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

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS	)	GEN Docket No. 90-314 ET Docket No. 92-100
	)	
Implementation of Section 309(j) of the Communications Act - Competitive Bidding, Narrowband PCS	)	PP Docket No. 93-253

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

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By the Commission:

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I. INTRODUCTION

1. By this Second Report and Order and Second Further Notice of Proposed Rule Making, we adopt a number of modifications to our existing narrowband Personal Communications Services (PCS) rules. These include the use of Major Trading Areas (MTAs) for future licensing, the establishment of a "substantial service" alternative to our construction benchmarks, and modifications to certain provisions of our narrowband PCS competitive bidding rules. In light of the Supreme Court holding in *Adarand Constructors, Inc. v. Peña*,[1] for example, we eliminate race- and gender-based auction provisions. We also eliminate the current narrowband PCS spectrum aggregation limit. In the Further Notice, we seek comment on whether to channelize and license the one megahertz of narrowband PCS spectrum that has been held in reserve.

II. EXECUTIVE SUMMARY

[1] *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995) *(Adarand)* (overruling aspects of *Metro Broadcasting, Inc. v. FCC*, 497 U.S. 547 (1990), and requiring a strict scrutiny standard of review for Congressionally mandated race-conscious measures).

2. As the expert agency charged with management of the radiofrequency spectrum, we continually seek to improve the efficiency of spectrum use, reduce the regulatory burden on spectrum users, encourage competition, and promote service to the largest feasible number of users. We believe the modifications to our rules we adopt below help further these goals.

Second Report and Order

In this Second Report and Order, we:

- Eliminate Basic Trading Areas (BTAs) as too small to provide a viable narrowband service and adopt MTAs for future licensing of narrowband PCS. We believe that narrowband PCS can be licensed using MTAs without compromising the goal of ensuring entry for small businesses.

- Eliminate the current narrowband PCS spectrum aggregation limit, finding that it is not necessary to prevent an undue concentration of licenses.

- Eliminate the restriction on paging response channels that limits eligibility for these channels to incumbent paging licensees. We believe elimination of the eligibility restriction will increase the likelihood of awarding the licenses to those that value them most highly. We will retain the current rule restricting use of the response channels to mobile-to-base transmissions. We believe this restriction is necessary to avoid harmful interference.

- Modify our existing construction and minimum coverage requirements for narrowband PCS spectrum by allowing licensees to meet a "substantial service" alternative. Such an option will increase buildout flexibility for narrowband PCS licensees.

- Decline to adopt additional construction and coverage requirements for nationwide geographic area paging licensees.

- Adopt a partitioning and disaggregation scheme similar to that adopted for broadband PCS. This scheme will facilitate the efficient use of narrowband PCS spectrum, increase competition, and expedite the provision of narrowband service to areas that may not otherwise receive narrowband PCS or other wireless services in the near term.

- Simplify our ownership disclosure requirements for narrowband PCS auction applicants.

We also adopt the following auction-related measures:

- The general competitive bidding rules found in Subpart Q of Part 1 of the Commission's rules apply to narrowband PCS, unless specified otherwise.

- In light of the strict scrutiny standard of review now required under *Adarand*, we limit eligibility for bidding credits to small businesses.

- We make bidding credits available on a tiered basis for two categories of designated entities. Small businesses with average annual gross revenues not exceeding $40 million for the preceding three years will receive a 15 percent credit. Very small businesses with

average annual gross revenues not exceeding $15 million for the preceding three years will receive a 25 percent credit.

- For the purpose of determining small business eligibility, we adopt, with a slight modification, our proposal to attribute the gross revenues of the applicant, its controlling principals and its affiliates.

- We eliminate the $40 million individual net worth limitation currently applicable in our narrowband PCS rules.

Second Further Notice of Proposed Rule Making

In this Second Further Notice of Proposed Rule Making, we:

- Tentatively conclude that we should proceed with the licensing of the one megahertz of narrowband spectrum that has been held in reserve, and we seek comment on how to channelize this spectrum.

- Seek comment on whether to rechannelize the narrowband PCS spectrum that has been channelized previously but not yet licensed in order to create larger spectrum blocks.

III. BACKGROUND

3. In the *PCS First Report* and *Order*, the Commission provided for the operation of new, narrowband PCS in the 900 MHz band.[2] The Commission broadly defined PCS as mobile and fixed communications offerings that serve individuals and businesses, and can be integrated with a variety of competing networks.[3] To promote a wide range of potential narrowband services, the Commission, in the *PCS First Report and Order*, declined to adopt a restrictive definition of narrowband PCS, such as limiting this category of PCS to advanced messaging and paging services.[4] The Commission also adopted a spectrum allocation and channelization plan, licensing rules, and technical standards for narrowband PCS.[5] In the *Competitive Bidding Second Report and Order,* the Commission determined that, pursuant to Section 309(j) of the Communications Act of 1934, as amended, PCS is subject to competitive bidding in the case of mutually exclusive applications.[6]

4. In the *Competitive Bidding Second Report and Order,* the Commission adopted

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[2] Amendment of the Commission's Rules to Establish New Narrowband Personal Communications Services, GEN Docket No. 90-314, ET Docket No. 92-100, *First Report and Order,* 8 FCC Rcd 7162 (1993) (*PCS First Report and Order*), *on recon., Memorandum Opinion and Order,* 9 FCC Rcd 1309 (1994) (*PCS MO&O*).

[3] *PCS First Report and Order,* 8 FCC Rcd at 7164, ¶ 13; *see also* 47 C.F.R. § 24.5.

[4] *PCS First Report and Order,* 8 FCC Rcd at 7164, ¶ 13.

[5] *Id.* at 7164-71, ¶¶ 15-37, 39-54.

