the restrictions on assignments or transfer of control for such entities, delineated *infra*.[151] We conclude that this approach is necessary in order to ensure that partitioning and disaggregation are not used as means to circumvent such restrictions.

74. We will require the entity acquiring a license by partitioning or disaggregation to satisfy the same construction requirements as the initial licensee, regardless of when its license was acquired.[152] Should a licensee fail to meet the construction requirements, the license will cancel automatically. The cancelled license will, if it was partitioned from a rectangular service area, revert to the BTA licensee for that channel (unless the forfeiting entity *is* the BTA licensee for that channel). If the forfeited license was partitioned from a BTA, the license will be auctioned. In addition, parties must comply with our current technical rules with respect to service area boundary limits and protections. Coordination and negotiation among licensees must be maintained and applied in licensing involving partitioned areas and disaggregated spectrum. Finally, under partitioning or spectrum disaggregation, an entity will be authorized to hold its license for the disaggregated spectrum or partitioned area for the remainder of the original license term. We conclude that this approach is appropriate because we should not bestow greater rights to a licensee receiving its authorization pursuant to partitioning or spectrum disaggregation than we awarded under the terms of the original license grant.

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150 *See* 47 C.F.R. § 101.56.

151 *See infra* paras. 160-161.

152 For a discussion of the build-out requirements, see *supra* paras. ?-50.

7. Regulatory Status

75. *Background.* In the *NPRM and Order* we requested comment on whether a new licensee in the 39 GHz band should be allowed to use the spectrum for private use and also to provide a common carrier service.[153]

76. *Discussion.* We conclude that 39 GHz band licensees should be permitted to serve as a common carrier or as a private licensee. Further, those licensees who select common carrier regulatory status will be able to provide private service, and those licensees who select private service provider regulatory status may share the use of their facilities on a non-profit basis or may offer service on a for-profit, private carrier basis subject to Section 101.135 of the Commission's Rules.[154] Under this scenario, licensees will elect the status of the services they wish to offer and be governed by the rules applicable to their status. Although no commenters addressed this issue, we believe our approach will promote economic efficiencies by reducing construction and operating costs associated with having to provide separate facilities. This result also is consistent with Section 101.133(a) of our Rules.[155]

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153 *NPRM and Order,* 11 FCC Rcd 4976-77.

154 47 C.F.R. §101.135.

155 *See* Part 101 *Report and Order* at paras. 37-39.

E. Treatment of Incumbent 39 GHz Licensees

77. Incumbent 39 GHz licensees are those who have been licensed under the current fixed microwave rules in 47 C.F.R. Part 101, or its predecessors, Parts 21 (for common carriers) or 94 (for private carriers). Their service areas are self-defined and generally are restricted to point-to-point operations. Many of these licensees have participated as commenters in this proceeding, and include WinStar, ART, BizTel, Columbia, and a number of PCS licensees.

1. Reconciling Service Areas of 39 GHz Incumbents with BTA Service Areas of New Licensees

78. While we have decided that BTAs are appropriate for the new licensing system in the 39 GHz band, we recognize that many of the newly-licensed BTA service areas will be encumbered by incumbent 39 GHz band licensees. These incumbents are authorized in various locations throughout the country, and their rectangular service areas will occupy portions of BTAs or cross BTA boundaries.[156] Our licensing approach toward these encumbered areas will necessarily differ depending on whether the incumbent licensee's authorization covers all or a portion of a BTA. We believe that resolution of this issue is an essential element of our goal to adopt a rational licensing approach for the 39 GHz band. After careful consideration of the concerns expressed by various commenters, we conclude that the following approaches are appropriate.

79. Where an incumbent licensee's rectangular service area occupies only a portion of a BTA, the licensee's channels will be available for application under the new competitive bidding rules, but the incumbent will retain the exclusive right to use those channels within its rectangular service area. The holder of the BTA authorization thus will be required to design its system to protect against harmful interference to the incumbent by complying with the Commission's interference protection standards.[157] Specifically, the BTA authorization holder will be required to coordinate with the rectangular service area licensee to ensure that interference protection is provided. Such a licensing policy enables incumbents and new licensees to operate concurrently and maximizes the provision of service to the public. We note that should such an incumbent lose its authority to operate, the BTA license holder will be entitled to operate within the portion of the forfeited rectangular service areas located within its BTA, without being subject to competitive bidding. This approach best serves the public because it gives the service providers an incentive to make efficient use of available spectrum, and it ensures that any disruption of service will be remedied as quickly as possible. This licensing design is similar to that used in the MDS service.[158] When we were amending the MDS rules, we were faced with an analogous situation arising from our decision to change the method for licensing from one that provided 35-mile zone of protection around the licensee's transmitter site to one that provided exclusive rights within a BTA. We maintained the *status quo* for incumbents, by continuing to recognize the sanctity of their 35-mile zone, but we provided that the holders of the new BTA authorizations would receive contingent rights to encumbered MDS spectrum within the BTA. Accordingly, if an MDS incumbent lost its authorization (by, *e.g.*, failing to construct), the forfeited channels would revert and become part of the BTA licensee's authorization.

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[156] The precise contours of incumbent service are currently unclear. While licenses have been issued, licensees are in various stages of constructing their systems.

[157] *See* 47 C.F.R. § 101.105.

[158] *See MDS Report and Order,* 10 FCC Rcd at 9612-13 (1995).

80. Where an authorized incumbent licensee has a rectangular service area covering an entire BTA, we will not make those channels available for "overlay" licensing in that BTA. Unlike the scenario described above, in this situation a BTA will not have areas that are currently unassigned. Since incumbents will be required to construct and operate pursuant to Commission Rules,[159] the public should be assured of receiving service throughout the BTA without the need to license an alternative provider.[160]

2. Repacking

81. *Background.* In the *NPRM and Order*, we asked for comment on whether incumbent facilities should be relicensed on their current frequency or whether incumbent links should be "repacked" into a different portion of the band than initially occupied. We
noted that under a repacking approach, most grandfathered links would be switched to one designated channel pair, provided that mutual interference would not result.[161]

82. *Discussion.* There was very little discussion by commenters on the issue of repacking. WinStar addressed this issue within its discussion of fair treatment to incumbents, by pointing out that the Commission generally does not single out incumbent licensees for treatment harsher than that given to new licensees.[162] Specifically, WinStar stated that the Commission chose not to repack incumbents when we established a mechanism for exclusive licensing of private carrier paging systems.[163] We agree that our general approach up to this point has been to refrain from repacking, if possible. For example, in a proceeding to provide for spectrum sharing between private land mobile services and the UHF television broadcast service, we chose not to repack existing broadcast stations because we found that the relocation of existing UHF-TV stations into the remaining portion of the UHF-TV spectrum would be costly and cause a major disruption in existing television service.[164] Similarly, we find that repacking the 39 GHz band would also cause a significant disruption of incumbent 39

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[159] *See supra* paras. ?-50 for discussion on build-out requirements.

[160] The practice in MDS and some mobile services of permitting incumbents to request an expansion of their service areas prior to identifying areas available for auction does not appear to be appropriate here. First, MDS is a broadcast video distribution service which, with power adjustments, could have a wider reach than that originally licensed. Mobile services may have found that subscribers need additional areas covered. The 39 GHz services licensed to date, however, appear to be short-hop point-to-point in nature, and we find no justification for permitting licensees to expand their service areas.

[161] *NPRM and Order*, 11 FCC Rcd at 4981.

[162] WinStar Comments at 54.

[163] *Id.* at 55 (citing Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, PR Docket No. 89-552, GN Docket No. 93-252, *Second Report and Order*, 11 FCC Rcd 3668 (1996)).

[164] *See* In the Matter of Further Sharing of the UHF Television Band by Private Land Mobile Radio Services, Gen. Docket No. 85-172, *Notice of Proposed Rule Making*, 101 FCC 2d 852 (1985).

operations.[165] As noted throughout this proceeding, we do not intend to alter or restrict significantly the operations of incumbents. Moreover, we believe that we can coordinate with the extant licenses of 39 GHz incumbents so that they will not impair our new licensing system using BTAs and 50-MHz channel blocks. Accordingly, we do not believe that repacking is necessary under these circumstances.

3. Disposition of Pending 39 GHz Band Applications

a. Background

83. On November 13, 1995, the Wireless Telecommunications Bureau ("Bureau"), pursuant to delegated authority, adopted and released an *Order* (*"Freeze Order"*) announcing that the Commission would no longer accept for filing any new applications for 39 GHz licenses in the Common Carrier or Operational Fixed Point-to-Point Microwave Radio Services, pending Commission action on the TIA Petition.[166] The *Freeze Order* was made effective upon its release.

84. The *NPRM and Order* extended the freeze, providing that pending applications would be processed only if (1) they were not mutually exclusive with other applications at the time of the Bureau's November 13, 1995, *Freeze Order*, and (2) the 60-day period for filing mutually exclusive applications had expired prior to November 13, 1995 (*i.e.*, the applications were "ripe").[167] The *NPRM and Order* further provided that those applications that were mutually exclusive with others as of November 13, 1995, or within the 60-day period for filing competing applications on or after November 13, 1995, would be held in abeyance for processing and disposition. In addition, amendments to these frozen applications received on or after November 13, 1995, were also held in abeyance. Moreover, applications for modification of existing 39 GHz licenses (*e.g.*, applications to modify existing licenses for the purpose of changing the height of an antenna) filed on or after November 13, 1995, were held in abeyance, as well as amendments thereto that were filed on or after November 13, 1995. Finally, no new applications to modify existing licenses, or amendments to pending modification applications, were to be accepted for filing on or after December 15, 1995, unless they (1) did not involve any enlargement of any portion of the proposed area of operation, and (2) did not change frequency blocks, other than to delete one or more.[168]

85. On January 16, 1996, Commco filed a Petition for Reconsideration and an Emergency Request for Stay, asking the Commission to vacate that portion of the *NPRM and Order* imposing an interim freeze on the processing of mutually exclusive applications to establish new facilities in the 39 GHz band, including

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[165] We note that with certain emerging technologies, such as PCS and digital television ("DTV"), the relocation of licensees may be unavoidable. *See, e.g.*, Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, MM Docket No. 87-268, *Sixth Further Notice of Proposed Rule Making*, FCC 96-317, at 9-17 (released Aug. 14, 1996) (proposing options for relocating those broadcast television licensees who are outside a "core" portion of the broadcast spectrum to this core, thereby avoiding the repacking of many broadcast stations); Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8825 (1996); *Second Report and Order*, 12 FCC Rcd 2705 (1997).

[166] *Freeze Order*, 11 FCC Rcd 1156 (Chief, Wireless Telecom. Bureau, 1995).

[167] *NPRM and Order*, 11 FCC Rcd at 4988-89. By using the terms "ripe" and "unripe" to identify applications' status with respect to completion of the public notice period, we do so only for purposes of clarity; the terms are not meant to prejudge the acceptability of any of these applications.

[168] *Id.*

amendments thereto, pending as of November 13, 1995.[169] BizTel, GHZ Equipment Company, Inc. ("GEC"), and TIA filed comments in support of the Stay Request. Additionally, on January 16, 1996, DCT Communications, Inc., filed a Petition for Partial Reconsideration, requesting that the Commission process (a) minor amendments, at least those that eliminate mutual exclusivity, and (b) as-yet uncontested applications for which the 60-day period for filing mutually exclusive applications had not expired prior to the November 13, 1995, *Freeze Order*.[170]

86. On January 17, 1997, we reconsidered certain aspects of our processing freeze and decided to lift the processing freeze on amendments of right filed before December 15, 1995.[171] Thus, all applications that were amended to resolve mutual exclusivity before that date were to be processed, provided they had completed their 60-day public notice period as of November 13, 1995. In addition, we clarified that applications to modify existing 39 GHz licenses and amendments thereto were to be processed regardless of when filed, provided they neither enlarge the service area nor change the assigned frequency blocks (except to delete them). In all other respects, our decisions regarding the filing and processing of 39 GHz applications and amendments were unaffected by the reconsideration decision. A summary of other main points of the decision follows:

- We decided to process those amendments of right filed on or after November 13, 1995, but before December 15, 1995.

- We noted that all other amendments filed on or after November 13, 1995, would continue to be held in abeyance.[172]

- We affirmed our decision to continue to hold in abeyance all pending mutually exclusive applications, unless the mutual exclusivity was resolved by an amendment of right filed before December 15, 1995. Where the mutual exclusivity was resolved, we expressly stated that we would process the application provided it was "ripe" as of November 13, 1995 -- *i.e.*, it had been placed on public notice and completed the 60-day cut-off period for filing of competing applications as of November 13, 1995.

- We affirmed our decision to hold in abeyance all applications that had not been placed on public notice or completed the 60-day cut-off period as of November 13, 1995.

b. Processing of Pending Applications

87. In view of the goals of this proceeding, *e.g.*, to foster competition among different service providers, to promote maximum efficient use of the spectrum, and to provide efficient service to customers by improving

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169 Commco, L.L.C., PLAINCOM, INC., and Sintra Capital Corporation Petition for Reconsideration (filed Jan. 16, 1996) ("Commco Petition"); Commco Emergency Request for Stay (filed Jan. 16, 1996).

170 DCT Communications, Inc., Petition For Partial Reconsideration of Freeze Order at 6 (filed Jan. 16, 1996) ("DCT Petition").

171 *Memorandum Opinion and Order*, FCC 96-486 (released Jan. 17, 1997), *supra*. *See* 47 C.F.R. § 101.29 (addressing amendments of right).

172 See 47 C.F.R. § 101.29 (c)(1)-(c)(5) for discussion of major amendments.

the licensing procedure, we conclude that what follows is the best approach for processing currently pending 39 GHz license applications that were affected by the November 13, 1995, *Freeze Order* and the December 15, 1995, freeze. The Commission has processed: (1) those 39 GHz applications that were not mutually exclusive as of December 15, 1995, and that, as of November 13, 1995, had passed the 60-day cut-off period for filing competing applications, (2) applications to modify existing licenses ("modification applications"), or amendments to modification applications, which do not enlarge the service area or change frequency blocks, except to delete them. For the reasons that follow, we have decided to dismiss, without prejudice, all other applications that have remained subject to the freeze, *i.e.*, (1) applications that are mutually exclusive, (2) applications that were not yet on public notice, or for which the 60-day cut-off period had not been completed prior to November 13, 1995, and (3) modification applications or amendments thereto that do not meet the criteria set out *infra*, in paragraph 95. These applicants may reapply under the new geographic area licensing rules established in this proceeding.

i. Pending Mutually Exclusive 39 GHz Applications

88. PCS and other CMRS licensees, equipment manufacturers, and TIA ask that we process 39 GHz applications that are pending and mutually exclusive.[173] GTE, however, urges us either to (1) dismiss the pending 39 GHz applications that we are holding in abeyance and open a new application filing window for such frequencies and licensing areas under the new rules that we adopt in this proceeding; or (2) retain those applications on file and permit other interested parties to file competing applications that will be processed pursuant to adopted competitive bidding procedures and corresponding rules for 39 GHz authorizations.[174] Some commenters recommend a specific time frame for allowing 39 GHz license applicants to resolve mutual exclusivity, *i.e.*, between 60 days and six months after a *Report and Order* is issued in this proceeding. Bachow asks that the Commission dismiss, without prejudice, any mutually exclusive applications that remain after the time for resolving mutual exclusivity passes.[175]

89. Some commenters further ask that the Commission dismiss as defective any applications which did not limit themselves to only one specified 39 GHz channel as of November 13, 1995, or which otherwise failed to satisfy a 1994 Public Notice that described the processing procedures and rules applicable to the 39 GHz band.[176] Under this approach, any remaining applicants that are still subject to mutual exclusivity would be allowed to file amendments to reduce their proposed service area contours or otherwise enter into settlement agreements to resolve their conflicts.

90. We have determined that the best approach for processing pending mutually exclusive applications is to dismiss them without prejudice, and to allow these applicants to submit new applications under the

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[173] *See, e.g.*, ANS Comments at 2; Altron Comments at 2; Ameritech Comments at 4-6; AT&T Comments at 12-13; BizTel Comments at 36-39; Columbia Comments at 5-12; Commco Comments at 3-4; DCT Comments at 29-34; DMC Comments at 2; GEC Comments at 5; Harris Comments at 2; Microwave Partners Comments at 7-9; Spectrum Comments at 2-3; TIA Comments at 10-12; Pinnacle Reply Comments at 2.

[174] GTE Comments at 6-7.

[175] Bachow Comments at 6, 16.

[176] *Public Notice*, Mimeo No. 44787 (released Sept. 16, 1994). *See also* Ameritech Comments at 3-4; AT&T Comments at 12-13; Bachow Comments at 5-6.

competitive bidding rules established in this proceeding.[177] We take this action because we find that it will optimize the public interest by promoting fair and efficient licensing practices. As we explain below in Section V-A ("Auctionability of the 39 GHz Band"), the use of a competitive bidding system for licensing the 39 GHz band constitutes the best method for choosing among mutually exclusive applicants. Competitive bidding allows spectrum to be acquired by the parties who value it most highly and increases the likelihood that innovative, competitive services will be offered to consumers. These benefits will be lost, in part, if we were to process pending mutually exclusive applications under our old rules. Moreover, under such an approach, those pending mutually exclusive applications that cannot be accommodated by the availability of alternative frequencies would be subject to comparative hearing (either formal or informal).[178] While these rules may be useful in other bands to address the rare situation in which two point-to-point links cannot be coordinated to avoid interference, in the 39 GHz band, applicants seek to serve geographic areas rather than to provide service on a single point-to-point link basis. This, coupled with the exponential growth in demand for 39 GHz spectrum, results in a significant number of mutually exclusive applications, including "daisy-chain" situations, among entities seeking to acquire spectrum. Resolving these mutually exclusive applications through comparative hearings would be much slower and possibly more costly, both to the government and applicants, than competitive bidding.

91. We also find that those who believe that they should be afforded the opportunity to amend their pending applications to avoid mutual exclusivity had ample opportunity to file such amendments prior to the commencement of this rule making. We are not convinced that parties who have not already entered such agreements will successfully accomplish such agreements now. Moreover, even if such agreements are possible, the parties will have the opportunity to accomplish similar results through the partitioning and disaggregation rules we are adopting today. Similarly, parties may resolve existing conflicts by forming joint ventures or similar arrangements to apply for BTA licenses. If, however, we permitted pending mutually exclusive applicants to resolve their conflicts outside the structure of the competitive bidding process, other entities would be foreclosed from an opportunity to apply for 39 GHz spectrum under the flexible rules we adopt herein. This would have the result of limiting the pool of potential applicants to those who have already filed under the current, more restrictive rules, and may inhibit the development of new and innovative services in this spectrum. Accordingly, we find that existing applicants have a reasonable avenue of relief for their concerns in the procedures we adopt herein, and we deny their requests.

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[177] *Cf.* Amendments of Parts 2 and 22 of the Commission's Rules to Allocate Spectrum in the 928-941 MHz Band and to Establish Other Rules, Policies, and Procedures for One-Way Paging Stations in the Domestic Public Land Mobile Radio Service, Gen Docket No. 80-183, *Third Report and Order*, 97 FCC 2d 900 (1984) (changing expected method for choosing among mutually exclusive applications); *Maxcell Telecom Plus, Inc. v. FCC*, 915 F.2d 1551 (D.C. Cir. 1987) (holding that Commission's overriding concern with efficient processing of the many applications for cellular radiotelephone licenses before it justified its use of a lottery to select applicants).