[6] Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket 93-253, *Second Report and Order,* 9 FCC Rcd 2348, 2358, ¶¶ 54-58 (1994) (*Competitive Bidding Second Report and Order*). In the Balanced Budget Act of 1997, Congress amended Section 309(j) to expand the Commission's auction authority and statutory mandate. The Commission is now required to assign initial licenses by competitive bidding whenever mutually exclusive applications are accepted for filing, with certain limited exceptions. Balanced Budget Act of 1997, Pub. L. No. 105-33, Title III, 111 Stat. 251 (1997).

general competitive bidding rules for auctionable services.[7] In the *Competitive Bidding Third Report and Order,* the Commission established competitive bidding rules specifically for narrowband PCS.[8] On reconsideration of that *Order*, the Commission revised certain auction procedures, expanded special provisions for designated entities in future narrowband auctions, and sought comment on additional designated entity provisions for the upcoming narrowband PCS auction.[9] Currently, of the three megahertz of 900 MHz spectrum allocated for narrowband PCS, two one-megahertz blocks are divided into specific channels for licensing.[10] The remaining one megahertz of narrowband PCS spectrum has been reserved to accommodate future development of narrowband PCS.[11]

5. The Commission has conducted two auctions for narrowband PCS licenses. As a result of these two auctions, ten nationwide narrowband PCS licenses and six regional narrowband PCS licenses in five different regions (totaling 30 regional licenses) have been granted.[12] Auctions have not yet been conducted for the narrowband PCS spectrum currently designated for licensing in 51 MTAs and 493 BTAs.[13] In addition, the 204 MTA licenses and 1,968 BTA licenses designated as unpaired response channels have not been auctioned.[14]

6. In the *Narrowband PCS R&O/Further Notice*, the Commission, *inter alia*, conformed the definition of minority groups with definitions used in other contexts, and declined to establish an entrepreneurs' block for narrowband PCS.[15] The Commission also proposed to reallocate all of the BTA channel blocks and some of the MTA channel blocks to create larger

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7 *Competitive Bidding Second Report and Order,* 9 FCC Rcd at 2360-2400, ¶¶ 68-297.

8 Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Third Report and Order,* 9 FCC Rcd 2941, 2944-79, ¶¶ 9-89 (1994) (*Competitive Bidding Third Report and Order*).

9 Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, Narrowband PCS, PP Docket No. 93-253, and Amendment of the Commission's Rules to Establish New Narrowband Personal Communications Services, GEN Docket No. 90-314, ET Docket No. 92-100, *Third Memorandum Opinion and Order and Further Notice of Proposed Rule Making,* 10 FCC Rcd 175 (1994) (*Competitive Bidding Third MO&O/Further Notice*). The term "designated entity" refers to small businesses, rural telephone companies, and businesses owned by minorities and/or women, collectively.

10 *See* 47 C.F.R. § 24.129; *see also Competitive Bidding Third Report and Order,* 9 FCC Rcd at 2944-45, ¶¶ 9-10.

11 *Competitive Bidding Third Report and Order,* 9 FCC Rcd at 2944, ¶ 9.

12 The nationwide narrowband PCS auction commenced on July 25, 1994, and closed after 47 rounds of bidding over a five-day period. *See* "Announcing the High Bidders in the Auction of Ten Nationwide Narrowband PCS Licenses; Winning Bids Total $617,006,674," *Public Notice,* PNWL 94-004 (rel. August 2, 1994). The regional narrowband PCS auction began on October 26, 1994, and closed on November 8, 1994, after 105 rounds. *See* "Announcing the High Bidders in the Auction of 30 Regional Narrowband (PCS) Licenses; Winning Bids Total $490,901,787," *Public Notice,* PNWL 94-27 (rel. Nov. 9, 1994). Certain licenses have been returned or have cancelled for nonpayment. An inventory of all available licenses will be issued by public notice prior to the conduct of an auction.

13 The remaining channels currently allocated to be licensed as narrowband PCS are found in the 901-902, 930-931, and 940-941 MHz bands. For the current spectrum and channelization plan, *see Competitive Bidding Third Report and Order,* 9 FCC Rcd at 2945, ¶¶ 9-10. *See also* 47 C.F.R. §§ 24.102, 24.129.

14 *See* 47 C.F.R. § 24.130.

15 Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS, GEN Docket No. 90-314, ET Docket No. 92-100, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, Narrowband PCS, PP Docket No. 93-253, *Report and Order and Further Notice of Proposed Rulemaking,* 12 FCC Rcd 12972, 12984, 12985, ¶¶ 19-20, 22 (1997) (*Narrowband PCS R&O/Further Notice*).

service areas, eliminate the restriction on paging response channels that limits eligibility for these channels to incumbent paging licensees, channelize and license the remaining one megahertz of narrowband PCS spectrum, modify its existing construction and minimum coverage requirements, establish a partitioning scheme similar to that adopted for broadband PCS, and modify the narrowband PCS auction rules.[16] With respect to the competitive bidding rules in particular, the Commission proposed to limit eligibility for bidding credits and installment payments to small businesses, and proposed to make bidding credits available on a tiered basis for small businesses.[17] In response to the *Narrowband PCS R&O/Further Notice*, the Commission received 15 comments and 16 reply comments.[18]

IV. SECOND REPORT AND ORDER

A. Service Rules

1. Service Area Reallocation

7. Background. In the *Narrowband PCS R&O/Further Notice*, the Commission sought comment on whether to reallocate all of the narrowband PCS BTA-based channel blocks, and some of the MTA-based channel blocks, as regional and nationwide licenses. Specifically, the Commission proposed to (1) redesignate the two remaining 50 kHz paired channels as nationwide channels; (2) establish one nationwide channel pair, three regional channel pairs, and one MTA-based channel pair from the five 50/12.5 kHz channel pairs; and (3) convert the four BTA-based 12.5 kHz unpaired response channels to regional channels. By designating these service areas, the Commission intended to give companies, including designated entities, the opportunity to establish viable narrowband service and to provide regional and nationwide service if circumstances warrant.[19]

8. The Commission also sought comment on what effect increasing the service area size of as-yet unlicensed channels would have on existing narrowband PCS licenses. It requested comment on whether its proposals would be equitable to existing licensees, and whether they would assist new entrants in offering services to the public in a more efficient manner.[20]

9. Last, the Commission requested comment on whether using Major Economic Areas (MEAs) would be preferable to using MTAs to license narrowband PCS in the future. The Commission noted that previously licensed regional narrowband PCS licenses were configured by aggregating MTAs into larger regional areas. Therefore, using MEAs would cause some inconsistencies between existing regional narrowband PCS boundaries and MEA-based boundaries.[21]

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16 *Id.* at 12976-77, ¶ 4.