[178] Even the "informal" comparative hearing can be quite involved. Thus, applicants meeting the criteria for an informal comparative hearing in accordance with Section 101.51 of our Rules are required to submit to the Commission a written statement containing (1) a waiver of the applicant's right to a formal hearing, (2) a request and agreement that in order to avoid the delay and expense of a formal hearing, the Commission should exercise its judgment to select from the mutually exclusive applications the proposal(s) that would best serve the public interest, and (3) the signature of a principal (and the principal's attorney if represented). After receipt of the written requests of all of the applicants, the Commission (if it deems this procedure appropriate) would issue a notice designating the comparative criteria upon which the applications are to be evaluated and would request each applicant to submit, within a specified period of time, additional information concerning the applicant's proposal relative to the comparative criteria. Within 30 days following the due date for filing this information, the Commission would accept argument on the competing proposals from rival applicants, potential customers, and other knowledgeable parties in interest. Within 15 days following the due date for the filing of comments, the rival applicants would file replies. From time to time during the course of this procedure the Commission might request additional information from the applicants and hold informal conferences at which all competing applicants would have the right to be represented. At the end of this process, the Commission would issue a decision granting one (or more) of the proposals which it concludes would best serve the public interest, convenience and necessity.

ii. Applications Within the 60-day Public Notice Period on November 13, 1995

92. Some petitioners and commenters argue that we should process the "unripe" applications -- those that had not passed the 60-day public notice period as of the date of the November 13, 1995, *Freeze Order*.[179] According to DCT, for example, all applications that have been or should have been placed on public notice announcing their susceptibility to petitions to deny as required by Section 309 of the Communications Act meet the processing requirements of the Communications Act.[180] DCT contends that the disparate treatment of these applications and those we have decided to process would only make sense if there were no vacant channel pairs available for a second applicant in the same service area.[181] DCT and WinStar argue that under the rules, if there were a vacant channel pair, a second applicant would have to yield ultimately to the first-in-time applicant with respect to the frequencies specified by the first-in-time applicant.[182]

93. In the January 17, 1997, *Memorandum Opinion and Order, supra*, we held that unripe applications would continue to be held in abeyance because, until we had completed our consideration of the record, we were not in a position to state whether further applications may be filed, or how the applications presently held in abeyance would have been treated. Having concluded here that the 39 GHz band should be subject to significantly different rules than the ones used previously, we believe that the most fair and reasonable approach with regard to pending unripe applications is to dismiss them and allow these applicants to reapply under the new rules set forth in this proceeding. Taking into account our conclusion that these new rules further the public interest, we believe that applying the new 39 GHZ rules to those applications that were still subject to the possibility of competing applications under the former rules adequately balances the expectations of applicants with the public need for a better system for licensing use of the 39 GHz band. We further believe that we have crafted a fair approach because such applicants will be permitted to apply for spectrum under the new rules.

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179 *See, e.g.*, DCT Comments at 34-36.

180 *Id.*

181 DCT Comments at 34-36.

182 DCT Comments at 34-36; WinStar Comments at 5. These commenters cite Section 101.103(e) of our Rules, which states that "[w]here frequency conflicts arise between co-pending applications in the Point-to-Point Microwave Radio and Local Television Transmission Services, it is the obligation of the later filing applicant to amend his application to remove the conflict, unless it can make a showing that the conflict cannot be reasonably eliminated. Where a frequency conflict is not resolved and no showing is submitted as to why the conflict cannot be resolved, the Commission may grant the first filed application and dismiss the later filed application(s) after giving the later filing applicant(s) 30 days to respond to the proposed action." 47 C.F.R. § 101.103(e).

iii. Modification Applications

94. In the *NPRM and Order*, we stated that we would hold in abeyance modification applications, and any amendments thereto, that were filed on or after November 13, 1995, the date of the *Freeze Order*.[183] We stated that no new applications to modify existing licenses would be accepted after December 15, 1995, unless they did not involve any enlargement in any portion of the service area and did not change frequency blocks (unless to delete one).[184]

95. In the January 17, 1997, *Memorandum Opinion and Order*, we clarified that any pending modification application or amendment thereto filed prior to November 13, 1995, was to be processed. Modification applications or amendments to such applications, filed between November 13 and December 15, 1995, which meet the criteria of Section 101.59 of our Rules[185] and which do not enlarge the applicant licensee's service area, were to be accepted for filing and processed. Any modification application, or amendment thereto, which meets the criteria of Section 101.61 of our Rules were likewise to be accepted for filing and processed.[186] All other modification applications and amendments thereto were to be held in abeyance.

96. For the same reasons that we dismiss without prejudice the pending mutually exclusive and unripe applications as discussed *supra*, we also dismiss without prejudice any modification application held in abeyance pursuant to the freeze. Such applications, if granted under the previous rules, would frustrate the goals underlying this proceeding by continuing the licensing scheme which we are abandoning today. As discussed *supra*, we must choose a point from which our new rules will apply, taking into account our conclusion that these new rules are in the best interest of the public for the development of new services in the 39 GHz band. We believe that it is fair to dismiss major modification applications because such applicants will be permitted to apply for additional spectrum, without disadvantaging potential new entrants, under the new rules.

iv. Applications That Are Partially Mutually Exclusive

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[183] A modification application and any amendment thereto, is filed pursuant to an existing license. There is no amendment of right for an existing license. An amendment of right is filed pursuant to a license application.

[184] *NPRM and Order*, 11 FCC Rcd at 4989.

[185] 47 C.F.R. § 101.59 provides that eligible licensees applying for certain minor station modifications receive an automatic grant of the modification as of the twenty-first day following public notice of the modification application. Modifications that may be authorized under this procedure are: (1) changes in a transmitter and existing transmitter operating characteristics, or protective configuration of a transmitter, if the increase in EIRP is less that 3 dB and if the bandwidth is not increased; (2) changes in the center line height of an antenna of less that 3.0 meters (10 feet) and of the antenna structure of 6.1 meters (20 feet) or less; (3) change in the geographical coordinates of a transmit station, receive station or passive facility by five seconds or less of latitude, longitude, or both, subject to FAA notice.

[186] 47 C.F.R. § 101.61 permits certain modifications without prior authorization, requiring only that the licensee notify the Commission of the changes and undertake any necessary coordination with other licensees. Modifications eligible for notification include: (1) change or modification of a transmitter if the replacement or modification is type-accepted, if the modulation is not changed, the frequency stability is equal to or better than the previously authorized level, and if the bandwidth and output power do not exceed previously authorized values; (2) addition or deletion of a transmitter for protection without changing the authorized power output (*e.g.*, hot standby transmitters; (3) change to an antenna which conforms to the requirements of §101.115 and has the same or better radiation characteristics as the previously authorized antenna; (4) any technical changes that would decrease the effective radiated power; (5) change of less than 1.5 meters in the centerline height of an antenna system, providing the new height of the antenna structure is increased 6.1 meters or less; (6) decrease in overall height of an antenna structure; (7) changes of no more than 1 degree in the azimuth of the center of the main lobe of radiation; (8) changes to the transmission line and other devices between the transmitter and the antenna if the effective radiated power of the station is not increased by more than one dB.

97. There are seven applications that are partially mutually exclusive. That is, these applications request more than one frequency pair, some of which are mutually exclusive with frequencies requested in other applications and some of which are not mutually exclusive. Although the non-mutually exclusive portion of these applications was subject to processing under our December 15, 1995, *NPRM and Order*, the mutually exclusive portion of each of the applications was required to be held in abeyance. The divided status of these applications has presented a unique processing issue. Our electronic process for addressing these applications does not permit partial grants because there is no capability for allowing an application to remain in pending status if final action has been taken on a portion of it. As a result, we have not been able to process the non-mutually exclusive portion of these applications until we had reached a decision regarding the disposition of pending mutually-exclusive applications in general. As we have now made this determination, we will process these applications as follows. Specifically, we will process to completion that portion of each of these applications that is non-mutually exclusive with other applications. However, we will dismiss the remainder of the application which cannot be granted due to mutual exclusivity, consistent with our order herein.

V. DECISION -- COMPETITIVE BIDDING ISSUES

A. Auctionability of the 39 GHz Band

98. *Background.* In the *NPRM and Order*, we proposed to use competitive bidding to select among mutually exclusive applications for initial licenses in the 39 GHz band.[187] We reconsidered our previous decision not to license intermediate links by competitive bidding and the various factors that influenced our decision. First, we noted that point-to-point microwave channels used as part of end-to-end subscriber-based service offerings meet the "principal use" requirement of the Communications Act. Second, because BTAs are large areas, we stated that defining service areas by BTAs likely will result in the filing of mutually exclusive applications. Third, we noted that based upon our experience with auctions in other services, an auction for intermediate links within a well-defined service area will neither significantly delay the provision of other services, such as PCS, to the public nor impose significant administrative costs on the applicants or the Commission. Fourth, we noted that by placing licenses in the hands of those who value this spectrum most highly, competitive bidding will likely promote the development and rapid deployment of new technologies and ensure that new and innovative technologies are readily accessible to the American people. Finally, we noted that some of the licensees in the 39 GHz band have offered to sell or lease their licenses and may never have intended to directly serve the public, but rather to hold their own auctions and thereby deprive the public of the aforementioned benefits.[188]

99. *Discussion.* Upon consideration of the record in this proceeding, we conclude that auctioning the 39 GHz band meets the new criteria set forth in Section 309(j) of the Communications Act, as amended by the Balanced Budget Act of 1997.[189] During the pendency of this proceeding and after comments were received in this proceeding, Congress enacted the Budget Act which extended and expanded the Commission's auction

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[187] *NPRM and Order*, 11 FCC Rcd at 4978.

[188] *Id*. at 4945.

[189] Balanced Budget Act of 1997, P.L. 105-33, 111 Stat. 251 (1997)("Budget Act"). Because we adopt competitive bidding as the licensing method for awarding licenses in the 39 GHz band, it is unnecessary for us to address the alternative of revising our current licensing rules for the 39 GHz band. *See NPRM and Order*, 11 FCC Rcd at 4977-81.

authority.[190] Many commenters support the award of unallocated spectrum through auctions for the 39 GHz band.[191] Using the pre-Budget Act criteria for auctionability of spectrum, some commenters argued that the 39 GHz band did not meet such criteria[192] because: (1) the band is being used for providing intermediate links and, therefore, is not principally being used to garner compensation from subscribers as required under the former "principal use" criteria of the Act;[193] (2) an auction of the 39 GHz band does not promote the objectives contained in the Act; and (3) an auction of intermediate links could significantly delay the development and deployment of new products and services and impose significant costs on licensees and the Commission.[194] As discussed below, as a result of the Budget Act provisions, the "principal use" criteria of 309(j)(2)(A) and "promote the objectives" criteria of 309(j)(2)(B) and 309(j)(3) of the Act no longer govern the auctionability of electromagnetic spectrum. Thus, we do not find these arguments to be compelling reasons not to employ competitive bidding procedures for 39 GHz spectrum.

100. Under the Budget Act, the Commission's auction authority covers all mutually exclusive applications for initial licenses or construction permits, with three limited exceptions which are not applicable in this proceeding.[195] The Budget Act replaced language in Section 309(j)(2), formerly called "Uses to Which Bidding May Apply,"[196] which stated the requirements for spectrum to be auctionable, *i.e.*, a determination that the principle use of the spectrum will be on a subscription basis and that competitive bidding will promote the objectives stated in Section 309(j)(3) with the new paragraph that expands the Commission's auction authority. Accordingly, under the amended Section 309(j), the Commission has the authority to auction the 39 GHz band.

101. We reject DCT's contentions that using competitive bidding procedures for this band violates Sections 309(j)(1) and 309(j)(6)(E), because the Commission is required to use various means to avoid mutual exclusivity, including the use of engineering solutions, negotiate threshold qualifications and service regulations, and licensing proceedings, before turning to auctions.[197] DCT argues that because the *NPRM and Order* finds that current point-to-point rules are structured to avoid mutual exclusivity through frequency coordination,[198]

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[190] *See* Budget Act, P.L. 105-33, 111 Stat. 251 (1997), § 3002.

[191] *See e.g.*, Altron Comments at 3; BizTel Comments at 14; Commco Comments at 8; GEC Comments at 14; GTE Comments at 2; Milliwave Comments at 6-8; Microwave Partners Comments at 5; No Wire Comments at 2; Spectrum Comments at 3; WinStar Comments at 14.

[192] *See, e.g.*, DCR Comments at 2-4; DMC Comments at 1, 3 (supporting TIA's Comments); Harris Comments at 3; Pacific Comments at 2; TIA Comments at 15-17.

[193] *See, e.g.*, DCR Comments at 2-3; TIA Comments at 16.

[194] *See, e.g.*, DCR Comments at 4; DCT Comments at 21-23.

[195] Budget Act, Pub. L. No. 105-33, 111 Stat. 251 (1997), § 3002(a)(1)(a). The three exceptions to the Commission's auction authority are in the areas of public safety radio services, digital television service to be provided by existing terrestrial broadcast licensees as replacement for their analog television licenses, and noncommercial educational or public broadcast stations.

[196] These paragraphs, 47 U.S.C. 309(j)(1) and (2) were entitled "General Authority" and "Uses to Which Bidding May Apply," respectively.

[197] DCT Comments at 16-21. Section 309(j)(1) of the Communications Act, as amended by the Budget Act, § 3002(a)(1)(A).

[198] DCT Comments at 16, citing the *NPRM and Order* at para. 27.

changing the rules to license by BTAs is tantamount to adopting a licensing system designed to encourage mutual exclusivity. However, the 39 GHz band has been the subject of significantly increased requests for large rectangular service areas and multiple channels. Frequency coordination techniques, suitable for the level of point-to-point spectrum demand existing prior to the existence of emerging technologies, are no longer adequate. Accordingly, our use of pre-defined geographic areas rather than the applicant-defined rectangular areas currently used as service areas furthers our public interest goals, as we concluded above in Section IV(C)(1). As we noted there, predetermined service areas will provide a more orderly structure for the licensing process and will foster efficient utilization of the 39 GHz spectrum in an expeditious manner. Indeed, the use of applicant-defined service areas can actually slow the delivery of services because the processing of each application requires extensive analysis and review by Commission staff.

102. Similarly, we also reject DCT's related contention that the proposed auction framework for the 39 GHz band -- simultaneous multiple round bidding, the Milgrom-Wilson activity rule and the simultaneous stopping rule -- encourages mutual exclusivity of applications.[199] DCT further rejects the proposed rule that would have limited licensees to an interest in four channel blocks contending that the "expansion of the number of channels which an applicant may receive from a de facto one channel to four channels also encourages mutual exclusivity."[200] The competitive bidding rules proposed have been used successfully in previous auctions and are intended to provide flexibility to bidders to pursue different strategies for interrelated licenses. Finally, as noted *supra*, we have decided not to place any limit on the number of channels a licensee may hold. We reject the contention that this will encourage mutual exclusivity, but rather believe that this will best foster the creation and deployment of new services. As discussed below, various other auction provisions adopted here will address the speculative bidding concerns raised by DCT.

103. While we believe that competitive bidding will place licenses in the hands of those who value them the most, various commenters propose other methods for licensing this band.[201] DCR, for example, proposes that the Commission use the alternative licensing proposal set forth in the *NPRM and Order*.[202] TGI proposes tight usage requirements, *e.g.*, existing permittees would have six months from completion of rule making to construct and commence operation of their systems. Bachow proposes that the Commission adopt a going-forward licensing approach that provides for, among other things, applicant-defined service areas in contrast to geographic licensing; public notice and thirty-day cut-off windows; exhaustion of coordination efforts prior to any auction; and reasonable build-out requirements.[203] Finally, Ameritech and others state that after the Commission has finished processing 39 GHz amendments, there likely will be little or no desirable spectrum for any subsequent overlay auction of the 39 GHz channels. These commenters recommend that, in lieu of auctions, the Commission make the 39 GHz band available for the licensing of point-to-point paths.[204] While we note these various

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199 *Id*. at 18-21.

200 DCT Comments at 18-21.

201 Ameritech Comments at 5; Bachow Comments at 14; DCR Comments at 4; TGI Comments at 4-8.

202 *NPRM and Order,* 11 FCC Rcd at 4977-78.

203 Bachow Comments at 14.

204 Ameritech Reply Comments at 7;*See, e.g.*, Bachow Comments at 6; No Wire Comments at 6.

proposals, we conclude that the Budget Act's amendments to Section 309(j) of the Act direct us to auction the 39 GHz band.

104. We also note that under the Budget Act amendments, we are required to provide adequate time before the issuance of bidding rules to permit notice and comment, and after the issuance of bidding rules to ensure adequate time for interested parties to assess the market and develop their strategies or approaches as required under Section 309(j)(3)(E).[205] We believe we have satisfied the first requirement by seeking comment in the *NPRM and Order*. As to the second requirement, the Wireless Telecommunications Bureau ("Bureau") recently released a Public Notice announcing general time frames for upcoming auctions.[206] We anticipate that the Bureau will routinely release similar public notices in the future. We believe that the release of such public notices combined with the release of a Public Notice announcing the 39 GHz auction should ensure that interested parties have adequate time to assess the market and develop their strategies.

B. Competitive Bidding Design and Procedures

1. Competitive Bidding Design

105. *Background*. In the *NPRM and Order*, we tentatively concluded that simultaneous multiple round auctions are appropriate for this band.[207] We noted that compared with other bidding mechanisms, simultaneous multiple round bidding will generate the most information about license values during the course of the auction and provide bidders with the most flexibility to pursue back-up strategies.

106. *Discussion*. Based on the record in this proceeding and our successful experience conducting simultaneous multiple round auctions for other services, we believe a simultaneous multiple round auction design is the preferable competitive bidding design for the 39 GHz band. The commenters generally support our proposal to use simultaneous multiple round auctions for selecting among mutually exclusive applicants.[208] In addition, we believe that the value of these licenses will be significantly interdependent because of the desirability of aggregation across geographic regions. Under these circumstances, simultaneous multiple round bidding will generate more information about license values during the course of the auction and provide bidders with more flexibility to pursue back-up strategies, than if the licenses were auctioned separately.

107. DCT, on the other hand, argues that simultaneous multiple round auctions gives applicants only one opportunity to file for any or all channels and that this approach creates an urgency to file for channels that the applicant would not otherwise seek, thereby fostering unnecessary creation of mutual exclusivity.[209] DCT's argument misses several points. As an initial matter, we are not proposing to auction all of the channels at one

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[205] Section 309(j)(3)(E) was added by the Budget Act, Pub. L. No. 105-33, 111 Stat. 251 (1997), § 3002.

[206] *See* FCC Announces Upcoming Spectrum Auction Schedule, *Public Notice*, DA 97-1627 (July 30, 1997).

[207] *See e.g., NPRM and Order*, 11 FCC Rcd at 4947, 4979.

[208] Altron Comments at 3; BizTel Comments at 15; Columbia Comments at 19; Commco Comments at 8; GEC Comments at 7; GTE Comments at 7; Milliwave Comments at 8-10; Pacific Comments at 3-4; Spectrum Comments at 3; TDS Comments at 7-8.

[209] DCT Comments at 18.

time but rather in a series of simultaneous multiple round auctions in which three channels would be placed up for bid in each auction. *See* Section V (C)(1) *infra*. Thus, applicants will have more than one opportunity to file for channels. Moreover, the nature of this auction design provides bidders with flexibility to pursue different strategies for interrelated licenses. Specifically, it allows a bidder to pursue substitute licenses in the event it fails to obtain its first choices. In addition, we believe that the upfront payment requirement and our withdrawal rules provide a sufficient deterrent against applicants seeking licenses that they do not want or intend to use.[210] Notwithstanding our conclusion regarding the use of simultaneous multiple round bidding, we retain the discretion to use a different methodology if that proves to be more administratively efficient.

2. Applicability of Part 1, Standardized Auction Rules

108. In the *Competitive Bidding Second Report and Order*, as modified by the *Competitive Bidding Second Memorandum Opinion and Order*, the Commission established general competitive bidding rules for all auctionable services, but also stated that such rules may be modified on a service-specific basis.[211] These general competitive bidding rules are contained in Part 1 of our Rules. In the recent *Order, Memorandum Opinion and Order and Notice of Proposed Rule Making* in WT Docket No. 97-82, we amended some of the Part 1 provisions, and proposed further amendments to the Part 1 rules to streamline our auction procedures.[212] Accordingly, for the 39 GHz band, we will follow the competitive bidding rules contained in, or ultimately established for, Subpart Q of Part 1 of the Commission's Rules, as amended by the Part 1 proceedings and related decisions, unless specifically indicated otherwise below.

C. Bidding Issues

1. Grouping of Licenses

109. *Background*. We determined in the *Competitive Bidding Second Report and Order* that highly interdependent licenses should be grouped together and put up for bid at the same time in a multiple round auction because such grouping provides bidders with the most information about the complementary and substitutable licenses during the course of the auction.[213] In the *NPRM and Order*, we requested comment on whether we should endeavor to have a single auction. We also solicited comments on alternative license groupings and requested bidders to explain how such groupings would benefit bidders.[214]

110. *Discussion*. We believe that all 39 GHz licenses are significantly interdependent. As a result, the optimal grouping of the licenses would be to put all of the licenses up for bid at the same time in order for bidders to have information about the prices of complementary and substitutable licenses during the auction. However, due to the large number of licenses that we anticipate will be auctioned (approximately 6,900), this approach may

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[210] *See Competitive Bidding Second Report and Order,* 9 FCC Rcd at 2377.

[211] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2350.

[212] Amendment of Part 1 of the Commission's Rules -- Competitive Bidding Proceeding, *Order, Memorandum Opinion and Order*, and *Notice of Proposed Rule Making*, FCC 97-60, 12 FCC Rcd 5686 (1997) (*Part 1 Order and NPRM*).

[213] *Id.* at 2366.

[214] *NPRM and Order*, 11 FCC Rcd at 4949-50.

be burdensome for bidders. Specifically, placing all of the 39 GHz licenses up for bid in a single auction may overwhelm bidders with the processing necessary to analyze effectively and efficiently the amount of information associated with such a large number of licenses. We conclude that a series of simultaneous multiple round auctions would be more advantageous to bidders and the most administratively feasible means of distributing these licenses. At this time, we believe that three channel pairs should be placed up for bid in each auction based on our review of the applicants' requests for channels in the 39 GHz band. We nonetheless reserve the discretion to change the number of channels offered during an auction if it is efficient and administratively feasible to do so and delegate such authority to the Bureau.

2. Reserve Price or Minimum Opening Bids

111. When licenses are subject to auction, the recently enacted Budget Act requires the Commission to prescribe methods by which a reasonable reserve price or a minimum opening bid is established, unless a determination is made that such an assessment is not in the public interest.[215] Recently, in conjunction with the 800 MHz Specialized Mobile Radio ("SMR") Service auction, the Bureau, pursuant to the Budget Act's provisions calling for the establishment of reserve prices or minimum opening bids in FCC auctions, proposed, *inter alia*, a formula for determining a reserve price or minimum opening bid for licenses and sought comment on its formula and other proposals for the auction scheduled to begin on October 28, 1997.[216] For the 39 GHz auction, we direct the Bureau to issue a similar public notice proposing a method for determining a reserve price or minimum opening bid for 39 GHz licenses subject to auction and seeking comment on its proposed method and other proposals.

3. *Bid Increments*

112. *Background*. Consistent with our approach for previous simultaneous multiple round auctions for other services, in the *NPRM and Order* we proposed to establish minimum bid increments for bidding in each round of the auction based on the same considerations given in our prior orders.[217] We proposed that the bid increment be the greater of a percentage of the high bid from the previous round or as a fixed dollar amount per megahertz per service area population ("MHz-pops"). We also proposed to retain the discretion to vary the minimum bid increments for individual licenses or groups of licenses at any time before or during the course of the auction, based on the number of bidders, bidding activity, and the aggregate high bid amounts.

113. *Discussion*. We adopt our bid increment proposals, particularly given that no commenters opposed them. In fact, Milliwave supports our proposal to retain the discretion with respect to bidding increments.[218] We will follow the practice that we have used for other auctions and delegate authority to the Bureau to announce, by Public Notice prior to the auction, the general guidelines for bid increments.

4. Stopping Rules

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[215] Budget Act, Pub. L. No. 105-33, 111 Stat. 251 (1997); 47 U.S.C. § 309(j)(4)(F).

[216] *See* Comment Sought on Balanced Budget Provisions Calling For Reserve Prices or Minimum Opening Bids in FCC Auctions, *Public Notice*, DA 97-1933 (September 5, 1997).

[217] *Id*. at 4950.

[218] Milliwave Comments at 10, n.21.

114. *Background*. When simultaneous multiple round auctions are used, a stopping rule must be established for determining when the auction is over. In simultaneous multiple round auctions, bidding may close separately on individual licenses, simultaneously on all licenses, or a hybrid approach may be used. Generally, we proposed to adopt a simultaneous stopping rule in the 39 GHz auction in which bidding generally remains open on all licenses until there is no new acceptable bid for any license. We further proposed to retain the discretion to declare when the auction will end, to vary the duration of bidding rounds or the interval at which bids are accepted, in order to move the auction toward closure more quickly.[219]

115. *Discussion*. We will adopt a simultaneous stopping rule whereby bidding will remain open on all licenses in an auction until bidding stops on every license. We believe that allowing simultaneous closing for all licenses will afford bidders flexibility to pursue back-up strategies without running the risk that bidders will hold back their bidding until final rounds. As a general matter, the auction will close after one round passes in which no new valid bids or proactive activity rule waivers are submitted. In any event, we adopt our proposal to retain the discretion to keep an auction open even if no new acceptable bids and no proactive waivers are submitted in a single round. Milliwave supports our proposal to retain such discretion.[220] In the event that we exercise this discretion, the effect will be the same as if a bidder has submitted a proactive waiver. We also retain the discretion to announce license-by-license closings.

116. We further retain the discretion to declare after 40 rounds that the auction will end after some specified number of additional rounds. Under such an approach, bids will be accepted only on licenses where the high bid has increased in the last three rounds.[221] This will deter bidders from continuing to bid on a few low value licenses solely to delay the closing of the auction. It also will enable the Commission to end the auction when it determines that the benefits of terminating the auction and issuing licenses exceed the likely benefits of continuing to allow bidding.

5. Activity Rules

117. *Background*. In the *Competitive Bidding Second Report and Order*, we adopted the Milgrom-Wilson activity rule as our preferred activity rule when a simultaneous stopping rule is used.[222] The Milgrom-Wilson approach encourages bidders to participate in early rounds by limiting their maximum participation to some multiple of their minimum participation level. In the *NPRM and Order*, we tentatively concluded that the Milgrom-Wilson activity rule should be used in conjunction with the proposed simultaneous stopping rule for this auction. We indicated our belief that the Milgrom-Wilson approach would best achieve the Commission's goals of affording bidders flexibility to pursue backup strategies, while at the same time ensuring that simultaneous auctions are concluded within a reasonable period of time.[223]

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219 *NPRM and Order*, 11 FCC Rcd at 4951-52.

220 Milliwave Comments at 10, n.21.

221 *Competitive Bidding Fifth Report and Order*, 9 FCC Rcd at 5552.

222 9 FCC Rcd at 2371-73.

223 *NPRM and Order*, 11 FCC Rcd at 4955, 4979.

118. *Discussion*. In accordance with Section 1.2104 of the Commission's Rules and the guidelines we adopted in the *Competitive Bidding Second Report and Order*, we will employ the Milgrom-Wilson activity rule for the 39 GHz auction. Milliwave supports adoption of this rule.[224] DCT appears to argue that the activity rule adds an incentive for bidders to apply for areas they do not intend to serve.[225] No other comments on this issue were received. DCT's argument with respect to this activity rule is misplaced. The activity rules do not encourage applicants to apply for more licenses than they intend to use, and actually has the opposite effect. Indeed, the total number of licenses applied for determines the activity requirement. Therefore, the greater the number of licenses an applicant applies for the greater its activity level must be in order to maintain eligibility in the auction.

119. For the 39 GHz auction, we will generally use the Milgrom-Wilson activity rule with some variations. Specifically, under the Milgrom-Wilson activity rule, the auction is divided into three stages and the minimum required activity level, measured as a fraction of the bidder's eligibility in the current round, will increase during the course of the auction. As in previous auctions, we will set, by announcement before the auction, the minimum required activity levels for each stage of the auction. We retain the discretion to vary, by announcement before or during the auction, the required minimum activity levels (and associated eligibility calculations) for each auction stage. Retaining this flexibility will improve our ability to control the pace of the auction and help ensure that the auction is completed within a reasonable period of time. We delegate to the Bureau the authority to set or vary the minimum activity levels if circumstances warrant a modification. The Bureau will announce any such modification by Public Notice. The auction will start in Stage One and move to Stage Two and then to Stage Three. The movement from one auction stage to the next will be dependent upon the auction activity level. The Bureau will retain the discretion to determine and announce during the course of an auction when, and if, to move form one auction stage to the next. However, under no circumstances can the auction revert to an earlier stage.

120. As we have in past auctions, to avoid the consequences of clerical errors and to compensate for unusual circumstances that might delay a bidder's bid preparation or submission in a particular round, we will provide bidders with five activity rule waivers that may be used in any round during the course of the auction. A waiver will preserve current eligibility in the next round, but cannot be used to correct an error in the amount bid. Bidders also will be afforded an opportunity to override the automatic waiver mechanism when they place a bid, if they wish to reduce their bidding eligibility and do not want to use a waiver to retain their eligibility at its current level.[226] If a bidder overrides the automatic waiver mechanism, its eligibility permanently will be reduced (according to the formulas specified above), and it will not be permitted to regain its bidding eligibility from a previous round. An automatic waiver invoked in a round in which there are no valid bids will not keep the auction open. Bidders will have the option to proactively enter an activity rule waiver during the bid submission period. If a bidder submits a proactive waiver[227] in a round in which no other bidding activity occurs, the auction will remain open. The Bureau will retain the discretion to issue additional waivers during the course of an auction for circumstances beyond a bidder's control, and also retain the flexibility to adjust, by Public Notice

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224 Milliwave Comments at 10, n.21.

225 DCT Comments at 18.

226 *See Competitive Bidding Fourth Memorandum Opinion and Order*, 9 FCC Rcd at 6861.

A proactive waiver is a waiver submitted by a bidder during the bid submission period and acts as a bid for purposes of keeping the auction open.

prior to an auction, the number of waivers permitted, or to institute a rule that allows one waiver during a specified number of bidding rounds or during specified stages of the auction.[228]

6. Duration of Bidding Rounds

121. *Background*. We proposed in the *NPRM and Order* to retain the discretion to vary the duration of bidding rounds or the interval at which bids are accepted (*e.g*., run more than one round per day) in order to move the auction toward closure more quickly.[229]

122. *Discussion*. We will retain discretion to vary the duration of bidding rounds and the interval at which bids are accepted. In simultaneous multiple round auctions, bidders may need a significant amount of time to evaluate back-up strategies and develop their bidding plans. Milliwave, the sole commenter addressing this issue, supports our decision.[230] The Bureau will announce any changes to the duration of and intervals between bidding rounds, either by Public Notice prior to the auction or by announcement during the auction.

D. Procedural and Payment Issues

1. Short-Form Applications

123. *Background.* In the *Competitive Bidding Second Report and Order*, we determined that we should only require a short-form application (FCC Form 175) prior to the auction, and that only winning bidders should be required to submit a long-form license application after the auction.[231]

124. *Discussion*. We adopt the bidding application and certification procedures contained in Section 1.1205 of the Commission's Rules, as amended by the Part 1 proceeding. Prior to the start of the 39 GHz auction, the Bureau will release an initial Public Notice announcing the auction. The initial Public Notice will specify the licenses to be auctioned and the procedures for the auction in the event that mutually exclusive applications are filed. The Public Notice will specify the method of competitive bidding to be used, applicable bid submission procedures, stopping rules, activity rules, and the deadline by which short-form applications must be filed and the amounts and deadlines for submitting the upfront payment.[232] We will not accept applications filed before or after the dates specified in the Public Notice. Applications submitted before the release of the Public Notice will be returned as premature. Likewise, applications submitted after the deadline specified by Public Notice will be dismissed, with prejudice, as untimely.

125. Soon after the release of the initial Public Notice, a Bidder Information Package will be made available to prospective bidders. The Bidder Information Package will contain information about incumbent

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228 *See Competitive Bidding Second Report and Order,* 9 FCC Rcd at 2373.

229 *NPRM and Order,* 11 FCC Rcd at 4955.

230 Milliwave Comments at 10, n.21.

231 *Id.* at 2375-76.

232 *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2376.

licensees based on our licensing records. Bidders also should conduct their own due diligence regarding incumbent licensees within the 39 GHz band.

126. All bidders will be required to submit short-form applications on FCC Form 175 (and FCC Form 175-S, if applicable), by the date specified in the initial Public Notice. Applicants are encouraged to file Form 175 electronically. Detailed instructions regarding electronic filing will be contained in the Bidder Information Package. The short-form applications will require applicants to provide the information required by Section 1.2105(a)(2) of the Commission's Rules, as amended by the Part 1 proceeding.[233]

[233] 47 C.F.R. § 1.2105(a)(2).

2. Amendments and Modifications

127. *Background.* To encourage maximum bidder participation, we proposed to provide applicants with an opportunity to correct minor defects in their short-form applications prior to the auction. Applicants whose short-form applications are substantially complete, but contain minor errors or defects, would be provided the opportunity to correct their applications prior to the auction.[234]

128. *Discussion*. We received no comments on our proposal. Thus, we will apply the provisions set forth in Part 1 of our rules, including amendments adopted in the Part 1 proceeding, governing amendments to and modifications of short-form applications to the 39 GHz service. Upon reviewing the short-form applications, we will issue a Public Notice listing all defective applications. Applicants with minor defects in their applications will be given an opportunity to cure them and resubmit a corrected version.

3. Upfront Payments

129. *Background.* As in the case of other auctionable services, the *NPRM and Order* proposed to require all auction participants to tender in advance to the Commission a substantial upfront payment. We proposed to use the standard upfront payment formula of $2,500 or $0.02 per MHz-pop for the largest combination of MHz-pops whichever is greater.[235]

130. *Discussion*. We previously have determined that a substantial upfront payment requirement is necessary to ensure that only serious, qualified bidders participate in auctions and to ensure that sufficient funds are available to satisfy any bid withdrawal or default payments that may be incurred. We stated in the *Competitive Bidding Second Report and Order* that as a general matter we will base upfront payments on a formula of $0.02 per MHz-pop for the largest combination of MHz-pops a bidder anticipates being active on in any single round of bidding. We also established a minimum upfront payment of $2,500, but we indicated that the minimum amount could be modified on a service-specific basis.[236] We have varied our minimum upfront payment where we determined that it would result in too high an upfront payment for the service.[237] Various commenters contend that the formula used in the PCS context is not appropriate for the 39 GHz band because it results in an upfront payment that is too high.[238]

131. We recognize, as indicated by commenters, that for purposes of 39 GHz services our standard upfront payment formula may yield excessively high payment amounts relative to license values. Upfront payments at such levels could discourage participation in the auction and would be well above the amounts needed to discourage frivolous bidding and above what is necessary to ensure that sufficient funds are available

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234 *NPRM and Order*, 11 FCC Rcd at 4957.

235 *NPRM and Order*, 11 FCC Rcd at 4958.

236 *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2379.

237 *See Implementation of Section 309(j) of the Communications Act - Competitive Bidding, Report and Order*, PP Docket No. 93-253, 10 FCC Rcd 9589, 9641 (1995) (*Competitive Bidding Report and Order)*.

238 *See, e.g.*, PCS Fund Comments at 6; BizTel Comments at 17; Pacific Comments at 2; Milliwave Comments at 11, n.22; WinStar Comments at 20-21.

to satisfy any bid withdrawal or default payments that may be incurred.[239] Since the frequency range and anticipated uses of 39 GHz services are more like LMDS than broadband PCS, we believe that it would be appropriate to set upfront payments closer to the levels used for LMDS than the $.02 per MHz-pop used in broadband PCS. LMDS upfront payments for 1150 MHz licenses range from $.00078 per MHz-pop for BTAs with population over one million to $.00026 per MHz-pop for BTAs with population under one hundred thousand.[240] Since many of the 39 GHz licenses are heavily encumbered it may also be appropriate to make license-by-license downward adjustments to the upfront payments to account for the reduced amount of spectrum available. Furthermore, by waiting until after the LMDS auction is conducted, we will have better estimates regarding the value of 39 GHz spectrum and be able to more accurately set the upfront payment amounts. Therefore, to allow the Commission sufficient time to conduct such analysis and to benefit from further auction experience we propose not to set the amounts of the upfront payments for 39 GHz services at this time. Instead, we delegate authority to the Bureau to set the amounts of upfront payments and to announce the levels by Public Notice.

4. Down Payment and Full Payment

132. *Background*. In the *NPRM and Order*, we tentatively concluded that winning bidders should be required to supplement their upfront payments with a down payment sufficient to bring their total deposits up to 20 percent of their winning bid(s).[241]

133. *Discussion.* We adopt the requirement that winning bidders must supplement their upfront payments with a down payment sufficient to bring their total deposits up to 20 percent of their winning bid(s). No commenters addressed this specific proposal. If the upfront payment already tendered by a winning bidder, after deducting any bid withdrawal and default payments due, amounts to 20 percent or more of its winning bids, no additional deposit will be required. If the upfront payment amount on deposit is greater than 20 percent of the winning bid amount after deducting any bid withdrawal and default payments due, the additional monies will be refunded.

134. We also will require winning bidders to submit the required down payment by wire transfer to our lock-box bank, by a date and time to be specified by Public Notice, generally within ten (10) business days following release of the Public Notice announcing the close of bidding. All auction winners generally will be required to make full payment of the balance of their winning bids within ten (10) business days following Public Notice that the Commission is prepared to award the license.

135. We note that we have proposed to adopt a late fee in Section 1.2109(a) in our Part 1 proceeding, to permit auction winners to make their final payments 10 business days after the payment deadline, provided that they also pay a late fee equal to five percent of the amount due.[242] While we do not adopt the proposed late

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[239] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2377-2381.

[240] Calculations: $.90 per pop/1150 MHz = $.00078 per MHz-pop, $.30 per pop/ 1150 MHz = $.00026 per MHz-pop. *See* Public Notice, DA 97-208, released Sept. 25, 1997, at 11.

[241] *NPRM and Order*, 11 FCC Rcd at 4959-60, 4979.

[242] *See Part 1 Order and NPRM*, FCC 97-60, 12 FCC Rcd 5686 (1997).

fee provision in this proceeding, we note that should we ultimately adopt such a provision in the Part 1 proceeding it shall apply to the 39 GHz band.