17 *Id.*

18 Appendix A provides the full and abbreviated names of the parties filing comments and reply comments.

19 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 12989-90, ¶¶ 29-31.

20 *Id.* at 12990, ¶ 32.

21 *Id.* at 12990, ¶ 31. MEAs, which are based on Economic Areas (EAs) defined by the Department of Commerce, were first developed by the Commission to define geographic license areas for the Wireless Communications Service. *See* Amendment of the Commission's Rules to Establish Part 27, the Wireless

10. Discussion. We will amend our current allocation of narrowband PCS spectrum to eliminate BTAs and license the remaining spectrum, including the response channels, based on MTAs. The majority of commenters share the view that BTAs are too small to provide viable narrowband service,[22] and there is substantial support for the use of MTAs.[23] While several commenters argue for a combination of regional and MTA licenses,[24] others oppose the creation of any additional regional licenses on the grounds that it would be too costly for small businesses to acquire and build out such licenses.[25] We find that MTAs are the most appropriate geographic area for licensing the remaining narrowband spectrum because they will serve the needs of a wide range of entities, including both large and small service providers. MTAs are not too large to preclude the entry of small businesses,[26] and those interested in service areas larger than MTAs will be able to create such areas by aggregating licenses. Moreover, we agree with those who argue that MTAs are large enough to support wide-area service and provide for economies of scale.[27] We believe that MTA-based service areas, coupled with the ability to aggregate licenses, will offer licensees substantial flexibility to provide wide-area local service as well as service on a larger scale.[28] We also note that the rules we adopt today providing for partitioning and

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Communications Service ("WCS"), *Report and Order*, 12 FCC Rcd 10785, 10814, ¶ 54 (1997) (*WCS Report and Order*). In the *WCS Report and Order*, we aggregated EAs into 52 MEAs, including 46 in the continental United States and an additional six areas covering Alaska (MEA #47), Hawaii (MEA #48), Guam and the Northern Mariana Islands (MEA # 49); Puerto Rico and the U.S. Virgin Islands (MEA #50); American Samoa (MEA #51); and the Gulf of Mexico (MEA #52). The Commission will address the licensing of narrowband PCS in the Gulf of Mexico in a separate proceeding.

[22] AirTouch Comments at 3-5; American Paging Comments at 2, 3-4; Arch Comments at 8, Reply Comments at 3; Benbow Comments at 2-3, Reply Comments at 3-4; Celpage Comments at 5-7, Reply Comments at 2; Metrocall Comments at 4-6, Reply Comments at 1-2; PageMart Comments at 2-3; PageNet Comments at 16-17, Reply Comments at 7; PCIA Comments at 2-3, 5-7; Preferred Networks Reply Comments at 2. *See also* MAP Mobile Reply Comments at 2-3.

[23] AirTouch Comments at 4-5; American Paging Comments at 2, 3-4; Arch Comments at 8; Benbow Comments at 3-4, Reply Comments at 3-4; Celpage Comments at 7, Reply Comments at 2; Metrocall Comments at 5-6, Reply Comments at 1-2; PageMart Comments at 2-3; PageNet Comments at 16-17, Reply Comments at 7; PCIA Comments at 2-3, 5-7; Preferred Networks Reply Comments at 2. *See also* Metrocall Comments at 6; Celpage Comments at 7 (arguing that if the Commission retains the current eligibility restrictions for the response channels, these channels should also be licensed on an MTA basis); PageNet Comments at 19 (opposing the proposal to convert the BTA-based response channels to regional channels and arguing that all of the response channels should be licensed on an MTA basis).

[24] Metrocall and Celpage contend that a such a combination would balance the needs of large and small carriers by allowing larger companies to establish wide-area networks while preserving opportunities for participation by smaller companies. Metrocall Comments at 5, Reply Comments at 1-3; Celpage Comments at 6-7, Reply Comments at 2-3. Benbow maintains that regional licenses would provide opportunities for small businesses. Benbow Comments at 3-4, Reply Comments at 3-5. Arch argues that one of the two 50 kHz paired channels should be designated as regional. Arch Comments at 8-9. *See also* MAP Mobile Reply Comments at 3-5 and Preferred Networks Reply Comments at 4.

[25] CONXUS Comments at 7-10; PageMart Comments at 3.

[26] An illustrative comparison is provided by the 900 MHz SMR auction, which was MTA-based, in which 60 out of 80 high bidders were small businesses. *See* "Wireless Telecom Bureau Releases Progress Report," *Press Release* (rel. March 5, 1997).

[27] American Paging Comments at 3; Celpage Comments at 5-7; Metrocall Comments at 5-6, Reply Comments at 2; PageNet Comments at 16-18, Reply Comments at 7.

[28] PageNet asserts that wide-area local service is the predominant paging service at this time. PageNet Comments at 17.

disaggregation will further enable the market to establish optimally sized service areas.[29]

11. The record contains little support for, and considerable opposition to, the establishment of additional nationwide licenses.[30] Arch, however, which generally supports the Commission's proposed reallocation, favors allocating one of the two remaining 50 kHz paired channels as a nationwide license.[31] According to Arch, large service areas are critical to two-way voice and data applications.[32] For the same reasons we decline to establish additional regional licenses, we will not adopt our proposal to create additional nationwide licenses.

12. Certain commenters argue that the elimination of BTA-based licenses would disadvantage small businesses in acquiring new licenses, and would be unfair to licensees that participated in previous auctions and based their business plans on the current spectrum allocation.[33] However, as we have already noted, there is broad support for replacing BTAs with MTAs in the record. Moreover, even commenters that are small businesses, such as Benbow, agree that BTAs are too small to support narrowband PCS.[34] Celpage, which specifically argues that "[s]maller entities relied on the upcoming availability of smaller, more manageable service areas," also supports the elimination of BTAs.[35] Considering the record as a whole, we do not believe that using MTAs will compromise the goal of ensuring entry for small businesses or undermine the confidence of either incumbent and potential licensees or the investment community.[36]

13. We are also not persuaded by RTG's contention that the record in this proceeding refutes the Commission's concern that BTAs are too small to provide viable narrowband PCS service.[37] Our experience with similar services suggests that larger licensing areas may be more suitable to the actual configuration of narrowband systems.[38]

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29 *See infra* at ¶¶ 57-74 for our discussion of partitioning and disaggregation.