5. *Bid Withdrawal, Default, and Disqualification*

136. *Background*. In the *Competitive Bidding Second Report and Order*, we noted the importance to the success of our competitive bidding process that potential bidders be required to make a monetary payment if they withdraw a high bid, are found not to be qualified to hold licenses, or default on payment of a balance due.[243]

137. *Discussion*. To prevent insincere bidding, we will apply our the bid withdrawal, default and disqualification rules found in Sections 1.2104(g), and 1.2109 of the Commission's Rules, as amended by the Part 1 proceeding, to the 39 GHz auctions. No commenters addressed this issue. Any bidder that withdraws a high bid before the Commission declares bidding closed will be required to reimburse the Commission in the amount of the difference between its high bid and the amount of the winning bid the next time the license is offered by the Commission, if this subsequent winning bid is lower than the withdrawn bid.[244] We will calculate the bid withdrawal payment as either (1) the difference between the withdrawn bid net of bidding credit and the subsequent winning bid net of bidding credit, or (2) the difference between the gross withdrawn bid and the subsequent gross winning bid for that license, whichever is less.[245] No withdrawal payment is assessed if the subsequent winning bid exceeds the withdrawn bid. If a winning bidder defaults after the close of an auction, the defaulting bidder will be required to pay the foregoing payment plus an additional payment of 3 percent of the subsequent winning bid or its own withdrawn bid, whichever is lower.[246]

138. We note that we have proposed to adopt guidelines for erroneous bids in our Part 1 proceeding, based upon the rationale discussed in the *Atlanta Trunking Order*.[247] While we do not adopt the proposed guidelines in this proceeding, we note that should we ultimately adopt such guidelines for erroneous bids in the Part 1 proceeding it shall apply to the 39 GHz band.

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[243] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2373.

[244] 47 C.F.R. § 1.2104 (g)(1).

[245] *In Matter of Atlantic Trunking Associates, Inc. and MAP Wireless, L.L.C. Requests to Waive Bid Withdrawal Payment Provisions*, 11 FCC Rcd 17189 (1996), we decided to partially waive these provisions with respect to individual requests for waiver of withdrawal payments as a result mistaken bids. We fashioned guidelines to address these situations based upon the premise that the appropriate bid withdrawal payment is one that takes into consideration the round and stage in which a mistaken bid is withdrawn. In general, this approach is designed to eliminate the strategic benefit of purposely submitting mistaken bids. On reconsideration, we waived the withdrawal payment in full for these three applicants based upon the possible confusion attributable to a feature of the Commission's software. *See Atlanta Trunking Associates, Inc. and MAP Wireless L.L.C. Requests to Waive Bid Withdrawal Payment Provisions,* FCC 97-154 (released May 6, 1997)("*Atlanta Trunking Order*").

[246] 47 C.F.R. § 1.2104(g).

[247] *See Part 1 Order and NPRM*, FCC 97-60, 12 FCC Rcd 5686 (1997);*See also Atlanta Trunking Order*.

7. Long-Form Applications and Petitions to Deny

139. *Background*. In the *NPRM and Order*, we stated that if the winning bidder makes a down payment in a timely manner, it would be required to file a long-form application.[248]

140. *Discussion*. We will apply our Part 1 long-form procedures to the 39 GHz auction, as amended by the Part 1 proceeding. No commenters addressed this issue. While long-form applications may be filed either electronically or manually, beginning January 1, 1998, all applications must be filed electronically. Upon acceptance for filing of the long-form application, the Commission will issue a Public Notice announcing this fact and triggering the filing window for petitions to deny. If the Commission denies all petitions to deny, and is otherwise satisfied that the applicant is qualified, a Public Notice announcing the grants will be issued.[249]

E. Regulatory Safeguards

1. Transfer Disclosure Requirements

141. *Background.* In Section 309(j) of the Communications Act, Congress directed the Commission to "require such transfer disclosures and anti-trafficking restrictions and payment schedules as may be necessary to prevent unjust enrichment as a result of the methods employed to issue licenses and permits."[250]

142. *Discussion*. We will adopt the transfer disclosure requirements contained in Section 1.2111(a) of our rules, as amended by the Part 1 proceeding, for all 39 GHz licenses obtained through competitive bidding. Generally, applicants transferring their licenses within three years after the initial license grant will be required to file, together with their transfer applications, the associated contracts for sale, option agreements, management agreements, and all other documents disclosing the total consideration received in return for the transfer of its license(s).

2. Anti-Collusion Rules

143. *Background.* In the *Competitive Bidding Second Report and Order*,[251] we adopted special rules prohibiting collusive conduct in the context of competitive bidding.[252] We indicated that such rules would serve the objectives of the Omnibus Budget Reconciliation Act of 1993 (Budget Act)[253] by preventing parties,

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248 *NPRM and Order,* 11 FCC Rcd at 4976-77, 4979.

249 We note, however, that applications for Part 101 licenses for private use are not placed on public notice and may be granted at any time after initial processing. In addition, petitions to deny are not authorized

250 47 U.S.C. § 309(j)(4)(E).

251 *See Competitive Bidding Second Report and Order,* 9 FCC Rcd at 2387-88.

252 *See* 47 C.F.R. § 1.2105(c).

253 Budget Act, Pub. L. 103-66, Title VI, § 6002, 107 Stat. 312, 388.

especially the largest firms, from agreeing in advance to bidding strategies that divide the market according to their strategic interests and that disadvantage other bidders.

144. *Discussion*. We adopt the rules prohibiting collusive conduct in Sections 1.2105 and 1.2107 of our rules,[254] as amended by the Part 1 proceeding, for use in the 39 GHz auctions. We note that we have proposed to adopt two exceptions to our anti-collusion rules in our Part 1 proceeding.[255] While we do not adopt the proposed exceptions in this proceeding, we note that whatever exceptions to the anti-collusion rules we ultimately adopt in the Part 1 proceeding shall apply to the 39 GHz band. Sections 1.2105 and 1.2107 of our rules,[256] operate along with existing antitrust laws as a safeguard to prevent collusion in the competitive bidding process.[257] In addition, where specific instances of collusion in the competitive bidding process are alleged during the petition to deny process, we may conduct an investigation or refer such complaints to the United States Department of Justice for investigation. Bidders who are found to have violated the antitrust laws or the Commission's rules in connection with their participation in the auction process may be subject to a variety of sanctions, including forfeiture of their down payment or their full bid amount, revocation of their license(s), and possible prohibition from participating in future auctions.[258]

F. Treatment of Designated Entities

1. Overview and Objectives

145. In authorizing the Commission to use competitive bidding, Congress mandated that the Commission "ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services."[259] The statute required the Commission to "consider the use of tax certificates, bidding preferences, and other procedures" in order to achieve this Congressional goal.[260] In addition, Section 309(j)(3)(B) provides that in establishing eligibility criteria and bidding methodologies the Commission shall promote "economic opportunity and competition . . . by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned

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[254] 47 CFR § 1.2105(c). *See also Part 1 Order and NPRM*.

[255] *See Part 1 Order and NPRM*, FCC 97-60, 12 FCC Rcd 5686 (1997).

[256] 47 CFR § 1.2105(c).

[257] *See Part 1 Order and NPRM*.

[258] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2388.

[259] 47 U.S.C. § 309(j)(4)(D).

[260] *Id*.

by members of minority groups and women."[261] Finally, Section 309(j)(4)(A) provides that to promote these objectives, the Commission shall consider alternative payment schedules including installment payments.[262]

146. We have employed a wide range of special provisions and eligibility criteria designed to meet the statutory objectives of providing opportunities to designated entities in other spectrum-based services. The measures considered thus far for each service were established after closely examining the specific characteristics of the service and determining whether any particular barriers to accessing capital stood in the way of designated entity opportunities. For example, in the C block broadband PCS auction, small businesses received a 25 percent bidding credit and all entrepreneurs' block licensees were entitled to pay for these licenses under an installment plan.[263] More recently, for the WCS auction, we adopted tiered bidding credits of 25 percent for small businesses and 35 percent for very small businesses, declined to adopt installment payments for designated entities because of the expedited procedures imposed by the Appropriations Act which required entities to make full payment on the bid amount quickly, and adopted a tiered definition of small and very small businesses. For the 800 MHz SMR auction, we also adopted tiered bidding credits of 25 percent for small businesses and 35 percent for very small businesses; eliminated installment payments for the upper 200 channels and deferred the decision on adopting installment payments in the lower 80 and General category channels to the outcome in the pending Part 1 proceeding; and adopted a tiered definition of small and very small businesses.[264]

147. In the *NPRM and Order*, we sought comment on whether the designated entity provisions adopted for broadband PCS should be applied here because this spectrum may be used in support of PCS.[265] We also sought comments broadly on how we can best promote opportunities for businesses owned by minorities and women in light of *Adarand*. Commenters were encouraged to provide the Commission with as much evidence as possible with regard to past discrimination, continuing discrimination, discrimination in access to capital, underrepresentation and other significant barriers facing businesses owned by minorities and women in obtaining licenses in communications services.[266]

2. Eligibility for Bidding Credits

148. At this time we have not developed a record sufficient to sustain race-based measures in the 39 GHz band based on the standard established by *Adarand Constructors v. Peña*. We also believe that at this time

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261 47 U.S.C. § 309(j)(3)(B).

262 47 U.S.C. § 309(j)(4)(A).

263 *Competitive Bidding Fifth Report and Order*, 9 FCC Rcd at 5581.

264 Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, Implementation of Sections 3(n) and 322 of the Communications Act -- Regulatory Treatment of Mobile Services, and Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, *Second Report and Order*, FCC 97-223, PR Docket 93-144, GN Docket 93-252, PP Docket 93-253 (rel. July 10, 1997).

265 *NPRM and Order*, 11 FCC Rcd at 4968-70.

266 Also, pursuant to Section 257 of the Act, we conducted a comprehensive proceeding to explore whether women- and minority-owned businesses as well as small businesses experience/face market entry barriers. *See* Section 257 Proceeding to Identify and Eliminate Market Entry Barriers for Small Businesses, *Notice of Inquiry*, GN 96-113, FCC 96-216, 11 FCC Rcd 10049 (1996); Section 257 Proceeding to Identify and Eliminate Barriers for Small Businesses, *Report*, GN 96-113 (rel. May 8, 1997).

the record is insufficient to support any gender-based provisions under the intermediate scrutiny standard.[267] In addition, the record in this proceeding does not demonstrate a need for special provisions for rural telephone companies beyond those that we adopt for small businesses. We thus will limit eligibility for special provisions for designated entities in the 39 GHz band to small businesses. While DCR supports adoption of special provisions designed to promote opportunities for businesses owned by minorities and women, it contends that fashioning provisions that can withstand the *Adarand* test should not be permitted to delay the licensing process. It notes that such a delay would be harmful to minority- and women-owned businesses attempting to attract financing and operate PCS systems.[268] Neither DCR nor other commenters provide evidence with regard to past discrimination, continuing discrimination, or other significant barriers to minorities and women. Based on the record in this proceeding, we intend to adopt bidding credits for applicants qualifying as small businesses, as discussed *infra*. As there will be small businesses with variable abilities to access capital, we will tier the bidding credits to account for these differences. We believe these provisions will provide small businesses with a meaningful opportunity to obtain licenses in the 39 GHz auction. Moreover, many minority- and women-owned entities are small businesses and will therefore qualify for the same special provisions that would have applied to them under our previous PCS rules.[269] As such, these provisions will meet Congress' goal of promoting wide dissemination of 39 GHz licenses.

a. Small Business Definition

149. *Background*. In the *Competitive Bidding Second Memorandum Opinion and Order*, we stated we would define small business eligibility on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold.[270] In the *NPRM and Order*, we proposed to define small businesses as those entities with not more than $40 million in average annual gross revenues for the preceding three years.[271] In addition, we proposed to apply the same affiliation and attribution rules for calculating revenues that previously we have adopted for broadband PCS. We noted, however, that the attribution rules for calculating gross revenues for broadband PCS are complex and sought comment on substituting the "control group" concept for a simpler attribution model. We asked how the revenues of a small business entity should be calculated. We also asked how investors should be treated in determining

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[267] *See United States v. Virginia*, 116 S.Ct. 2264 (1996) *See also, J.E.B. v. Alabama ex. rel. T.B.,* 511 U.S. 127 (1994); *Mississippi University for Women v. Hogan,* 458 U.S. 718 (1982). *See also*, Implementation of Section 309(j) of the Communications Act - - Competitive Bidding, *Tenth Report and Order*, PP Docket No. 93-253, FCC 96-447 (rel. November 21, 1996), §§ 10-12 ("*IVDS Order*") (discussing the impact of the Supreme Court's decision in *Adarand* and *United States v. Virginia* on our small business provisions).

[268] DCR Comments at 6 n.18.

[269] *See generally 1992 Survey of Minority-Owned Business Enterprises,* December 11, 1995, Agriculture and Financial Statistics Division, Bureau of the Census, U.S. Department of Commerce; *1992 Survey of Women-Owned Businesses,* January 29, 1996, Agriculture and Financial Statistics Division, Bureau of the Census, U.S. Department of Commerce.

[270] Implementation of Section 309(j) of the Communications Act - Competitive Bidding, *Second Memorandum Opinion and Order*, PP Docket No. 93-253, 9 FCC Rcd 7245, 7269 (1994) (*Second Memorandum Opinion and Order).*

[271] *NPRM and Order,* 11 FCC Rcd at 4971-72.

the eligibility of a small business, *e.g.*, whether only investors that hold ownership interests at a certain threshold should have their gross revenues included (*e.g.*, ownership interests of five percent would trigger attribution).[272]

150. *Discussion.* As a general matter, we adopt our proposed small business definition of an entity with not more than $40 million in average annual gross revenues for the preceding three years. We conclude that this definition will accommodate the broadest cross-section of small businesses because it will include, at a minimum, all entities recognized as small businesses in the CMRS contexts for which we have either adopted or proposed small businesses definitions.[273] We, however, reject DCR's suggestion to adopt a definition which completely mirrors our small business definition in the broadband PCS C block rules. Significantly, if certain winning C block winners do not qualify as small businesses here, they will be able to participate in the 39 GHz auctions even though they will not be eligible for special provisions. Moreover, DCR has failed to demonstrate that control group equity structures and affiliation rule exceptions are warranted in the 39 GHz context. In fact, given the broad array of services that may be offered in the 39 GHz band, ranging from CMRS support services to niche service offerings, we are reluctant to adopt such complex ownership structures absent evidence of the same factors present in the broadband PCS context. As discussed in further detail, *infra*, we are providing bidding credits to an additional category of small businesses -- very small businesses.[274] A very small business is an entity that together with its affiliates and persons or entities that hold attributable interests in such entity and their affiliates, has average gross revenues that are not more than $15 million for the preceding three years.

151. In determining whether an applicant qualifies for bidding credits as a small business or a very small business in the 39 GHz auction, we will consider the gross revenues of the small business applicant, its affiliates, and certain investors in the applicant. Specifically, for purposes of determining small business status, we will attribute the gross revenues of all controlling principals in the small business applicant as well as the gross revenues of affiliates of the applicant. We also choose not to impose specific equity requirements on the controlling principals that meet our small business definition. We will still require, however, that in order for an applicant to qualify as a small business, qualifying small business principals must maintain "control" of the applicant. The term "control" would include both *de facto* and *de jure* control of the applicant. For this purpose, we will borrow from certain SBA rules that are used to determine when a firm should be deemed an affiliate of a small business.[275] Typically, *de jure* control is evidenced by ownership of 50.1 percent of an entity's voting stock. *De facto* control is determined on a case-by-case basis. An entity must demonstrate at least the following indicia of control to establish that it retains *de facto* control of the applicant: (1) the entity constitutes or appoints more than 50 percent of the board of directors or partnership management committee; (2) the entity has authority

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272 *Id.* at 4972.

273 For example, for the 900 MHz SMR service, we adopted a two-tiered small business definition to include entities with gross revenues of not more than $15 million and $3 million *See Competitive Bidding Seventh Report and Order*, 10 FCC Rcd at 6945. Similarly, for LMDS, we adopted a two-tiered small business definition with small businesses defined as entities with average gross revenues for the three preceding years of more than $15 million but not more than $40 million and very small businesses defined as entities with average gross revenues for the three preceding years of not more than $15 million *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 Order at §§ 14-16, Petitions for Reconsideration of the Commission's Competitive Bidding Rules, *Second Order on Reconsideration*, CC Docket No. 92-297, FCC 97-323 (released September 12, 1997). With respect to broadband PCS service, we adopted a small business definition to include entities with revenues of not more than $40 million *See Competitive Bidding Fifth Report and Order*, 9 FCC Rcd at 5581.

274 *See infra* ¶¶ 152-154.

275 *See* 13 C.F.R. §121.401.

to appoint, promote, demote and fire senior executives that control the day-to-day activities of the licensees; and (3) the entity plays an integral role in all major management decisions.[276] While we are not imposing specific equity requirements on the small business principals, the absence of significant equity could raise questions about whether the applicant qualifies as a *bona fide* small business. Finally, we reject Winstar's proposal to adopt a high attribution standard to determine small business status because the absence of special provisions for minorities and women reduces the risk that applications falsely claiming such status will be filed.[277] The existence of special small business provisions requires us to adopt the provisions set forth herein in order to prevent their improper use.

b. Bidding Credits

152. *Background*. In the *NPRM and Order*, we proposed a 10 percent bidding credit for qualified small businesses. We stated that the magnitude of the credit was reasonable and equitable in view of other proposals which will benefit designated entities, including the relatively small geographic licensing areas and the availability of installment payments. We also proposed to allow eligible entities to apply the credit to all licenses. However, we sought comment on whether small businesses should receive a larger bidding credit, such 25 percent credit.[278]

153. *Discussion*. Based upon the record before us, we adopt tiered bidding credits for the 39 GHz service. Several commenters support our proposal to give bidding credits to small businesses.[279] Some of these commenters also express concern that a 10 percent credit is too low.[280] We agree with PCS Fund's contention that tiered bidding credits will promote vigorous competition not only between small businesses and large businesses but also between small businesses of different economic sizes.[281]

154. We believe that a tiered approach will encourage smaller businesses, that may be very well-suited to provide niche services, to participate in the provision of services in the 39 GHz band. For example, WinStar states that it believes that a major use of the spectrum will be for wireless local loop services.[282] Microwave Partners indicates that it is looking at the spectrum for medical, public health and safety related applications, such as high speed transmission of medical data between physicians' offices and clinics and hospitals, laboratories and X-ray facilities; interactive videoconferencing for the continuing education of all health care personnel; and

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276 *See Competitive Bidding Fourth Memorandum Opinion and Order*, 10 FCC Rcd at 447.

277 *See* WinStar Comments at 22-23.

278 *NPRM and Order*, 11 FCC Rcd at 4969-70.

279 *See, e.g.*, WinStar Comments at 21; DCR Comments at 7; PCS Fund Comments at 9.

280 *See, e.g.*, DCR Comments at 7 (suggesting a 25 percent bidding credit); PCS Fund Comments at 9 (suggesting a bidding credit of up to 40 percent).

281 *See* PCS Fund Comments at 9.

282 WinStar Comments at 7.

surveillance and security monitoring of high risk areas.[283] We recognize that smaller businesses have more difficulty accessing capital and thus need a higher bidding credit. These tiered bidding credits are narrowly tailored to the varying abilities of businesses to access capital. Tiering also takes into account that different small businesses will pursue different strategies. Accordingly, small businesses with average gross revenues of not more than $40 million for the preceding three years will receive a 25 percent bidding credit. Very small businesses, that is, those small businesses with average gross revenues of not more than $15 million for the preceding three years, will receive a 35 percent bidding credit. Bidding credits for small businesses are not cumulative.

c. Installment Payments

155. *Background*. In the *NPRM and Order*, we proposed to allow small businesses to pay off their successful license bids in installments. In the *Competitive Bidding Second Report and Order*, we concluded that installment payments are an effective means to address the inability of small businesses to obtain financing and will enable these entities to compete more effectively for the auctioned spectrum.[284] Under our proposal, small business licensees may elect to pay their winning bid amount (less upfront payments) in installments over the ten-year term of the license, with interest charges to be fixed at the time of licensing at a rate equal to the rate for ten-year U.S. Treasury obligations plus 2.5 percent. We sought comment on these proposals.[285]

156. We also sought comments on proposals for additional special payment provisions to further address the access to capital challenges faced by small businesses. We proposed that small business licensees be permitted to make interest-only installment payments during the first two years of the license term. We also proposed to reduce down payments for small businesses to 5 percent of the winning bid due five days after the auction closes and the remaining 5 percent down payment due five days after release of the Public Notice announcing that the Commission is prepared to award the license. Finally, we sought comment on whether to offer "tiered" installment payments scaled to the financial size of a small business applicant.[286]

157. *Discussion*. We have carefully considered the use of installment payment plans for 39 GHz licenses and have decided not to adopt our proposal to allow small businesses to pay for their licenses in installment payments. First, Congress did not require the use of installment payments in all auctions, but rather recognized them as one means of promoting the various objectives of Section 309(j)(3) of the Communications

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283 Microwave Partner Comments at 3-4.

284 *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2389.

285 *NPRM and Order*, 11 FCC Rcd at 4970.

286 *Id*. at 4971.

Act.[287] The Commission continues to experiment with different means for achieving its obligations under the statute, and has offered installment payments to licensees in several auctioned wireless services.[288] By no means, however, has Congress dictated that installment payments are the only tool in assisting small business. Indeed, we have conducted several auctions without installment payments.[289] We conclude that we can meet our statutory obligations in the 39 GHz auction absent these provisions.[290]

158. The Commission must balance competing objectives in Section 309(j) that require, *inter alia*, that it promote the development and rapid deployment of new spectrum-based services (i.e., competition) and ensure that designated entities are given the opportunity to participate in the provision of such services.[291] In assessing the public interest, we must try to ensure that all the objectives of Section 309(j) are considered. Our experience with the installment payment program leads us to conclude that installment payments may not always serve the public interest. We are presently examining issues relating to our administration of installment payments in

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[287] Specifically, Section 309(j)(4) of the Communications Act states that the Commission shall, in prescribing regulations pursuant to these objectives and others, "*consider* alternative payment schedules and methods of calculation, including lump sums or guaranteed installment payments, with or without royalty payments, or other schedules or methods that promote the objectives described in paragraph (3)(B) . . . ." *See* 47 U.S.C. § 309(j)(4)(A) (emphasis supplied). *See also* Omnibus Budget Reconciliation Act of 1993, Report of the Committee on the Budget, House of Representatives, to Accompany H.R. 2264, A Bill to Provide for Reconciliation Pursuant to Section 7 of the Concurrent Resolution of the Budget for Fiscal Year 1994, May 25, 1993, at p. 255:

> While it is clear that, in many instances, the objectives of section 309(j) will be best served by a traditional, "cash-on-the-barrelhead" auction, it is important that the Commission employ different methodologies as appropriate. Under this subsection, the Commission has the flexibility to utilize any combination of techniques that would serve the public interest.

[288] *See, e.g.*, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Fourth Report and Order*, 9 FCC Rcd 2330 (1994) (Interactive Video Data Services); Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Third Report and Order*, 9 FCC Rcd 2941 (1994) ("*Narrowband PCS Third Report and Order*") (regional narrowband PCS); Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Fifth Report and Order*, 9 FCC Rcd 5532 (1994) (broadband PCS); Implementation of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, PP Docket No. 93-253, *Report and Order*, 10 FCC Rcd 9589 (1995) (Multipoint Distribution Service); and Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool, PR Docket No. 89-553, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, Implementation of Sections 3(n) and 322 of the Communications Act, GN Docket No. 93-252, *Second Order on Reconsideration* and *Seventh Report and Order*, 11 FCC Rcd 2639 (1995) (900 MHz Specialized Mobile Radio ("SMR")). The Commission has recently reversed its decision to offer installment payment plans for the 800 MHz Specialized Mobile Radio auction. *See* Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, RM-8117, RM-8030, RM-8029, Implementation of Section 3(n) and 322 of the Communications Act -- Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Memorandum Opinion and Order*, FCC 97-224, 62 Fed. Reg. 41225 (rel. July 10, 1997) ("*800 MHz MO&O*").

[289] We specifically note the auctions of licenses for the Wireless Communications Service ("WCS"), nationwide narrowband PCS, and cellular unserved areas. *See, respectively,* Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS"), GN Docket No. 96-228, *Report and Order*, FCC 97-50, 62 Fed. Reg. 9636 (rel. February 19, 1997) ("*WCS Report and Order*"); *Narrowband PCS Third Report and Order*; and Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, Amendment of Part 22 of the Commission's Rules to Provide for the Filing and Processing of Applications for Unserved Areas in the Cellular Service and to Modify Other Cellular Rules, CC Docket No. 90-6, *Ninth Report and Order*, 11 FCC Rcd 14769 (1996).

[290] *See LMDS Second Report and Order* at ¶¶ 344-349.

[291] *See* 47 U.S.C. § 309(j)(3) and (4).

several other proceedings.[292] Because of the importance of these issues, we plan to incorporate our decisions regarding installment payments and other financial issues into our Part 1 rulemaking.[293]

159. Finally, as discussed *infra*, we have adopted enhanced bidding credits for the 39 GHz auction. The bidding credits we adopt for small businesses will help to promote access to the 39 GHz band and various new services by ensuring that small businesses will have genuine opportunities to participate in the 39 GHz auctions and in provision of services. We also note that, given the relatively large numbers of licenses available in the 39 GHz band, there should be opportunities for small business participation. We have determined that, in view of the favorable tiered bidding credits we adopt herein, we do not see the need to adopt reduced down payments for small businesses in order to ensure either their access to capital or their participation in the auction. Instead, we will require a 20 percent down payment, the same down payment that is required of all other 39 GHz auction winners. Under this approach, all winning bidders will be required to supplement their upfront payments to bring their total payment to 20 percent of their winning bid within 10 business days of the close of the auction. Prior to licensing, they will be required to pay the balance of their winning bid. We believe that a 20 percent down payment is appropriate here to ensure that all auction winners have the necessary financial capabilities to complete payment for the license and to pay for the costs of constructing a system and protect against possible default, while at the same time not being so onerous as to hinder growth and diminish access.[294]

3. Transfer Restrictions and Unjust Enrichment Provisions

160. *Background*. Our unjust enrichment provisions are integral to the success of the special provisions for designated entities in the various auctionable services. In the *Competitive Bidding Second Report and Order*, we outlined unjust enrichment provisions applicable specifically to designated entities. We established these provisions to deter speculation and participation in the licensing process by those who do not intend to offer service to the public, or intend to use our provisions to obtain a license at a lower cost than they otherwise would have to pay, and later to sell it for a profit.[295] In the *NPRM and Order*, we sought comment regarding the appropriate approach to prevent unjust enrichment.[296]

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[292] *See Part 1 Order and NPRM* at ¶¶ 34-35, proposing changes to the competitive bidding process in Part 1 of the Commission's Rules. *See also* "Wireless Telecommunications Bureau Seeks Comment on Broadband PCS C and F Block Installment Payment Issues," *Public Notice*, WT Docket 97-82, DA 97-679 (rel. June 2, 1997). Several parties also filed petitions for reconsideration in the Commission's paging and 800 MHz SMR proceedings, in which they requested that the Commission reconsider its adoption of installment payment plans for small businesses. *See* Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, *Petitions for Reconsideration*, filed by Paging Network, Inc. and Personal Communications Industry Association, April 11, 1997. *See also* Implementation of Section 3(n) and 322 of the Communications Act -- Regulatory Treatment of Mobile Services, *Petition for Reconsideration*, filed March 18, 1996, by Nextel Communications. We have since eliminated installment payments in the auction of the upper 200 channels of 800 MHz SMR. *See 800 MHz MO&O* at ¶¶ 130-132. We also have deferred the issue of the propriety of installment payments for the lower 230 channels to our Part 1 rulemaking. *See* Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, RM-8117, RM-8030, RM-8029, Implementation of Sections 3(n) and 322 of the Communications Act -- Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Second Report and Order*, FCC 97-223, 62 Fed. Reg. 41190 (rel. July 10, 1997), at § 279; and *Part 1 Order and NPRM* at ¶¶ 34-35.

[293] *Part 1 Order and NPRM*.

[294] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2381.

[295] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2394.

[296] *NPRM and Order*, 11 FCC Rcd at 4973-74.

161. *Discussion.* To ensure that large businesses do not become the unintended beneficiaries of measures meant for smaller firms, we will adopt unjust enrichment provisions similar to those adopted for other services, including, for example, narrowband PCS and 900 MHz SMR services.[297] These rules provide that, during the initial license term, licensees utilizing bidding credits and seeking to assign or transfer control of a license to an entity that does not meet the eligibility criteria for bidding credits will be required to reimburse the government for the total value of the benefit conferred by the government, that is, the amount of the bidding credit, plus interest, before the transfer will be permitted. The rules which we now adopt additionally provide that, if a licensee applies to assign or transfer control of a license to an entity that is eligible for a lower bidding credit, the difference between the bidding credit obtained by the assigning party and the bidding credit for which the acquiring party would qualify, plus interest, must be paid to the United States Treasury as a condition of approval of the assignment or transfer.

162. If a licensee that utilizes bidding credits seeks to make any change in ownership structure that would render the licensee ineligible for bidding credits, or eligible only for a lower bidding credit, the licensee must first seek Commission approval and reimburse the government for the amount of the bidding credit, or the difference between its original bidding credit and the bidding credit for which it is eligible after the ownership change, plus interest. Additionally, if an investor subsequently, purchases an interest in the business and, as a result, the gross revenues of the business exceed the applicable financial caps, this unjust provision will apply. The amount of this payment will be reduced over time as follows: (1) a transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or, in the case of very small businesses transferring to small businesses, 100 percent of the difference between the bidding credit received by the former and the bidding credit received by the latter is eligible); (2) in year three of the license term the payment will be 75 percent; (3) in year four the payment will be 50 percent; and (4) in year five the payment will be 25 percent, after which there will be no payment. These assessments will have to be paid to the U.S. Treasury as a condition of approval of the assignment or transfer.[298] Thus, a small business that received bidding credits seeking transfer or assignment of a license to an entity that does not qualify as a small business will be required to reimburse the government for the amount of the bidding credit, plus interest, before the transfer will be permitted.

4. Entrepreneurs' Block

163. *Background.* In the *Competitive Bidding Fifth Report and Order*, we established entrepreneurs' blocks in broadband PCS on which only qualified entrepreneurs, including small businesses, could bid. We requested comment on whether the capital requirements of this service were anticipated to be so substantial that we should insulate certain blocks from very large bidders in order to provide meaningful opportunities for designated entities. We also requested comment on the need to adopt an entrepreneurs' block to ensure that there will be adequate spectrum available for communications links for broadband PCS entrepreneurs' block licensees.[299]

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[297] *Competitive Bidding Third Report and Order,* 9 FCC Rcd at 2975, 2979; *Competitive Bidding Seventh Report and Order*, 10 FCC Rcd at 6953-55.

[298] *See* Implementation of Section 309(j) of the Communications Act - Competitive Bidding, *Erratum to Third Memorandum Opinion and Order*, PP Docket No. 93-253, 10 FCC Rcd 173 (1994).

[299] *NPRM and Order,* 11 FCC Rcd at 4974-75.

164. *Discussion*. No commenter advocated the adoption of an entrepreneurs' block and we decide not to adopt one in the 39 GHz service. First, the relatively large numbers of licenses available in the 39 GHz band should allow for extensive small business participation. Second, small businesses will have a significant opportunity to compete for licenses given the enhanced bidding credits that we have adopted for small businesses. The bidding credits we adopt for small businesses will help to promote access to the 39 GHz band and various new services by ensuring that small businesses will have genuine opportunities to participate in the 39 GHz auctions and in provision of services.

VI. SECOND NOTICE OF PROPOSED RULE MAKING

A. Background

165. We believe that one issue -- the use of partitioning and disaggregation by parties taking advantage of bidding credits under our competitive bidding licensing rules -- merits further consideration and requires further information from commenters.

B. Partitioning and Disaggregation for Small Business Licensees

166. In the *Report and Order* portion of this decision, we expanded our geographic partitioning provisions to all 39 GHz licensees and permitted spectrum disaggregation. The rules and provisions adopted herein are consistent with those recently adopted by the Commission in connection with expanding our geographic partitioning rules for broadband PCS.[300] In this *Second Notice of Proposed Rule Making*, we propose various rules to implement these partitioning and disaggregation policies as they relate to small businesses that are eligible for bidding credits. We solicit comments on our proposals herein.

167. As noted in our *Report and Order and FNPRM* establishing partitioning and disaggregation rules for broadband PCS licensees,[301] small businesses face certain barriers to entry into the wireless telecommunications marketplace as providers of spectrum-based services that, we believe, could be addressed by rules. Providing licensees with the flexibility to partition their geographic service areas would create smaller areas that could be licensed to small businesses, including those entities which may not have had the resources to participate successfully in spectrum auctions. In addition, partitioning may provide a funding source that would enable licensees to construct their systems and provide the latest in technological enhancements to the public.[302] Similarly, providing licensees with the flexibility to disaggregate spectrum would create smaller portions of spectrum that could be licensed to small businesses.

168. The expansion of the partitioning rules to include all 39 GHz licensees, as well as the availability of the disaggregation option, implements, in part, the requirement of Section 257 of the Communications Act.[303]

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[300] *See Broadband Report and Order and FNPRM*.

[301] *Id.*

[302] *Id.*

[303] 47 U.S.C. § 257 (1996).

This Section requires that we eliminate entry barriers into the telecommunications market for small businesses. It is important, however, that we take appropriate precautions to prevent unjust enrichment where we provide special incentives to encourage small business participation in 39 GHz services. We believe that we must ensure that licensees that have benefitted from bidding credits are not permitted to become unjustly enriched by immediately partitioning a portion of their license area to parties that do not qualify for such benefits.[304]

169. In the *Report and Order* portion of this decision, we have decided not to adopt an entrepreneurs' block for the 39 GHz service. Instead, we have adopted bidding credits for small businesses in order to promote economic opportunities for a wide range of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women, as required by Section 309(j)(4)(C)(ii) of the Communications Act.[305] In addition, we allow all licensees to partition and disaggregate at any time, which will provide a significant benefit to all licensees, including small businesses. We believe that allowing small businesses to partition and/or disaggregate their licenses to other qualified small businesses will help attain the Congressional objective of ensuring that small businesses have an opportunity to participate in the provision of spectrum services.

170. We tentatively conclude, however, that we should apply restrictions on partitioning and/or disaggregation by licensees that have received bidding credits when the buyer is a small business subject to less favorable bidding credits or a non-small business not eligible for bidding credits.[306] We seek comment on the type of unjust enrichment requirements that should be placed as a condition for approval of partitioning and disaggregation arrangements, *e.g.*, an application for a partial transfer of a license owned by a qualified small business to a non-small business. We tentatively conclude that these unjust enrichment provisions would include payment of any bidding credit that we may adopt for small businesses and would be applied on a proportional basis. We seek comment on how such unjust enrichment amounts should be calculated, especially in light of the difficulty of devising a methodology or formula that will differentiate the relative market value of the opportunities to provide service to various partitioned areas within a geographic or market area. We seek comment on whether we should consider the price paid by the partitionee in determining the percentage of the outstanding principal balance to be repaid. We tentatively conclude that if we permit a small business licensee to disaggregate to another qualified small business that would not qualify for the same level of bidding credit as the disaggregating licensee, the disaggregating licensee will be required to repay a portion of the benefit it received. We seek comment on how that amount should be calculated. We seek comment on what provisions, if any, we should adopt to address the situation of a small business licensee's disaggregation followed by default in payment of a winning bid at auction.

VII. PROCEDURAL MATTERS

A. Regulatory Flexibility Act

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[304] See 47 C.F.R. § 101.1210(b), which sets forth unjust enrichment provisions with respect to qualified small businesses seeking to transfer or assign a license to an entity that is not a qualified small business.

[305] *See supra* ¶¶ 152-154.

[306] *Id.* In the *Report and Order* portion of this decision, we provided that small businesses with average gross revenues of not more than $40 million for the preceding three years will receive a 25 percent bidding credit. Smaller businesses with average gross revenues of not more than $15 million for the preceding three years will receive a 35 percent bidding credit. Bidding credits for small businesses are not cumulative.

171. The analysis for this *Report and Order* pursuant to the Regulatory Flexibility Act, 5 U.S.C. Section 604, is contained in Appendix B.

172. With respect to this *Second Notice of Proposed Rule Making*, an Initial Regulatory Flexibility Analysis is also contained in Appendix B. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis of the expected impact on small entities of the proposals suggested in this document. Written public comments are requested on the Initial Regulatory Flexibility 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 Initial Regulatory Flexibility Analysis regarding the prevalence of small businesses in the 39 GHz services industry. Comments on the Initial Regulatory Flexibility Analysis must be filed in accordance with the same filing deadlines as comments on the *Second Notice of Proposed Rule Making*, but they must have a separate and distinct heading designating them as responses to the Initial Regulatory Flexibility Analysis. The Secretary shall send a copy of this *Second Notice of Proposed Rule Making*, including the initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603(a) of the Regulatory Flexibility Act. Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. § 601 *et seq.* (1981).

B. *Ex Parte* Rules--Non-Restricted Proceeding

173. This is a non-restricted notice and comment rulemaking proceeding. *Ex parte* presentations are permitted except during the Sunshine Agenda period, provided they are disclosed as provided in Commission Rules. *See generally* 47 C.F.R. §§ 1.1201, 1.1203, and 1.1206(a).

C. Comment Dates

174. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415 and 1.419, interested parties may file comments on or before 30 days after the date of publication of this *Second Notice of Proposed Rule Making* in the Federal Register, and reply comments on or before 45 days after date of publication of this *Second Notice of Proposed Rule Making* in the Federal Register. To file formally in this proceeding, you must file an original and four copies of all comments, reply comments, and supporting comments. If you want each Commissioner to receive a personal copy of your comments, you must file an original plus nine copies. You should send comments and reply comments to Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center of the Federal Communications Commission, Room 239, 1919 M Street, N.W., Washington, D.C. 20554.

175. Written comments by the public on the proposed and/or modified information collections are due 30 days after date of publication in the Federal Register. Written comments must be submitted by the Office of Management and Budget (OMB) on the proposed and/or modified information collections on or before 60 days after date of publication in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Dorothy Conway, Federal Communications Commission, Room 234, 1919 M Street, N.W., Washington D.C. 20554, or via the Internet to dconway@fcc.gov and to Timothy Fain, OMB Desk Officer, 10236 NEOB, 725 - 17th Street, N.W., Washington D.C. 20503 or via the Internet to fain_t@al.eop.gov.