30 Those opposed to nationwide licenses include AirTouch, American Paging, Ameritech, Celpage, CONXUS, Merlin, Metrocall, Morgan Stanley, PageMart, PageNet, PCIA, and RTG. AirTouch Comments at 5-14; American Paging Comments at 2, Reply Comments at 1-2; Ameritech Comments at 5-7, Reply Comments at 3-4;Celpage Comments at 6, Reply Comments at 2; CONXUS Comments at 7-10, Reply Comments at 5-6; Merlin Comments at 3-4; Metrocall Comments at 5, Reply Comments at 2; Morgan Stanley Comments at 4-5;PageMart Comments at 2-3, Reply Comments at 2-5; PageNet Comments at 17-18, Reply Comments at 5-6; PCIA Comments at 5-8; RTG Comments at 6-7, 9-12.

31 Arch Comments at 9. *See also* MAP Mobile Reply Comments at 3 (expressing support for this proposal).

32 Arch Comments at 4.

33 Ameritech Comments at 5-7, Reply Comments at 2-4; CONXUS Comments at 5-11, Reply Comments at 4-7; RTG Comments at 8-12. *See also* AirTouch Comments at 10 (arguing that the proposal to eliminate virtually all smaller geographic areas violates the Communications Act); Merlin Comments at 4 (arguing that increasing the geographic license size of narrowband PCS channels will deter new entrants from participating in future narrowband PCS auctions, because the upfront cost of participation will be substantially higher than originally proposed); NTCA Reply Comments at 3.

34 Benbow Comments at 3.

35 Celpage Comments at 5-7.

36 *See* CONXUS Comments at 6.

37 RTG Comments at 6-7. *See also* NTCA Reply Comments at 3.

38 For example, we recently adopted MEA-based licensing for the 929 MHz and 931 MHz paging bands, which are likely to be directly competitive with narrowband PCS. *See* Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, WT Docket No. 96-18, Implementation of Section 309(j)

14. Finally, we note that the use of MTAs will avoid any potential problems that might arise from inconsistencies between the boundaries of MEAs and existing regional licenses based on MTAs.[39] Moreover, Rand McNally & Company, which owns the copyright to MTAs, has granted a blanket license to parties with an interest in this proceeding to use MTAs, and there is therefore no impediment to their use for narrowband PCS.

2. Spectrum Aggregation Limit

15. Background. In the *Narrowband PCS R&O/Further Notice,* the Commission sought comment on whether, in light of its tentative conclusion that it should license the one megahertz of narrowband PCS spectrum held in reserve, the current aggregation limit on narrowband PCS spectrum should be modified or eliminated.[40] Narrowband PCS is not subject to the 45 MHz commercial mobile radio service (CMRS) spectrum cap.[41] However, a single licensee is permitted to hold licenses for no more than three channels, either paired or unpaired, in any geographic area.[42]

16. Discussion. We will eliminate the narrowband PCS spectrum aggregation limit. The limit was adopted in 1993 to ensure that narrowband PCS services would be offered on a competitive basis.[43] However, the Commission recently has concluded that the paging/messaging industry is highly competitive.[44] Moreover, narrowband PCS licensees increasingly compete with other sectors of the wireless industry, including broadband PCS and Specialized Mobile Radio (SMR), that offer the same or similar services.[45] Thus, we find that the aggregation limit is not needed to prevent an undue concentration of licenses, either through the auctioning of additional narrowband PCS spectrum or post-auction mergers. Moreover, the aggregation limit may be harmful if it disadvantages narrowband PCS licensees in competing

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of the Communications Act – Competitive Bidding, PP Docket No. 93-253, *Memorandum Opinion and Order on Reconsideration and Third Report and Order,* 14 FCC Rcd 10030, 10044, ¶¶ 16-17 (1999) (*Paging MO&O/Third Report and Order*). We also adopted EAs, which are larger than BTAs, as the geographic area for licensing the lower paging bands. Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, WT Docket No. 96-18, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Second Report and Order and Further Notice of Proposed Rulemaking,* 12 FCC Rcd 2732, 2748-49, ¶¶ 23-24 (1997) (*Paging Second Report and Order*).

[39] *See* Motorola Comments at 6, Reply Comments at 5; Benbow Comments at 4-5. *See also* PCIA Comments at 6-7.

[40] *Narrowband PCS R&O/Further Notice,* 12 FCC Rcd 12991-92, ¶ 35.

[41] Implementation of Sections 3(n) and 332 of the Communications Act, GN Docket 93-252, Regulatory Treatment of Mobile Services, 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, 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 935-940 MHz Band Allotted to the Specialized MobileRadio Pool, PR Docket No. 89-553, *Third Report and Order,* 9 FCC Rcd 7988, 8111, ¶ 267 (1994) (*CMRS Third Report and Order*). The CMRS spectrum cap is set forth at 47 C.F.R. § 20.6.

[42] *PCS First Report and Order,* 8 FCC Rcd at 7168, ¶ 34, n.21; 47 C.F.R. § 24.101.

[43] *Id.* at 7168, ¶ 34.

[44] Implementation of Section 6002(b) of the Omnibus Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Fourth Report,* 14 FCC Rcd 10145, 10185-87, 10190 (1999).

[45] *Id.* at 10185-87.

against other services.[46] We find that, in order to compete with other providers of paging and messaging services, narrowband PCS licensees may well need to consolidate and should not be prevented from doing so by the current narrowband PCS spectrum aggregation limit.[47] We also agree with PCIA that narrowband PCS licensees should be permitted to hold licenses for enough spectrum to support new and innovative services.[48] Thus, irrespective of any decision we make regarding the channelization and licensing of the one megahertz of narrowband PCS spectrum held in reserve, we find that the limit should be abolished.

17. We disagree with Merlin's contention that eliminating the aggregation limit will enable large companies to use their larger capital resources to prevent entry by small competitors.[49] Acquiring spectrum for purposes of withholding its use would be very expensive. In addition, such efforts would be difficult, given the large number of licensees already competing in this market and the fact that, as noted above, narrowband PCS licensees face competition from other wireless sectors. We do not believe that companies will attempt to acquire licenses merely to foreclose entry by smaller entities because it is clear that such a strategy would not be successful in limiting competition.

18. We recognize that, in our recent order addressing the CMRS spectrum cap set forth in Section 20.6 of our rules, we found that a spectrum cap was necessary to ensure that the mobile voice market is competitive.[50] We found that there was a risk of excessive concentration through mergers that might erase the competitive gains that had been made in that market, and that a bright line test was an effective and efficient means of dealing with that risk. In the paging/messaging context, however, the risk of excessive concentration is much lower. Paging carriers face growing competition from short messaging services (SMS)[51] and other digital service features offered by an increasing number of mobile voice carriers. In addition, our recent auction of spectrum in the 929 and 931 MHz bands should facilitate further entry or capacity expansion. We note that we retain the ability to evaluate individual transfer and assignment applications on a case-by-case basis through our review of such applications. We find, therefore, that a spectrum aggregation limit is unwarranted. Finally, because we are eliminating the spectrum limit, we need not address arguments regarding the appropriate attribution standard for such a limit.[52]

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46 *See* CONXUS Comments at 14-15, Reply Comments at 2-4; AirTouch Reply Comments at 7-8; PCIA, *White Paper Supporting Elimination of the Narrowband PCS Spectrum Aggregation Limit,* filed February 10, 2000, at 5, 8-14 *(PCIA White Paper). See also* PageMart Comments at 8.

47 *See PCIA White Paper* at 14-17.

48 *Id.* at 13, 15.

49 Merlin Comments at 5.

50 *See* 1998 Biennial Regulatory Review Spectrum Aggregation Limits for Wireless Telecommunications Carriers; Cellular Telecommunications Industry Association's Petition for Forbearance from the 45 MHz CMRS Spectrum Cap, WT Docket No. 98-205; Amendment of Parts 20 and 24 of the Commission's Rules—Broadband PCS Competitive Bidding and Commercial Mobile Radio Service Spectrum Cap, WT Docket No. 96-59; Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Report and Order,* FCC 99-244, 1999 WL 734848 (rel. Sept. 22, 1999), ¶¶ 49-55; 47 C.F.R. § 20.6.

51 SMS is a digital feature offered by some cellular, broadband PCS, and SMR carriers that permits users' handsets to include the functionality of paging and messaging devices.

52 Arch and Benbow argue that the Commission should retain the narrowband PCS spectrum cap, but

3. Eligibility for Response Channels

19. Background. In order to provide an opportunity for incumbent paging licensees to upgrade their operations, the Commission set aside 100 kilohertz (eight unpaired frequencies) of the 3 megahertz allocated for narrowband PCS as paging response channels, *i.e.*, channels to be used in paired communications with existing one-way paging frequencies to provide mobile-to-base station communications.[53] The Commission's intent in establishing these channels was to provide a means for one-way (single frequency) paging licensees to obtain a second frequency for the purpose of delivering signals back from their customers' mobile devices. The Commission's current rules limit eligibility for acquiring narrowband PCS response channels to existing paging licensees, *i.e.*, those licensed to operate conventional one-way paging base stations under Part 22 or Part 90 of the Commission's rules as of the application filing deadline for the paging response channels.[54] In the *Narrowband PCS R&O/Further Notice*, the Commission requested comment on whether to eliminate this limitation on eligibility for the response channels.[55] The Commission requested that commenters address whether it should lift eligibility restrictions on all response channels or only on certain response channels and asked about the potential impact on eligibility of its recent *Paging Second Report and Order*, which adopted geographic area licensing rules for paging systems.[56] Last, the Commission sought comment on whether it should retain the current rule restricting use of the response channels to mobile-to-base transmissions or allow the marketplace to determine the most efficient use of the channels.[57]

20. Discussion. We adopt the Commission's proposal to lift all eligibility restrictions on applying for paging response channels. We find that our current rules unnecessarily exclude potential users of the response channels that are not paging licensees, *e.g.*, narrowband PCS licensees. We disagree with those who argue that the restriction is warranted because paging incumbents are most likely to put the response channels to immediate use (by pairing them with operational systems).[58] We agree with Merlin that lifting the eligibility restrictions will encourage entry of new narrowband PCS providers by providing greater flexibility to new

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replace the current attribution threshold (*i.e.*, 5 percent) with those contained in the CMRS spectrum cap rule (*i.e.*, 20 percent for non-small businesses; 40 percent for small businesses). Arch Comments at 12-15; Benbow Comments at 8-11. *See also* Celpage Reply Comments at 5; Preferred Networks Reply Comments at 5-6.

53 *PCS First Report and Order*, 8 FCC Rcd at 7165, ¶ 20.

54 *See* 47 C.F.R. § 24.130.

55 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 12994, ¶ 40. Existing paging licensees' eligibility for response channels is limited to any BTA or MTA that encompasses an authorized base station orthat is partly or wholly overlapped by the paging system's service area, which is generally defined as the area within 32.2 kilometers of the licensee's base station. In the case of "F," "G," "H," or "K" class stations under Sections 22.502(c) and 90.495(b)(1) of our rules, service area is defined as the area that is within the service area radius specified in Section 22.504(b)(2). 47 C.F.R. § 24.130(a).

56 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 12994, ¶ 40. *See also Paging Second Report and Order*, 12 FCC Rcd at 2744-46, 2748-49, ¶¶ 14-19, 23-25.

57 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 12994, ¶ 40.