D. Initial Paperwork Reduction Act of 1995 Analysis

176. This *Second Notice of Proposed Rule Making* contains either a proposed or modified information collection. As part of its continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this *Second Notice of Proposed Rule Making*, as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Public and agency comments are due at the same time as other comments on this *Second Notice of Proposed Rule Making*; OMB comments are due 60 days after the date of publication of this *Second Notice of Proposed Rule Making* in the Federal Register. Comments should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

E. Ordering Clauses

177. Authority for issuance of this *Report and Order and Second Notice of Proposed Rule Making* is contained in Sections 4(i), 257, 303(r), and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 257, 303(r), and 309(j).

178. IT IS ORDERED, that Parts 1, 2, and 101 of the Commission's Rules ARE AMENDED as specified in Appendix C, effective 60 days after publication in the Federal Register. This action is taken pursuant to Sections 4(i), 303(c), 303(f), 303(g), 303(r) and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§154(i), 303(c), 303(f), 303(g), 303(r) and 309(j).

F. Further Information

179. For further information concerning this proceeding, contact Susan Magnotti at (202) 418-0871 (Public Safety and Private Wireless Division, Wireless Telecommunications Bureau) or Christina Eads Clearwater at (202) 418-0660 (Auctions and Industry Analysis Division, Wireless Telecommunications Bureau).

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX A

PARTIES FILING COMMENTS AND REPLY COMMENTS

Comments

Advanced Radio Telecom Corporation (ART)
Alcatel Network Systems, Inc. (ANS)
Altron Communications, L.C. (Altron)
Ameritech Corporation (Ameritech)
Angel Technologies Corporation (Angel)
Association for Local Telecommunications Services (ALTS)
AT&T Wireless Services, Inc. (AT&T)
Bachow and Associates, Inc. (Bachow)
BizTel, Inc. (BizTel)
Columbia Millimeter Communications, L.P. (Columbia)
Commco, L.L.C. (Commco)
Comsearch
DCR Communications, Inc. (DCR)
DCT Communications, Inc. (DCT)
Digital Microwave Corporation (DMC)
Fixed Point-to-Point Communications Section, Network Equipment Division
of the Telecommunications Industry Association (TIA)
GHz Equipment Company, Inc. (GEC)
GTE Service Corporation (GTE)
Harris Corporation - Farinon Division (Harris)
INNOVA Corporation (INNOVA)
Microwave Partners d/b/a/ Astroline Communications (Microwave Partners)
Milliwave Limited Partnership (Milliwave)
Motorola Satellite Communications, Inc. (Motorola)
National Spectrum Managers Association (NSMA)
No Wire L.L.C. (No Wire)
Pacific Bell Mobile Services (Pacific)
PCS Fund
Personal Communications Industry Association (PCIA)
Rand McNally & Company (Rand McNally)
Sintra Capital Corporation (Sintra)
Spectrum Communications, L.C. (Spectrum)
Telco Group, Inc. (TGI)
Telephone and Data Systems, Inc. (TDS)
Winstar Communications, Inc. (WinStar)

Reply Comments

Alcatel Network Systems, Inc. (ANS)
Ameritech Corporation (Ameritech)
AT&T Wireless Services, Inc. (AT&T)
Bachow and Associates, Inc. (Bachow)
BizTel, Inc. (BizTel)
Cambridge Partners, Inc. (Cambridge)
Columbia Millimeter Communications, L.P. (Columbia)
Commco, L.L.C. (Commco)
Comsearch
Fixed Point-to-Point Communications Section, Network Equipment Division
of the Telecommunications Industry Association (TIA)
Microwave Partners d/b/a/ Astroline Communications (Microwave Partners)
Milliwave Limited Partnership (Milliwave)
Pacific Bell Mobile Services (Pacific)
PCS Fund
Pinnacle Seven Communications, Inc. (Pinnacle)
U S WEST, Inc. (U S West)
WinStar Communications, Inc. (WinStar)

APPENDIX B

REGULATORY FLEXIBILITY ACT

I. Final Regulatory Flexibility Analysis

Report and Order

As required by Section 603 of the Regulatory Flexibility Act, 5 U.S.C. § 603 (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the Notice of Proposed Rule Making in this proceeding in ET Docket No. 95-183.[307] The Commission sought written public comments on the proposals in the *NPRM*, including on the IRFA. The Commission's Final Regulatory Flexibility Analysis (FRFA) in this *Report and Order* conforms to the RFA, as amended by the Contract With America Advancement Act of 1996 (CWAAA), Pub. L. No. 104-121, 110 Stat. 847 (1996).[308]

A. Need for and Purpose of this Action:

In this Report and Order, the Commission adopts rules and procedures intended to facilitate the efficient use of the 38.6-40.0 GHz frequency band (the "39 GHz" band)and to permit different types of services to be offered therein. The purposes of this action are to provide support spectrum for emerging technologies, as well as to permit the development of innovative point-to-point or point-to-multipoint services. The Commission amends the rules for fixed, point-to-point microwave service in the 39 GHz band , so as to conform the regulatory approach toward operations in that band with our proposals for licensing the adjacent 37.0-38.6 GHz (37 GHz) band. Action on the 37.0-38.6 GHz band (the "37 GHz" band) has been postponed. In this item the Commission retains the existing channeling plan and amends some of the existing licensing and technical rules for the 39 GHz band in order to improve the regulatory environment for the development and implementation of a broad range of point-to-point microwave operations. The Commission also is adopting rules for competitive bidding for the 39 GHz band. By these actions, the Commission is creating a flexible regulatory vehicle for facilitating the development of a variety of fixed microwave operations that will provide, *inter alia*, communications infrastructure for commercial and private mobile radio operations and competitive wireless local telephone service. The Commission concludes that the public interest is served by the geographic licensing and competitive bidding rules adopted herein.

B. Summary of Issues Raised by the Public Comments in Response to the Initial Regulatory Flexibility Analysis:

No comments were filed in direct response to the IRFA. In general comments on the *NPRM*, however, some commenters raised issues that might affect small entities. In particular, one commenter contended that in the auctions for the 39 GHz band, small entities may be at serious competitive disadvantage *vis-a-vis* large, well-financed companies, especially if the small businesses already expended substantial sums on obtaining PCS licenses. This commenter stated that if auctions are to be utilized, small business preferences must be designed

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[307] 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, *Notice of Proposed Rule Making and Order,* 11 FCC Rcd 4930 (1996)*(NPRM and Order).*

[308] Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA, Subtitle II of the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA),*codified at* 5 U.S.C. § 601 *et seq.)*

to provide meaningful assistance to small business.[309] Other commenters also supported small business preferences in the auctions.[310] Various commenters contend that the upfront payment formula of $2,500 or $0.02 pop per MHz as proposed is excessive and will put a burden on small businesses.[311] Further, some commenters claim that the proposed bidding credit offered to small business entities is too low.[312] Many commenters support the concept of permitting all 39 GHz licensees to partition their licenses to any potential licensee meeting the relevant requirements.[313] These commenters state that partitioning will assist small businesses that might be able to afford a portion of a license.

C. Changes Made to the Proposed Rules

SERVICE RULES

In the *NPRM*, we proposed a partitioning scheme with respect to rural telephone companies. The Commission has determined in the *Report and Order* that the option of partitioning should be made available to all entities eligible to be licensees in the 39 GHz band. The Commission also concluded that 39 GHz licensees should be permitted to disaggregate their spectrum blocks. In the *NPRM* we also proposed to establish a maximum field strength limit that would apply at the boundaries of each service area which would provide that licensees' operations not exceeding this limit would avoid the need to complete the formal coordination process. However, in this *Report and Order* we elect not to adopt a field strength limit but will continue to use the frequency coordination procedures outlined in Section 101.103(d) of the Commission's Rules. In addition, we proposed new build-out requirements for 39 GHz licensees to ensure that the spectrum was being used efficiently. We suggested four construction build-out options, each of which depended upon a specific number of fixed stations to be built within the licensees' geographic area. In this *Report and Order*, we conclude that a substantial service standard is the most appropriate benchmark for a build-out requirement for the 39 GHz band, because it will permit flexibility in system design and market development, and provide a clear and expeditious accounting of spectrum use by licensees to ensure that service is being provided to the public.

AUCTION RULES

The Commission has delegated authority to the Wireless Telecommunications Bureau to modify the upfront payment calculation for the 39 GHz auction if circumstances warrant and such modification is in the public interest.

The Commission in general adopted the proposed small business definition of an entity with not more than $40 million in average annual gross revenues for the preceding three years. As discussed below, with respect to bidding credits, the Commission created an additional category of small businesses -- very small

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309 DCR Comments at 6.

310 DCR Comments at 6; PCS Fund Comments at 10.

311 *See e.g.*, PCS Fund Comments at 6; Milliwave Limited Comments at 11, n.22; WinStar Comments at 20-21; Pacific Bell Comments at 2.

312 PCS Fund Comments at 8-10; DCR Comments at 7.

313 *See, e.g.*, DCR Comments at 2-6; AT&T Wireless Comments at 10; Pacific Bell Comments at 6.

businesses. These are entities with not more than $15 million in average annual gross revenues for the preceding three years. In determining whether an applicant qualifies as a small business, the Commission will attribute the gross revenues of all controlling principals in the small business applicant as well as the gross revenues of affiliates of the applicant. No specific equity requirements will be imposed on the controlling principals that meet the small business definition. However, in order for an applicant to qualify as a small business, qualifying small business principals must maintain "control" of the applicant. The term control will include both *de facto* and *de jure* control of the applicant.

In the *NPRM*, the Commission proposed a 10 percent bidding credit for qualified small businesses. In this item, the Commission adopts tiered bidding credits. Tiered bidding credits will promote vigorous competition not only between small businesses and large businesses but also between small businesses of different economic sizes. In addition, a tiered approach will encourage smaller businesses, that may be very well-suited to provide niche services to participate in this auction. Accordingly, small businesses with average gross revenues of not more than $40 million for the preceding three years will receive a 25 percent bidding credit. Smaller businesses with average gross revenues of not more than $15 million for the preceding three years will receive a 35 percent bidding credit. Bidding credits for small businesses will not be cumulative.

D. Description and Estimate of the Small Entities Subject to the Rules:

The rules adopted in this Report and Order will allow cellular, PCS, and other small communication entities that require support spectrum to obtain licenses through competitive bidding. Pursuant to 47 C.F.R. §101.1209, the Commission has defined "small business entity" in the 39 GHz auction as a firm that had gross revenues of less than $40 million in the three previous calendar years. Approval for this regulation defining "small business entity" in the context of 39 GHz was requested from the Small Business Administration on May 8, 1997.

1. Estimates for Cellular Licensees

The Commission has not developed a definition of small entities applicable to cellular licensees. Therefore, the applicable definition of small entity is the definition under the Small Business Administration (SBA) rules applicable to radiotelephone companies. This definition provides that a small entity is a radiotelephone company employing fewer than 1,500 persons.[314] Since the Regulatory Flexibility Act amendments were not in effect until the record in this proceeding was closed, the Commission was unable to request information regarding the number of small cellular businesses and is unable at this time to determine the precise number of cellular firms which are small businesses.

The size data provided by the SBA does not enable us to make a meaningful estimate of the number of cellular providers which are small entities because it combines all radiotelephone companies with 500 or more employees.[315] We therefore used the 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of the Census, which is the most recent information available. This document shows that only 12 radiotelephone firms out of a total of 1,178 such firms which operated during 1992 had 1,000 or more

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[314] 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

[315] U.S. Small Business Administration 1992 Economic Census Employment Report, Bureau of the Census, U.S. Department of Commerce, SIC Code 4812 (radiotelephone communications industry data adopted by the SBA Office of Advocacy).

employees.[316] Therefore, even if all 12 of these firms were cellular telephone companies, nearly all cellular carriers were small businesses under the SBA's definition. We assume, for purposes of our evaluations and conclusions in this FRFA, that all of the current cellular licensees are small entities, as that term is defined by the SBA. Although there are 1,758 cellular licenses, we do not know the number of cellular licensees, since a cellular licensee may own several licenses.

2. Estimates for Broadband PCS Licensees

The broadband PCS spectrum is divided into six frequency blocks designated A through F. Pursuant to 47 C.F.R. § 24.720(b), the Commission has defined "small entity" in the auctions for Blocks C and F as a firm 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.[317]

The Commission has auctioned broadband PCS licenses in Blocks A through F. We do not have sufficient data to determine how many small businesses bid successfully for licenses in Blocks A and B. For the C Block auction, a total of 255 qualified bidders participated in the auction. Of the qualified bidders, all were entrepreneurs --defined for this auction as entities together with affiliates, having gross revenues of less than $125 million and total assets of less than $500 million at the time the FCC Form 175 application was filed. Of the 255 qualified bidders, 253 were "small businesses"--defined for this auction as entities together with affiliates, having gross revenues of less than $40 million at the time the FCC Form 175 application was filed. After a total of 184 rounds, the number of winning bidders totalled 89, all of whom were small business entrepreneurs, who won a total of 493 licenses. To date, two of the winning bidders defaulted on 18 of the licenses. Those licenses were reauctioned in Auction #10. For the D, E, and F Block auction, the D and E blocks were open to all licensees; the F block was open to bidders who qualified as an entrepreneur--defined for this auction as entities, together with affiliates, having gross revenues of less than $125 million and total assets of less than $500 million at the time the FCC Form 175 application was filed. Of the 153 initial bidders for the three blocks, 105 qualified as entrepreneurs. The D, E, and F Block auction ended with 125 bidders winning 1472 licenses and the FCC holding 7 licenses as a result of bid withdrawals. For the D, E, and F Block auction, 93 of the winning bidders qualified as small entities as defined for that auction. Accordingly, we estimate that 48% of the winning bidders for the auction of broadband PCS licenses in Blocks A through F are small businesses.

U.S. Bureau of the Census, U.S. Department of Commerce, 1992 Census of Transportation, Communications, and Utilities, UC92-S-1, Subject Series, Establishment and Firm Size, Table 5, Employment Size of Firms: 1992, SIC Code 4812 (issued May 1995).

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, 5581-84 (1994).

3. Estimates for Point-to-Point or Point-to-Multipoint Entities

The rules adopted in this *Report and Order* will apply to any current licensee or any company which chooses to apply for a license in the 39 GHz band. The Commission has not developed a definition of small entities applicable to such licensees. The SBA definitions of small entity for 39 GHz band licensees are the definitions applicable to radiotelephone companies. The definition of radiotelephone companies provides that a small entity is a radiotelephone company employing fewer than 1,500 persons.[318] Since the Regulatory Flexibility Act amendments were not in effect until the record in this proceeding was closed, the Commission was unable to request information regarding the potential number of small businesses interested in the 39 GHz frequency band and is unable at this time to determine the precise number of potential applicants which are small businesses.

The size data provided by the SBA does not enable us to make a meaningful estimate of the number of telecommunications providers which are small entities because it combines all radiotelephone companies with 500 or more employees.[319] We therefore used the 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of the Census, which is the most recent information available. This document shows that only 12 radiotelephone firms out of a total of 1,178 such firms which operated during 1992 had 1,000 or more employees.[320] Therefore, a majority of 39 GHz entities providing radiotelephone services could be small businesses under the SBA's definition**.**

However, in the *NPRM*,[321] we proposed to define a small business as an entity that, together with affiliates and attributable investors, has average gross revenues for the three preceding years of less than $40 million. We have not yet received approval by the SBA for this definition. We assume, for purposes of our evaluations and conclusions in this FRFA, that nearly all of the 39 GHz licensees will be small entities, as that term is defined by the SBA.

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13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

U.S. Small Business Administration 1992 Economic Census Employment Report, Bureau of the Census, U.S. Department of Commerce, SIC Code 4812 (radiotelephone communications industry data adopted by the SBA Office of Advocacy).

U.S. Bureau of the Census, U.S. Department of Commerce, 1992 Census of Transportation, Communications, and Utilities, UC92-S-1, Subject Series, Establishment and Firm Size, Table 5, Employment Size of Firms: 1992, SIC Code 4812 (issued May 1995).

NPRM and Order, 11 FCC Rcd at 4971-72.

E. Summary of Projected Reporting, Recordkeeping and Other Compliance Requirements

SERVICE RULES

There are some reporting requirements imposed by the *Report and Order*. In most instances, it is likely that the entities filing will require the services of persons with technical or engineering expertise to prepare reports. In order to facilitate operation in the 39 GHz band, we are not imposing separate regulatory burdens that may affect small businesses. Generally, all applicants will be required to file applications for authorization to construct and operate and to adhere to the technical criteria set forth in the final rules.

AUCTION RULES

All license applicants will be subject to reporting and record keeping requirements to comply with the competitive bidding rules. Specifically, applicants will apply for 39 GHz license auctions by filing a short-form application and will file a long-form application at the conclusion of the auction. Additionally, entities seeking treatment as "small businesses" will need to submit information pertaining to the gross revenues of the small business applicant, its affiliates, and certain investors in the applicant.

F. Steps Taken to Minimize the Economic Impact on Small Entities

SERVICE RULES

The Commission adopts service and technical rules that facilitate the accommodation of all proposed and existing systems in the 39 GHz band. We believe these rules are a reasonable accommodation of all competing interests in this band, including small entities. The plans for the 39 GHz band provide both small entities and larger businesses the same opportunity to develop and operate viable systems within the band, and initiate competitive services.

AUCTION RULES

Section 309 (j)(3)B) of the Communications Act of 1934, as amended, provides that in establishing eligibility criteria and bidding methodologies the Commission shall, *inter alia*, "promote[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.[322] Section 309(j)(4)(A) provides that in order to promote such objectives, the Commission shall "consider alternative payment schedules and methods of calculation, including lump sums or guaranteed installment payments, with or without royalty payments, or other schedules or methods . . . and combinations of such schedules and methods."[323] Section 309(j)(4)(D) also requires the Commission to "ensure that small business, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services."[324] Therefore, it is

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322 47 U.S.C. § 309(j)(3)(B).

323 47 U.S.C. § 309(j)(4)(A).

324 47 U.S.C. § 309(j)(4)(D).

appropriate to establish special provisions in the 39 GHz band for competitive bidding by small businesses.

The Commission notes that Congress made specific findings with regard to access to capital in the Small Business Credit and Business Opportunity Enhancement Act of 1992, that small business concerns, which represent higher degrees of risk in financial markets than do large businesses, are experiencing increased difficulties in obtaining credit.[325] The Commission believes that small businesses applying for 39 GHz band licenses should be entitled to some type of bidding credits. In awarding licenses, the Commission is committed to meeting the statutory objectives of promoting economic opportunity and competition, of avoiding excessive concentration of licenses, and of ensuring access to new and innovative technologies 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. The Commission concludes that special provisions for small businesses are appropriate for awarding licenses because construction of systems may require a significant amount of capital, and minority- and women-owned businesses will be able to take advantage of specific provisions that we adopt for small businesses.

The Commission has adopted various special provisions to encourage and facilitate participation by small entities in the auctions. In particular, small businesses with revenues of not more than $40 million are eligible for a 25 percent bidding credit, and small businesses with average annual gross revenues of not more than $15 million are eligible for a 35 percent bidding credit on all 39 GHz licenses. These bidding credits are not cumulative.