58 Arch Comments at 12, Reply Comments at 11-12; Celpage Comments at 12, Reply Comments at 6-7; Metrocall Comments at 9, Reply Comments at 6; MAP Mobile Reply Comments at 6; Preferred Networks Reply Comments at 4.

licensees to use these channels in conjunction with other spectrum to provide new services.[59]

21. PageNet and PCIA contend that eliminating the restriction will hinder paging licensees in developing services to compete with narrowband and broadband PCS carriers.[60] Similarly, Benbow argues against eliminating the eligibility restriction, and proposes instead that the Commission extend eligibility for the paging response channels only to narrowband licensees that have a "geographic relationship" to the service area(s) for which they seek the additional spectrum, on the grounds that allowing non-narrowband service providers to acquire these channels could prevent narrowband licensees from becoming fully competitive with CMRS systems.[61] We disagree. We find that removal of eligibility restrictions will increase competition for these channels and thereby increase the likelihood that licenses for these channels will be awarded to those, including paging licensees, that value them most highly. We disagree with Ameritech's argument that eliminating the restriction may attract speculative bidders that would later attempt to sell response channel licenses to incumbent paging operators if two-way paging becomes technologically and economically feasible.[62] We believe that our rules, including our competitive bidding rules and construction and coverage requirements, adequately deter speculation and other anticompetitive activities. We note also that our decision to eliminate the current limit on aggregation of narrowband PCS spectrum, discussed above, will help narrowband PCS licensees compete with other CMRS providers.[63] In keeping with that decision, as well as our decision here to eliminate eligibility restrictions, we also conclude that there should be no limit on the number of response channels a licensee may hold.

22. Many parties commenting on the issue disagreed with the Commission's tentative conclusion that the response channels should not be restricted to mobile-to-base transmissions, provided that licensees comply with the relevant rules regarding maximum transmitter power and interference.[64] Several commenters argue that allowing these channels to be used for other purposes would cause harmful interference with current narrowband PCS licensees.[65] Motorola opposes use of the response channels for base-to-mobile transmissions because base transmitters typically use high duty cycles and greater antenna heights.[66] We agree with these commenters and will retain the current rule restricting use of the response channels to mobile-to-base transmissions.

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59 Merlin Comments at 6.

60 PageNet Comments at 21-22, Reply Comments at 14; PCIA Comments at 11-12, Reply Comments at 10-11; MAP Mobile Reply Comments at 5-6. *See also* Metrocall Comments at 9-10, Reply Comments at 6-7; Celpage Comments at 12, Reply Comments at 7 (arguing that many paging operators refrained from participating in previous narrowband PCS auctions expecting that these channels would be available exclusively to them in the future).

61 Benbow Comments at 12, Reply Comments at 7-8. *See also* CONXUS Comments at 11; PageNet Comments at 22.

62 Ameritech Comments at 8, Reply Comments at 10.

63 *See supra* at ¶¶ 16-18.

64 Motorola Comments at 8-9, Reply Comments at 6-7; Benbow Comments at 13, Reply Comments at 8; Arch Comments at 6, 11, Reply Comments at 10; PCIA Comments at 11-13, Reply Comments at 11-12;PageNet Reply Comments at 10-11; Preferred Networks Reply Comments at 4. *But see* AirTouch Reply Comments at 6 (supporting the elimination of use restrictions).

65 Arch Comments at 11; Benbow Comments at 13. *See also* PCIA Comments at 12-13, Reply Comments at 13; Preferred Networks Reply Comments at 4.

66 Motorola Comments at 8-10.

B. Construction and Coverage Requirements for Narrowband PCS Licensees

23. Background. The Commission adopted the current minimum coverage requirements for narrowband PCS in 1994.[67] Since then, we have moved towards a more flexible approach to coverage requirements in other services.[68] In light of these developments in other services, the Commission proposed in the *Narrowband PCS R&O/Further Notice* to allow narrowband PCS licensees to demonstrate "substantial service" as an alternative to meeting the coverage requirements set forth in the existing rules. The Commission also requested comment on whether it should (1) eliminate all coverage requirements for narrowband PCS, or (2) modify its existing narrowband PCS coverage benchmarks in addition to adopting a substantial service option. The Commission questioned whether the existing benchmarks for MTA-based narrowband PCS licensees are appropriate compared to our paging requirements. It also asked that commenters discuss applicable coverage requirements for regional and nationwide narrowband PCS licensees.[69]

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[67] *PCS MO&O*, 9 FCC Rcd at 1313-14, ¶¶ 31-34. Specifically, nationwide narrowband PCS licensees must provide coverage to a composite area of 750,000 square kilometers or serve 37.5 percent of the U.S. population within five years of their license grants, and must provide coverage to a composite area of 1,500,000 square kilometers or serve 75 percent of the U.S. population within ten years of license grant. Regional licensees must cover 150,000 square kilometers or serve 37.5 percent of the population in their licensing areas within five years, and must cover 300,000 square kilometers or serve 75 percent of the regional population within ten years. MTA licensees must cover 75,000 square kilometers or 25 percent of the geographic area or serve 37.5 percent of the MTA population in five years, and must cover 150,000 square kilometers or 50 percent of the geographic area or serve 75 percent of the MTA population in ten years. *See* 47 C.F.R. § 24.103.

[68] For example, paging licensees may either meet population coverage benchmarks (one-third of the license area population within three years of license grant, and two-thirds of the population within five years) or may demonstrate that they are providing "substantial service" in the license area within five years of license grant. *Paging Second Report and Order*, 12 FCC Rcd at 2766-67, ¶ 63. These build-out requirements apply to MEA and EA geographic area paging licenses. *Paging MO&O/Third Report and Order,* 14 FCC Rcd at 10070-74, ¶¶ 64-72. Substantial service is defined as "service that is sound, favorable, and substantially above a level of mediocre service that would barely warrant renewal." *See* 47 C.F.R. § 22.503(k)(3).

We have also adopted substantial service as an alternative to specific coverage benchmarks in 900 MHz SMR and for the 10 MHz blocks in broadband PCS. *See* 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, 2651-52, ¶ 31 (1995) (*900 MHz Second Order on Reconsideration*); Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, *Memorandum Opinion and Order,* 9 FCC Rcd 4957, 5018-19, ¶ 155 (1994).

[69] *Narrowband PCS R&O/Further Notice,* 12 FCC Rcd at 12996-98, ¶¶ 44-47. There is no counterpart to regional narrowband PCS in our paging rules; therefore, we do not have specific paging coverage requirements for comparison in this instance. We also have not adopted coverage requirements for nationwide geographic area paging licensees, but note that under our former rules licensees on the nationwide 931 MHz frequencies were required initially to construct stations in at least 15 Standard Metropolitan Statistical Areas, and to offer service on a nationwide basis within two years of the start of service. 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, *Memorandum Opinion and Order on Reconsideration (Part 2)*, 93 F.C.C.2d 908, 917 (1983); *see also* 47 C.F.R. § 22.527(b)(5)(1994). To encourage the development of wide-area paging systems, the Commission also implemented exclusive licensing of qualified local, regional, and nationwide paging systems on thirty-five of the forty 929 MHz channels licensed, at that time, under Part 90 of our

24. Discussion. We will maintain our current coverage requirements for narrowband PCS and will adopt a substantial service requirement as an alternative. We find that coverage requirements, including a substantial service standard, encourage the provision of service to areas that would not necessarily receive service expeditiously solely through the operation of market forces.