In addition, the Commission has extended partitioning to all entities eligible to be licensees in the 39 GHz band. The Commission also concluded here to allow all 39 GHz licensees to disaggregate their spectrum blocks. These provisions should help facilitate market entry by small entities who may lack the financial resources to participate in the auction alone. These entities will be able to participate in the provision of services by purchasing a portion of a license.

[325] Small Business Credit and Business Opportunity Enhancement Act of 1992, Pub. L. No. 102-366, 331(a)(3), 106 Stat. 1007.

G. Significant Alternatives Considered and Rejected:

SERVICE RULES

The Commission considered and rejected several alternatives to the licensing plan and competitive bidding rules we adopted. In response to a Petition for Rule Making filed by the Telecommunications Industry Association (TIA), the Commission initiated this proceeding. This Report and Order does not provide direct relief requested by TIA in particular areas. For example, the Commission rejected the individual link licensing alternative which was suggested by TIA. The Commission also considered and rejected proposals to license spectrum on an MTA or Rectangular Service Area basis because it determined that BTA licensing would further spectrum management and better serve the 39 GHz band because the wide variety of services proposed by commenters relate to PCS systems or are local in nature. In addition, BTAs which are smaller than MTAs, will facilitate the ability of smaller systems to participate in geographic area licensing. Therefore, based on the record in this proceeding, the Commission believes that BTAs would be more appropriate for licensing the 39 GHz band.

The Commission also considered various proposals by entities relating to the disposition of pending 39 GHz applications. The processing procedures which we adopted are based on some proposed alternative. Other proposals were rejected, such as the suggestion that the Commission process pending mutually exclusive applications. We determined that pending mutually exclusive applications will be dismissed without prejudice, and all applicants, including small business entities, would be permitted to submit new applications under the competitive bidding rules established in this proceeding. Because applicants had ample opportunity to file amendments prior to the onset of this rule making, in order to avoid mutual exclusivity, we believe the above procedure is the best approach. We also considered various divergent proposals made in response to our build-out plan for incumbents and for new 39 GHz licensees. With the goal of accommodating various entities, we developed specific construction requirements and implemented a "substantial service" showing for these entities. By rejecting such build-out alternatives which required the construction of significant amounts of links within a short time frame, the Commission adopts an alternative which takes into consideration concerns raised by commenters, including small business entities, regarding establishing services which are specialized and do not lend to traditional construction requirements.

AUCTION RULES

The Commission considered and rejected several significant alternatives with respect to the auction rules. The Commission rejected the use of any type of licensing method in favor of competitive bidding as the method of awarding 39 GHz licenses. The Commission concluded that awarding 39 GHz licenses by auction meets the congressional criteria in Section 309(j) of the Communications Act, and will likely promote the Act's objectives. The Commission also rejected a sequential or other auction design in favor of a simultaneous multiple round auction design because the licenses are interdependent. As to designated entities that may be entitled to special provisions, the Commission determined that based upon the record it only would extend such special provisions to small businesses. The Commission rejected offering reduced upfront or down payments and payment by installment payments and, instead, adopted tiered bidding credits for small businesses. The Commission adopted a small business definition of an entity with not more than $40 million in average gross revenues for the preceding three years. The Commission held that this definition of small business will accommodate the broadest cross-section of small businesses because it will include, at a minimum, all those entities recognized as small businesses in the CMRS contests for which the Commission has adopted or proposed small businesses definitions. Since the Commission rejected a straight across-the-board 10 percent bidding credit for qualified small businesses and, based upon the record, adopted tiered bidding credits for the 39 GHz service, small businesses with average gross revenues of not more than $40 million for the preceding three years will receive a

25 percent bidding credit and smaller businesses with average gross revenues of not more than $15 million for the preceding three years will receive a 35 percent bidding credit.

H. Report to Congress

The Commission shall send a copy of this Final Regulatory Flexibility Analysis, along with this *Report and Order*, in a report to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. § 801(a)(1)(A). A copy of this Final Regulatory Flexibility Analysis will also be published in the Federal Register.

II. Initial Regulatory Flexibility Analysis

Further Notice of Proposed Rule Making

As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected impact on small entities of the policies and rules proposed in the *Further Notice of Proposed Rule Making*. Written public comments are requested on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Further Notice of Proposed Rule Making* provided above in Section VII(C).

A. Reason for Action

In the companion *Report and Order*, the Commission expanded the Commission's geographic partitioning provisions to al 39 GHz licensees and permitted spectrum disaggregation. The Commission seeks further comment on: the use of partitioning and disaggregation by parties taking advantage of bidding credits under our competitive bidding licensing rules, and certain technical rules.

B. Objectives

The expansion of the partitioning and disaggregation rules in the *Report and Order* to include all 39 GHz licensees implements, in part, the requirements of Section 257 of the Telecommunications Act of 1996 which requires that we eliminate entry barriers into the telecommunications market for small businesses. In the *Further Notice of Proposed Rule Making* the Commission tentatively concludes that unjust enrichment provisions should apply when a licensee has benefitted from the small business provisions (*i.e.*installment plans and bidding credits) in the auction rules and then partitions a portion of the license area to another entity that would not qualify for such benefits or would not qualify for the same level of benefits. The Commission seeks comment on how such unjust enrichment should be calculated under each scenario. The Commission further seeks comments on what the respective obligations of the participants in partitioning transfer should be.

C. Legal Basis

The proposed action is authorized under Sections 4(i), 257, 303(r), and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 257, 303(r), and 309(j).

D. Reporting, Recordkeeping, and Other Compliance Requirements

1. Geographic Partitioning and Spectrum Disaggregation

The proposals in the *Further Notice of Proposed Rule Making* do not include the possibility of imposing additional reporting and/or recordkeeping requirements in connection with businesses obtaining licenses through the partitioning and disaggregation rules. The information requirements placed on businesses seeking to obtain licenses through partitioning or disaggregation will be used to determine if the licensee is a qualifying entity to obtain a partitioned license or disaggregated spectrum. Those reporting requirements are stated in the companion Final Regulatory Flexibility Act. Those reporting requirements also will likely be used to ensure that a licensee is not unjustly enriched by a partitioning or disaggregation arrangement.

E. Federal Rules which Overlap, Duplicate or Conflict with These Rules

None.

F. Description and Number of Small Entities Involved

1. Geographic Partitioning and Spectrum Disaggregation

The unjust enrichment proposals with respect to partitioning and disaggregation will affect all small businesses that avail themselves of partitioning and/or disaggregation including small businesses currently holding 39 GHz licenses who choose to partition and/or disaggregate and small businesses who may acquire licenses through partitioning and/or disaggregation. The Commission is required to estimate in its Final Regulatory Flexibility Analysis the number of small entities to which a rule will apply, provide a description of such entities, and assess the impact of the rule on such entities. To assist the Commission in this analysis, commenters are requested to provide information regarding how many total entities, existing and potential, would be affected by the proposed rules in the *Further Notice of Proposed Rule Making*. In particular, we seek estimates of how many such entities will be considered small businesses. As explained in the Final Regulatory Flexibility Analysis in the *Report and Order*, we are utilizing the SBA definition applicable to radiotelephone

companies, *i.e.*, an entity employing less than 1,500 persons.[326] We seek comment on whether this definition is appropriate for 39 GHz licensees in this context. Additionally, we request each commenter to identify whether it is a "small business" under this definition. If a commenter is a subsidiary of another entity, this information should be provided for both the subsidiary and the parent corporation or entity.

G. Significant Alternatives Minimizing the Impact on Small Entities Consistent with the Stated Objectives

In the *Further Notice of Proposed Rule Making*, the Commission tentatively concludes that unjust enrichment provisions should apply when a licensee has benefitted from the small business provisions in the auctions rules and partitions a portion of the license area to another entity that would not qualify for such benefits. The alternative to applying the unjust enrichment provisions would be to allow an entity who had benefitted from the special bidding provisions for small businesses to become unjustly enriched by partitioning a portion of their license area to parties that do not qualify for such benefits.

The *Further Notice of Proposed Rule Making* solicits comment on a variety of alternatives discussed herein. Any significant alternatives presented in the comments will be considered.

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13 C.F.R. § 121.201, Standard Industrial Classification Code 4812.

APPENDIX C

FINAL RULES

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

PART 1 - PRACTICE AND PROCEDURE

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

Authority: Secs. 4, 303, 48 Stat. 1066, 1082, as amended: 47 U.S.C. 154, 303: Implement, 5 U.S.C. 552 and 21 U.S.C. 853a, unless otherwise noted.

2. Add paragraph (a)(9) to Section 1.2102 and revise paragraph (b)(4) of Section 1.2102 to read as follows:

§ 1.2102 Eligibility of applications for competitive bidding.

(a) * * *

(9) Basic trading area licenses in the 38.6-40.0 GHz band.

(b) * * *

(4) Applications for channels in all frequency bands, except those listed in paragraph (a)(9), which are used as an intermediate link or links in the provision of continuous, end-to-end service where no service is provided directly to subscribers over the frequencies. Examples of such intermediate links are:

* * * * *

B. Part 101 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 101 FIXED MICROWAVE SERVICES

1. The authority citation for Part 101 continues to read as follows:

Authority: Sec. 4 and 303 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 524 and 303, unless otherwise noted.

2. In §101.13(d), amend to except renewal applications in the 38.6-40.0 GHz band and to specify that renewal applications must be filed eighteen months prior to the end of the license term:

§101.13 Application forms and requirements for private operational fixed stations.

* * *

(d) Application for renewal of station licenses must be submitted on such form as the Commission may designate by public notice. Applications for renewal must be made during the license term and, except for renewal applications in the 38.6-40.0 GHz band, should be filed within 90 days, but not later than 30 days, prior

to the end of the license term. Renewal applications in the 38.6-40.0 GHz band must be filed eighteen months prior to the end of the license term. See Section 101.17 for renewal requirements for the 38.6-40.0 GHz frequency band. When a licensee submits a timely application for renewal of a station license, the existing license for that station will continue as a valid authorization until the Commission has made a final decision on the application. Whenever a group of station licenses in the same radio service are to be renewed simultaneously, a single "blanket" application may be filed to cover the entire group if the application identifies each station by call sign and station location. Applicants should note also any special renewal requirements under the rules for such radio station(s).

3. In §101.15(c), amend to specify that authorizations in the 38.6-40.0 GHz band must be filed eighteen months prior to the end of the license term:

§101.15 Application forms for common carrier fixed stations

* * *

(c) Renewal of station license. Except for renewal of special temporary authorizations and authorizations in the 38.6-40.0 GHz band, FCC Form 405 ("Application for Renewal of Station License") must be filed by the licensee between thirty (30) and sixty (60) days prior to the expiration date of the license sought to be renewed. For authorizations in the 38.6-40.0 GHz band, the licensee must file FCC Form XXX eighteen months prior to the expiration date of the license sought to be renewed. See Section 101.17 for renewal requirements for the 38.6-40.0 GHz frequency band. Whenever a group of station licenses in the same radio service are to be renewed simultaneously, a single "blanket" application may be filed to cover the entire group if the application identifies each station by call sign and station location. Applicants sould note also any special renewal requirements under the ruels for each radio service. When a licensee submits a timely application for renewal of a station license, the existing license continues in effect until the Commission has rendered a decision on the renewal application.

4. Add new §101.17 to read as follows:

§101.17 Performance Requirements for the 38.6-40.0 GHz frequency band.

(a) All 38.6-40.0 GHz band licensees must demonstrate substantial service at the time of license renewal. A licensee's substantial service showing should include, but not be limited to, the following information for each channel for which they hold a license, in each BTA or portion of a BTA covered by their license, in order to qualify for renewal of that license. The information provided will be judged by the Commission to determine whether the licensee is providing service which rises to the level of "substantial."

(1) A description of the 38.6-40.0 GHz band licensee's current service in terms of geographic coverage;

(2) A description of the 38.6-40.0 GHz band licensee's current service in terms of population served (as well as any additional service provided during the five-year build-out period);

(3) A description of the 38.6-40.0 GHz band licensee's investments in its system(s) (type of facilities constructed and their operational status is required);

(b) Any 38.6-40.0 GHz band licensees adjudged not to be providing substantial service will not have their licenses renewed.

5. In §101.45(d), amend to clarify that mutually exclusive applications in the 38.6-40.0 GHz band are subject to competitive bidding procedures.

§101.45 Mutually exclusive applications

* * *

(d) Except for applications in the 38.6-40.0 GHz band, private operational fixed point-to-point microwave applications for authorization under this Part will be entitled to be included in a random selection process or to comparative consideration with one or more conflicting applications in accordance with the provisions of §1.227.(b)(4) of this chapter. Applications in the 38.6-40.0 GHz band are subject to competitive bidding procedures in §§101.XXX-XXX.

6. In § 101.51(a), amend to include applications subject to competitive bidding.

§ 101.51 Comparative evaluation of mutually exclusive applications

* * *

(a) In order to expedite action on mutually exclusive applications in services under this rules part where neither competitive bidding nor the random selection processes apply, the applicants may request the Commission to consider their applicatinos without a formal hearing in accordance with the summary procedure outlined in paragraph (b) in this section if:

*****

7. In § 101.53, amend to require assignees to meet assignors construction requirements.

§ 101.53 Assignment or transfer of station authorization.

(g) Assignees receiving Commission authority to acquire a 38.6-40.0 GHz license pursuant to this paragraph must meet the assignors' construction requirment dates. *See* §§ 101.63 and 64 in this chapter.

8. In § 101.55(a), amend to except licenses authorized pursuant to competitive bidding procedures.

§ 101.55 Considerations involving assignment or transfer applications

* * *

(a) Licenses not authorized pursuant to competitive bidding procedures may not be assigned or transferred prior to completion of construction of the facility. However, consent to the assignment or transfer of control of such a license may be given prior to the completion of construction where:

(1) The assignment or transfer does not involve a substantial change in or ownership or control of the authorized facilities; or in

(2) The assignment or transfer of control is involuntary due to the licensee's bankruptcy, death, or legal disability.

(b) The Commission will review a proposed transaction to determine if the circumstances indicate "trafficking" in licenses whenever applications (except those involving *pro forma* assignment or transfer of control) for consent to assignment of a license, or for transfer of control of a license, involve facilities:

* * *

(2) that have not been constructed, unless the authorizations were granted pursuant to a competitive bidding procedure; or

* * *

9. Add a new rule §101.56 as follows:

§ 101.56 Partitioned Service Areas (PSAs) and Disaggregated Spectrum

(a)(1) The holder of an BTA authorization to provide service in the 38.6-40 GHz band pursuant to the competitive bidding process may enter into agreements with eligible parties to partition any portion of its service area according to county boundaries, or according to other geopolitical subdivision boundaries. Alternatively, licensees may enter into agreements or contracts to disaggregate portions of spectrum, provided acquired spectrum is disaggregated according to frequency pairs.

(2)(i) Contracts must be filed with the Commission within 30 days of the date that such agreements are reached.

(ii) The contracts must include descriptions of the areas being partitioned or spectrum disaggregated. The partitioned service area shall be defined by coordinate points at every 3 seconds along the partitioned service area unless an FCC recognized service area is utilized (i.e., Metropolitan Service Area or Rural Service Area) or county lines are followed. If geographic coordinate points are used, they must be specified in degrees, minutes, and seconds to the nearest second of latitude and longitude and must be based upon the 1927 North American Datum (NAD27). Applicants may supply geographical coordinates based on 1983 North American Datum (NAD83) in addition to those required (NAD27). In the case where an FCC recognized service area or county lines are utilized, applicants need only list the specific area(s) (through use of FCC designations or county names) that constitute the partitioned area.

(3) Parties to partitioning and spectrum disaggregation contracts must file concurrently with such contracts the following:

(i) an application FCC Form 494 or 402, as applicable, for authority to operate a 38.6-40 GHz service facility.

(ii) application for assignment to operate in the market area being partitioned or to operate in the market area covered by the disaggregated spectrum.

(iii) a completed FCC Form 430, where applicable, if not already on file at the Commission..

(b) The eligibility requirements applicable to BTA authorization holders also apply to those individuals and entities seeking partitioned or disaggregated spectrum authorizations.

(c) Subsequent to issuance of the authorization for a partitioned service area, the partitioned area will be treated as a separate protected service area.

(d)(1) When any area within a BTA becomes a partitioned service area, the remaining counties and geopolitical subdivision within that BTA will be subsequently treated and classified as a partitioned service area.

(d)(2) At the time a BTA is partitioned, the Commission shall cancel the BTA authorization initially issued and issue a partitioned service area authorization to the former BTA authorization holder.

(f) The duties and responsibilities imposed upon BTA authorization holders in this part, apply to those licensees obtaining authorizations by partitioning or spectrum disaggregation.

(g) The build-out requirements for the partitioned service area or disaggregated spectrum shall be the same as applied to the BTA authorization holder.

(h) The license term for the partitioned service area or disaggregated spectrum shall be the remainder of the period that would apply to the BTA authorization holder.

(i) Licensees, except those using bidding credits in a competitive bidding procedure, shall have the authority to partition service areas or disaggregate spectrum.

10. Add new section § 101. 64 to read as follows:

§ 101.64 Service areas.

Service areas for 38.6-40.0 GHz service are Basic Trading Areas (BTAs) as defined below. BTAs are based on the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, at pages 40-44 ("BTA"). Rand McNally organizes the 50 States and the District of Columbia into 487 BTAs. The BTA Map is available for public inspection at the Wireless Telecommunications Bureau, Room 5322, 2025 M Street, NW., Washington, DC.

The BTA service areas are based on the Rand McNally 1995 Commercial Atlas & marketing Guide, 123rd Edition, at pages 40-44, with the following additions licensed separately as BTA-like areas: American Samoa; Guam; Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands. The Mayaguez/Aguadilla-Ponce BTA-like service area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas, Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincon, Sabana Grande, Salinas, San German, Santa Isabel, Villalba, and Yauco. The San Juan BTA-like service area consists of all other municipios in Puerto Rico.

11. In § 101.103, paragraph is added and reads as follows:

§ 101.103 Frequency coordination procedures.

* * * * *

(i)(i) When the licensed facilities are to be operated in the band 38,600 MHz to 40,000 MHz and the facilities are located within 16 kilometers of the boundaries of a Basic Trading Area, each licensee must complete the frequency coordination process of subsection 101.103(d) with respect to neighboring BTA licensees and existing licensees within its BTA service area that may be affected by its operation prior to initiating service. In addition to the technical parameters listed in subsection 101.103(d), the coordinating licensee must also provide potentially affected parties technical information related to its subchannelization plan and system geometry.

(ii) Response to notification should be made as quickly as possible, even if no technical problems are anticipated. Any response to notification indicating potential interference must specify the technical details and must be provided to the licensee, either electronically or in writing, within 10 days of notification. Every reasonable effort should be made by all licensees to eliminate all problems and conflicts. If no response to notification is received within 10 days, the licensee will be deemed to have made reasonable efforts to coordinate

and may commence operation without a response. The beginning of the 10-day period is determined pursuant to subsection 101.103(d)(v).

12. In §101.107 revise the table to add new footnote 9 to read as follows:

§ 101.107 Frequency tolerance

	FREQUENCY TOLERANCE (PERCENT)		
Frequency (MHz)	All fixed and based stations	Mobile stations over 3 watts	Mobile stations 3 watts or less
31,300 to 40,000 (6)	0.03 (9)	0.03	0.03

/9/ Equipment authorized to be operated in the 38,600-40,000 MHz band is exempt from the frequency tolerance requirement noted in the above table.

13. In § 101.109 a new footnote 6 is added to the table to read as follows:

§ 101.109 Bandwidth

Frequency Band (MHz)	Maximum Authorized Bandwidth
38,600 to 40,000	50 MHz /6/

/6/ For channel block assignments in the 38,600-40,000 MHz band, the authorized bandwidth is equivalent to an unpaired channel block assignment or to either half of a symmetrical paired channel block assignment. When adjacent channels are aggregated, equipment is permitted to operate over the full channel block aggregation without restriction.

NOTE: Unwanted emissions shall be suppressed at the aggregate channel block edges based on the same roll-off rate as is specified for a single channel block in paragraphs 101.111(a)(ii) and (iii) of this chapter.

14. In 101.115(c), the frequency "Above 31,300" is removed from the table and the frequency band 38,600 to 40,000 MHz and footnote 13 are added in numerical order to the table as follows:

§ 101.115 Directional antennas

* * * * *

(c) * * *

Antenna Standards										
Frequency (MHz)	Category	Maximum beamwidth to 3 dB points (included angles in degrees)	Minimum antenna gain (dBi)	Minimum radiation suppression to angle in degrees from centerline of main beam in decibels						
				5° to 10°	10° to 15°	15° to 20°	20° to 30°	30° to 100°	100° to 140°	140° to 180°
*	*	*	*	*	*	*	*	*	*	*
38,600 to 40,000(13)	A	n/a	38	25	29	33	26	42	55	55
	B	n/a	38	20	24	28	32	35	36	36

/13/ Stations authorized to operate in the 38,600-40,000 MHz band may use antennas other than those meeting the Category A standard. However, the Commission may require the use of higher performance antennas where interference problems can be resolved by the use of such antennas.

15. In §101.147, paragraph (u) is revised as paragraphs (u)(1) and (u)(2) to read as follows:

§ 101.147 Frequency assignments

* * * * *

(u) (1) Assignments in the band 38,600-40,000 MHz must be according to the following frequency plan:

Channel Group A		Channel Group B	
Channel No.	Frequency band limits (MHz)	Channel No.	Frequency Band limits (MHz)
1-A	38,600-38,650	1-B	39,300-39,350
2-A	38,650-38,000	2-B	39,350-39,400
3-A	38,700-38,750	3-B	39,400-39,450
4-A	38,750-38,800	4-B	39,450-39,500
5-A	38,800-38,850	5-B	39,500-39,550
6-A	38,350-38,900	6-B	39,550-39,600
7-A	38,900-38,950	7-B	39,600-39,650
8-A	38,950-39,000	8-B	39,650-39,700
9-A	39,000-39,050	9-B	39,700-39,750
10-A	39,050-39,100	10-B	39,750-39,800
11-A	39,100-39,150	11-B	39,800-39,850
12-A	39,150-39,200	12-B	39,850-39,900
13-A	39,200-39,250	13-B	39,900-39,950
14-A	39,250-39,300	14-B	39,950-40,000

(2) Channel Blocks 1 through 14 are assigned for use within Basic Trading Areas (BTAs). Applicants are to apprise themselves of any grandfathered links within the BTA for which they seek a license. All of the channel blocks may be subdivided as desired by the licensee and used within its service area as desired without further authorization subject to the terms and conditions set forth in § 101.149.

16. Add a new Subpart N as follows.

Subpart N -- Competitive Bidding Procedures for the 38.6-40.0 GHz Band

Sec.

§ 101.1201 38.6-40.0 GHz subject to competitive bidding.

Mutually exclusive 38.6-40.0 GHz initial applications are subject to competitive bidding. The general competitive bidding procedures found in 47 C.F.R. Part 1, Subpart Q will apply unless otherwise provided in this part.

§ 101.1202 Competitive bidding design for 38.6-40.0 GHz licensing.

The following competitive bidding procedures generally will be used in 38.6-40.0 GHz auctions. Additional, specific procedures may be set forth by public notice. The Commission also may design and test alternative procedures. See 47 C.F.R. §§ 1.2103 and 1.2104. The Commission will employ simultaneous multiple round bidding when choosing from among mutually exclusive initial applications to provide 38.6-40.0 GHz service, unless otherwise specified by the Wireless Telecommunications Bureau before the auction.

§ 101.1203 Competitive bidding mechanisms.

(a) *Sequencing*. The Commission will establish and may vary the sequence in which 38.6-40.0 GHz licenses will be auctioned.

(b) *Grouping*. The Commission will conduct a series of sequential auctions of three channels at a time within each BTA unless the Wireless Telecommunications Bureau announces, by Public Notice prior to the auction, an alternative auction scheme.

(c) *Minimum Bid Increments*. The Commission will, by announcement before or during an auction, require minimum bid increments in dollar or percentage terms.

(d) *Stopping Rules*. The Commission will establish stopping rules before or during multiple round auctions in order to terminate an auction within a reasonable time.

(e) *Activity Rules.* The Commission will establish activity rules which require a minimum amount of bidding activity. In the event that the Commission establishes an activity rule in connection with a simultaneous multiple round auction, each bidder will be entitled to request and will be automatically granted a certain number of waivers of such rule during the auction.

§ 101.1204 Bidding application procedures.

All applicants to participate in competitive bidding for 38.6-40.0 GHz licenses must submit applications on FCC Forms 175 pursuant to the provisions of §1.2105 of this Chapter. The Wireless Telecommunications Bureau will issue a Public Notice announcing the availability of 38.6-40.0 GHz licenses and, in the event that mutually exclusive applications are filed, the date of the auction for those licenses. This Public Notice also will specify the date on or before which applicants intending to participate in a 38.6-40.0 auction must file their applications in order to be eligible for that auction, and it will contain information necessary for completion of the application as well as other important information such as the materials which must accompany the forms, any filing fee that must accompany the application or any upfront payment that need to be submitted, and the location where the application must be filed. In addition, each applicant must identify its status as a small business or rural telephone company.

§ 101.1205 Submission of upfront payments and down payments.

(a) Each bidder in the 38.6-40.0 GHz auction will be required to submit an upfront payment. This upfront payment will be based upon a formula established by the Wireless Telecommunications Bureau and announced by Public Notice prior to the auction.

(b) Each winning bidder in the 38.6-40.0 GHz auction shall make a down payment to the Commission in an amount sufficient to bring its total deposits up to 20 percent of its winning bid by a date and time to be specified by Public Notice, generally within ten business days following the close of bidding. Full payment of the balance of the winning bids shall be paid within ten days after Public Notice announcing that the Commission is prepared to award the license. The grant of the application is conditional upon receipt of full payment. The Commission generally will grant the license within a reasonable period of time after receiving full payment.

§ 101.1206 Long-form applications.

Each winning bidder will be required to submit a long-form application. Winning bidders must submit long-form applications within ten (10) business days after being notified by Public Notice that it is the winning bidder. Long-form applications shall be processed under the rules contained in Part 21 and 94 of the Commission's Rules.

§ 101.1207 Procedures for filing petitions to deny against long-form applications

The applicable procedures for the filing of petitions to deny the long-form applications of winning bidders contained in Section 21.30 of the Commission's Rules shall be followed by the applicant (*see* 47 C.F.R. §21.30).

§ 101.1208 Bidding credits for small businesses.

(a) A winning bidder that qualifies as a small business or a consortium of small businesses, (as defined in § 101.1209(b)(1)(i) may use a bidding credit of 25 percent to lower the cost of its winning bid on any of the licenses in this part. A winning bidder that qualifies as a very small business or a consortium of very small businesses, (as defined in §101.1209(b)(1)(ii) may use a bidding credit of 35 percent to lower the cost of its winning bid on any of the licenses in this part.

(b) Unjust Enrichment.

(1) A small business seeking transfer or assignment of a license to an entity that is not a small business under the definitions in § 101.1209(b)(1)(i) and (ii), will be required to reimburse the government for the amount of the bidding credit, plus interest at the rate imposed for installment financing at the time the license was awarded, before transfer will be permitted. The amount of this penalty will be reduced over time as follows: a transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit: in year three of the license term the penalty will be 75 percent; in year four the penalty will be 50 percent and in year five the penalty will be 25 percent, after which there will be no penalty. These penalties must be paid back to the U.S. Treasury as a condition of approval of the assignment or transfer.

(2) If a small business that utilizes a bidding credit under this section seeks to assign or transfer control of its license to a small business meeting the eligibility standards for lower bidding credits or seeks to make any other change in ownership that would result in the licensee qualifying for a lower bidding credit under this section, the licensee must seek Commission approval and reimburse the government for the difference between the amount of the bidding credit obtained by the licensee and the bidding credit for which the assignee, transferee or licensee is eligible under this section as a condition of the approval of such assignment, transfer or other ownership change.

§ 101.1209 Definitions.

(a) Scope. The definitions in this section apply to §§ 101.1201 through 101.1209, unless otherwise specified in those sections.

(b) Small Business and Very Small Business.

(1)(i) A small business is an entity that together with its affiliates and persons or entities that hold attributable interests in such entity and their affiliates, has average gross revenues that are not more than $40 million for the preceding three years. (ii) A very small business is an entity that together with its affiliates and persons or entities that hold attributable interests in such entity and their affiliates, has average gross revenues that are not more than $15 million for the preceding three years.

(2) For purposes of determining whether an entity meets either the small business or very small business definitions set forth in paragraph (b)(1) of this section, the gross revenues of the entity, its affiliates, persons or entities holding interests in the entity and their affiliates shall be considered on a cumulative basis and aggregated.

(3) A small business consortium is a conglomerate organization formed as a joint venture between or among mutually-independent business firms, each of which individually satisfies either definition of a small business in paragraphs (b)(1) and (b)(2) of this section.

(c) *Rural Telephone Company*. A rural telephone company means a local exchange carrier operating entity to the extent that such entity--

(A) provides common carrier service to any local exchange carrier study area that does not include either--

(i) any incorporated place of 10,000 inhabitants or more, or any part therof, based on the most recently available population statistics of the Bureau of the Census;or

(ii) any territory, incorporated or unincorporated, included in an urbanized area, as defined by the Bureau of the Census, as of August 10, 1993;

(B) provides telephone exchange service, including exchange access, to fewer than 50,000 access lines;

(C) provides telephone exchange service to any local exchange carrier study area with fewer than 100,000 access lines; or

(D) has less than 15 per cent of its access lines in communities of more than 50,000 on the date of enactment of the Telecommunications Act of 1996.

(d) *Gross Revenues. Gross revenues* shall mean all income received by an entity, whether earned or passive, before any deductions are made for costs of doing business (*e.g.*, cost of goods sold), as evidenced by audited quarterly financial statements for the relevant number of calendar years preceding January 1, 1996, or, if audited financial statements were not prepared on a calendar-year basis, of the most recently completed fiscal years preceding the filing of the applicant's short-form application (Form 175). For applications filed after December

31, 1995, gross revenues shall be evidenced by audited financial statements for the preceding relevant number of calendar or fiscal years. If an entity was not in existence for all or part of the relevant period, gross revenues shall be evidenced by the audited financial statements of the entity's predecessor-in-interest or, if there is no identifiable predecessor-in-interest, unaudited financial statements certified by the applicant as accurate.

(e) *Affiliate*.

(1) *Basis for Affiliation*. An individual or entity is an affiliate of an applicant or of a person holding an attributable interest in an applicant (both referred to herein as "the applicant") if such individual or entity:

(i) Directly or indirectly controls or has the power to control the applicant, or

(ii) Is directly or indirectly controlled by the applicant, or

(iii) Is directly or indirectly controlled by a third party or parties that also controls or has the power to control the applicant, or

(iv) Has an "identity of interest" with the applicant.

(2) *Nature of control in determining affiliation*.

(i) Every business concern is considered to have one or more parties who directly or indirectly control or have the power to control it. Control may be affirmative or negative and it is immaterial whether it is exercised so long as the power to control exists.

Example for paragraph (e)(2)(i). An applicant owning 50 percent of the voting stock of another concern would have negative power to control such concern since such party can block any action of the other stockholders. Also, the bylaws of a corporation may permit a stockholder with less than 50 percent of the voting to block any actions taken by the other stockholders in the other entity. Affiliation exists when the applicant has the power to control a concern while at the same time another person, or persons, are in control of the concern at the will of the party or parties with the power of control.

(ii) Control can arise through stock ownership; occupancy of director, officer or key employee positions; contractual or other business relations; or combinations of these and other factors. A key employee is an employee who, because of his/her position in the concern, has a critical influence in or substantive control over the operations or management of the concern.

(iii) Control can arise through management positions where a concern's voting stock is so widely distributed that no effective control can be established.

Example for paragraph (e)(2)(iii). In a corporation where the officers and directors own various size blocks of stock totaling 40 percent of the corporation's voting stock, but no officer or director has a block sufficient to give him or her control or the power to control and the remaining 60 percent is widely distributed with no individual stockholder having a stock interest greater than 10 percent, management has the power to control. If persons with such management control of the other entity are persons with attributable interests in the applicant, the other entity will be deemed an affiliate of the applicant.

(3) *Identity of interest between and among persons.* Affiliation can arise between or among two or more persons with an identity of interest, such as members of the same family or persons with common investments. In determining if the applicant controls or is controlled by a concern, persons with an identity of interest will be treated as though they were one person.

Example 1. Two shareholders in Corporation Y each have attributable interests in the same application. While neither shareholder has enough shares to individually control Corporation Y, together they have the power to control Corporation Y. The two shareholders with these common investments (or identity of interest) are treated as though they are one person and Corporation Y would be deemed an affiliate of the applicant.

Example 2. One shareholder in Corporation Y, shareholder A, has an attributable interest in a SMR application. Another shareholder in Corporation Y, shareholder B, has a nonattributable interest in the same SMR application. While neither shareholder has enough shares to individually control Corporation Y, together they have the power to control Corporation Y. Through the common investment of shareholders A and B in the SMR application, Corporation Y would still be deemed an affiliate of the applicant.

(i) *Spousal Affiliation*. Both spouses are deemed to own or control or have the power to control interests owned or controlled by either of them, unless they are subject to a legal separation recognized by a court of competent jurisdiction in the United States.

(ii) *Kinship Affiliation*. Immediate family members will be presumed to own or control or have the power to control interests owned or controlled by other immediate family members. In this context "immediate family member" means father, mother, husband, wife, son, daughter, brother, sister, father- or mother-in-law, son- or daughter-in-law, brother- or sister-in-law, step-father, or -mother, step-brother, or -sister, step-son, or -daughter, half brother or sister. This presumption may be rebutted by showing that

(A) The family members are estranged,

(B) The family ties are remote, or

(C) The family members are not closely involved with each other in business matters.

Example for paragraph (e)(3)(ii). A owns a controlling interest in Corporation X. A's sister-in-law, B, has an attributable interest in an SMR application. Because A and B have a presumptive kinship affiliation, A's interest in Corporation X is attributable to B, and thus to the applicant, unless B rebuts the presumption with the necessary showing.

(4) *Affiliation through stock ownership*.

(i) An applicant is presumed to control or have the power to control a concern if he or she owns or controls or has the power to control 50 percent or more of its voting stock.

(ii) An applicant is presumed to control or have the power to control a concern even though he or she owns, controls or has the power to control less than 50 percent of the concern's voting stock, if the block of stock he or she owns, controls or has the power to control is large as compared with any other outstanding block of stock.

(iii) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, such minority holdings are equal or approximately equal in size, and the aggregate of these minority holdings is large as compared with any other stock holding, the presumption arises that each one of these persons individually controls or has the power to control the concern; however, such presumption may be rebutted by a showing that such control or power to control, in fact, does not exist.

(5) *Affiliation arising under stock options, convertible debentures, and agreements to merge*. Stock options, convertible debentures, and agreements to merge (including agreements in principle) are generally considered to have a present effect on the power to control the concern. Therefore, in making a size determination, such options, debentures, and agreements will generally be treated as though the rights held thereunder had been exercised. However, neither an affiliate nor an applicant can use such options and debentures to appear to terminate its control over another concern before it actually does so.

Example 1 for paragraph (e)(5). If company B holds an option to purchase a controlling interest in company A, who holds an attributable interest in an SMR application, the situation is treated as though company B had exercised its rights and had become owner of a controlling interest in company A. The gross revenues of company B must be taken into account in determining the size of the applicant.

Example 2 for paragraph (e)(5). If a large company, BigCo, holds 70% (70 of 100 outstanding shares) of the voting stock of company A, who holds an attributable interest in an SMR application, and gives a third party, SmallCo, an option to purchase 50 of the 70 shares owned by BigCo, BigCo will be deemed to be an affiliate of company, and thus the applicant, until SmallCo actually exercises its options to purchase such shares. In order to prevent BigCo from circumventing the intent of the rule which requires such options to be considered on a fully diluted basis, the option is not considered to have present effect in this case.

Example 3 for paragraph (e)(5). If company A has entered into an agreement to merge with company B in the future, the situation is treated as though the merger has taken place.

(6) *Affiliation under voting trusts*.

(i) Stock interests held in trust shall be deemed controlled by any person who holds or shares the power to vote such stock, to any person who has the sole power to sell such stock, and to any person who has the right to revoke the trust at will or to replace the trustee at will.

(ii) If a trustee has a familial, personal or extra-trust business relationship to the grantor or the beneficiary, the stock interests held in trust will be deemed controlled by the grantor or beneficiary, as appropriate.

(iii) If the primary purpose of a voting trust, or similar agreement, is to separate voting power from beneficial ownership of voting stock for the purpose of shifting control of or the power to control a concern in order that such concern or another concern may meet the Commission's size standards, such voting trust shall not be considered valid for this purpose
regardless of whether it is or is not recognized within the appropriate jurisdiction.

(7) *Affiliation through common management*. Affiliation generally arises where officers, directors, or key employees serve as the majority or otherwise as the controlling element of the board of directors and/or the management of another entity.

(8) *Affiliation through common facilities*. Affiliation generally arises where one concern shares office space and/or employees and/or other facilities with another concern, particularly where such concerns are in the same or related industry or field of operations, or where such concerns were formerly affiliated, and through these sharing arrangements one concern
has control, or potential control, of the other concern.

(9) *Affiliation through contractual relationships*. Affiliation generally arises where one concern is dependent upon another concern for contracts and business to such a degree that one concern has control, or potential control, of the other concern.

(10) *Affiliation under joint venture arrangements*.

(i) A joint venture for size determination purposes is an association of concerns and/or individuals, with interests in any degree or proportion, formed by contract, express or implied, to engage in and carry out a single, specific business venture for joint profit for which purpose they combine their efforts, property, money, skill and knowledge, but not on a continuing or permanent basis for conducting business generally. The determination whether an entity is a joint venture is based upon the facts of the business operation, regardless of how the business operation may be designated by the parties involved. An agreement to share profits/losses proportionate to each party's contribution to the business operation is a significant factor in determining whether the business option is a joint venture.

(ii) The parties to a joint venture are considered to be affiliated with each other.

(11) *Exclusion from affiliation coverage*. For purposes of this section, Indian tribes or Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.), or entities owned and controlled by such tribes or corporations, are not considered affiliates of an applicant (or licensee) that is owned and controlled by such tribes, corporations or entities, and that otherwise complies with the requirements of this section, except that gross revenues derived from gaming activities conducted by affiliated entities pursuant to the Indian Gaming Regulatory Act (25 U.S.C. 2701 et seq.) will be counted in determining such applicant's (or licensee's) compliance with the financial requirements of this section, unless such applicant establishes that it will not receive a substantial unfair competitive advantage because significant legal constraints restrict the applicant's ability to access such gross revenues.