25. We disagree with those who argue that the Commission's current construction benchmarks should be modified. According to Arch and Benbow, the Commission should eliminate the five-year construction requirement and allow both existing and new narrowband PCS licensees to meet a 37.5 percent population benchmark by the tenth year of their license terms.[70] Arch and Benbow claim that such an adjustment is necessary given the severe delays in equipment and service deployment that have occurred in this service.[71] Similarly, PCIA contends that the Commission should preserve the existing buildout requirements, but delay the commencement of the five-year buildout period until the original two megahertz of narrowband PCS spectrum has been fully licensed.[72] We recognize that narrowband PCS is a developing service and that there has been a delay in equipment availability. We therefore believe that it would not be appropriate at this time to establish three- and five-year benchmarks for this service, as we have done for the paging services, in lieu of the current benchmarks. We also believe, however, that our five- and ten-year construction benchmarks provide sufficient time for narrowband PCS licensees to construct their systems. We note that the nationwide narrowband PCS licensees that have reached their five-year buildout benchmarks have all represented to us that they met the requirement, and none requested a waiver.[73] Thus, we find that there is no need to alter the current benchmarks, and that it is best to address any problems that individual licensees may have because of difficulties with financing or equipment availability by evaluating requests for waiver on a case-by-case basis.

26. Commenters express varied concerns about the adoption of a substantial service requirement. PageNet, PCIA, CONXUS and others argue that replacing the existing coverage requirements with a substantial service test would encourage speculation, fraud, and

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rules. Amendment of the Commission's Rules to Provide Channel Exclusivity to Qualified Private Paging Systems at 929-930 MHz, *Report and Order*, 8 FCC Rcd 8318, 8319-20, ¶ 6 (1994). To earn nationwide exclusivity on 929 MHz channels, licensees were required to construct 300 transmitters or more in the continental United States, Alaska, Hawaii, and Puerto Rico. *See* 47 C.F.R. § 90.495 (1994). Licensees were also required to provide service to at least 50 urban markets, including 25 of the top 50 markets, and to two markets in each of the seven regions modeled on Regional Bell Operating Company regions. *Id. See also Paging MO&O/Third Report and Order,* 14 FCC Rcd at 10099-100, ¶¶ 129-130, where we concluded that it would be best to defer any decision on whether to impose minimum coverage requirements on paging licensees holding nationwide geographic area licenses until we resolved similar issues raised in the *Narrowband PCS R&O/Further Notice. See infra* at ¶ 30 for our decision regarding nationwide geographic area paging licenses.

[70] Arch Comments at 17-18, Reply Comments at 16; Benbow Comments at 15, Reply Comments at 5.

[71] Arch Comments at 18, Reply Comments at 16; Benbow Comments at 14-15, Reply Comments at 5. *See also* AirTouch Reply Comments at 5.

[72] PCIA Comments at 15, Reply Comments at 6. *See also* CONXUS Comments at 14 (arguing that the existing five-year benchmark be established from the date by which the last narrowband PCS license under the existing allocation is granted, to compensate for delays in equipment availability);AirTouch Reply Comments at 5 (expressing support for PCIA or CONXUS proposal); Arch Reply Comments at 16,Benbow Reply Comments at 5-6 (supporting CONXUS/PCIA proposal if theirs is not adopted).

[73] One regional licensee has requested an extension of the five-year construction deadline, and one regional licensee has failed to notify the Commission that it has met its five-year construction requirement.

anticompetitive behavior.[74] According to PageNet, a substantial service standard will invite speculators to participate in the auction, retain the licenses they win for years without building out, thereby drive up prices, and then sell the licenses for substantially more than they paid at auction.[75] PCIA and CONXUS also assert that a substantial service standard will enable fraudulent "application mills" to flourish.[76] We find, however, that a substantial service option may be very useful in allowing licensees to use spectrum flexibly to provide new and innovative services uninhibited by a requirement that they meet a specific coverage benchmark or lose their license. We also recognize that rural areas may be more difficult to serve than urban areas. Permitting licensees to make a substantial service showing may encourage them to build out in rural areas because it would give them the option of satisfying our construction requirements by serving rural areas without necessarily having to meet either the population or composite area benchmarks set forth in our current rules. We find that these advantages outweigh any concerns commenters have regarding speculation or anticompetitive conduct.

27. PageNet argues that because the substantial service concept has never been clearly defined, the Commission will have the difficult burden of assessing, on a case-by-case basis, whether licensees that claim this option have actually met the requirement.[77] PageNet claims that this, in turn, will lead to prolonged litigation, which will delay service to the public and prevent incumbents from expanding their systems.[78] Ameritech supports the substantial service proposal, but proposes a modified definition of that term for narrowband PCS that will clearly identify the required level of service. Ameritech recommends that substantial service be defined as "service that is sound, favorable, and reasonably capable of meeting an appropriate portion of the public demand for one or more of the communications services of which the system is capable under the Commission's rules."[79] In the past we have offered guidance to licensees in other services with regard to factors that we would consider in evaluating whether the substantial service requirement has been met. We gave such guidance to WCS licensees and recently extended this same guidance to our paging licensees.[80] We shall apply these same factors to evaluations of substantial service showings made by narrowband PCS licensees.[81] Thus, the

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[74] PageNet Comments at 12-13; PCIA Comments at 13-14, Reply Comments at 3; CONXUS Comments at 11-13, Reply Comments at 8 (also arguing that the reason for adopting such a requirement for services such as 900 MHz SMR, *i.e.*, the presence of incumbent licensees, does not exist for narrowband PCS). *See also*Benbow Comments at 13-14; Celpage Comments at 11, Reply Comments at 6; Merlin Comments at 7 (arguing that spectrum warehousing is most likely to arise in the event the Commission adopts larger geographic licensing areas, such as national or regional); Metrocall Comments at 9, Reply Comments at 5.

[75] PageNet Comments at 12-13.

[76] PCIA Comments at 13-14; CONXUS Comments at 11-12.

[77] PageNet Comments at 13-14.

[78] PageNet Comments at 14-15, Reply Comments at 10-11. *See also* PCIA Comments at 14, Reply Comments at 4 (arguing that substantial service standard is "so vague a term as to be virtually meaningless," and will lead to protracted litigation should the Commission revoke an operator's license on grounds that it has failed to meet this standard); PageMart Comments at 6-7; RTG Comments at 12; Preferred Networks Reply Comments at 6.

[79] Ameritech Comments at 3-5, Reply Comments at 6. *See also* Metrocall Comments at 9; Celpage Comments at 11 (arguing that the Commission must clarify what is meant by the term "substantial service," claiming that the current definition is susceptible to abuse and will be difficult to enforce).

[80] *WCS Report and Order*, 12 FCC Rcd at 10843-44, ¶ 113; *Paging MO&O/Third Report and Order*, 14 FCC Rcd at 10072-73, ¶ 70.

[81] In the *Paging MO&O/Third Report and Order*, we also established a presumption that the substantial service requirement is satisfied if an MEA or EA licensee provides coverage to two-thirds of the population in theunserved

Commission may consider such factors as whether the licensee is offering a specialized or technologically sophisticated service that does not require a high level of coverage to be of benefit to customers, and whether the licensee's operations serve niche markets. A licensee may also demonstrate that it is providing service to unserved or underserved areas without covering a specific composite area or percentage of the population. Because the substantial service requirement can be met in a variety of ways, the Wireless Telcommunications Bureau (Bureau) will review licensees' showings on a case-by-case basis. Using the guiding principles outlined here, we do not expect undue difficulty in determining whether a licensee has met the requirement.

28. Just as we believe that the addition of a substantial service alternative to our rules will be helpful to entities seeking to provide innovative services, we also recognize that there may be instances in which a flexible approach to our narrowband PCS operational or technical rules would be helpful to such entities and would promote the development of new services. Although we have crafted these rules to generally provide for a wide range of technologies and business plans, there may be instances where particular circumstances render the rules unreasonable or overly burdensome, to the extent the public interest would be harmed by their strict application. We therefore will give expedited treatment to requests for waivers of these operational and technical rules, and, to the extent we find that such waivers will not harm other licensees and will be in the public interest, we will consider them favorably.

C. Construction and Coverage Requirements for Nationwide Paging Licensees

29. Background. In the *Paging MO&O/Third Report and Order*, the Commission considered the issue of coverage requirements for nationwide geographic area paging licensees and deferred any decision on the issue until it resolved similar matters in the instant narrowband PCS rulemaking proceeding. The Commission stated that doing so would allow it to fully consider whether regulatory parity with respect to coverage requirements is appropriate not only for nationwide and MEA/EA paging licensees, but also for nationwide paging and narrowband PCS carriers. The paging and narrowband PCS services operate on adjacent bands in the 900 MHz spectrum and the Commission has previously observed a close, potentially competitive relationship between the two services. Additionally, the Commission stated that deferring the decision on coverage requirements for nationwide geographic area paging licensees would enable it to better look into the question of whether nationwide paging carriers provide nationwide coverage that extends to rural areas.[82]

30. Discussion. Although MEA/EA paging licensees and nationwide narrowband PCS licensees are currently subject to build-out requirements, we will not adopt coverage requirements for nationwide paging licensees that would be in addition to the build-out requirements they have already met. As noted above, nationwide paging licensees have already met pre-existing build-out rules, which were imposed in connection with nationwide exclusivity

area of the MEA or EA within five years of license grant. *See Paging MO&O/Third Report and Order*, 14 FCC Rcd at 10072, ¶ 69. This presumption is not applicable here because narrowband PCS spectrum is unencumbered.

[82] *Paging MO&O/Third Report and Order*, 14 FCC Rcd at 10093-100, ¶¶ 120-130. We incorporate into the instant proceeding comments submitted in the paging docket regarding the issue of coverage requirements for nationwide paging licensees.

rules prior to the advent of geographic area licensing.[83] Having carefully examined our databases reflecting the extent of construction by nationwide paging licensees, we find that all of these licensees are already providing sufficient coverage to meet the five-year benchmark applicable to nationwide narrowband PCS licensees, and some of them have met the ten-year benchmark.[84] Thus, while we expect nationwide paging licensees to build out their systems to the same extent as nationwide narrowband PCS licensees, we conclude that the build-out requirements set forth in our previous rules were adequate to promote coverage by nationwide paging licensees that is equivalent to that of nationwide narrowband PCS licensees, which have recently reached their five-year benchmark. In addition, while we anticipate that nationwide paging licensees' build-out in rural areas should increase in the future given that licensees appear to have already constructed in most urban areas, we have no evidence that nationwide paging licensees' build-out in rural areas is deficient. We therefore conclude that it is unnecessary to impose a new layer of regulations on nationwide paging licensees by adopting additional coverage requirements for them. However, if we are presented with evidence in the future that there is a need to impose a requirement equivalent to the ten-year nationwide narrowband PCS benchmark, we will consider revisiting this issue in the future.

D. Applicability of the Part 1 General Competitive Bidding Rules

31. Background. In the *Competitive Bidding Third Report and Order*, the Commission decided to award narrowband PCS licenses using the simultaneous multiple round auction methodology.[85] In light of the experience gained from the nationwide narrowband PCS auction, it later revised or clarified provisions governing minimum opening bids, activity rules, pre-auction procedures, the release of bidder information, and collusion.[86] In the *Narrowband PCS R&O/Further Notice*, the Commission generally reaffirmed the auction methodology adopted for narrowband PCS, sought comment on whether modifications should be made to the overall auction design adopted for narrowband PCS, and revisited certain provisions governing the general bidding procedures for narrowband PCS.[87]

32. More specifically, in the *Narrowband PCS R&O/Further Notice,* the Commission tentatively concluded that it would conduct one simultaneous multiple round auction for the remaining spectrum that has been allocated for narrowband PCS.[88] The Commission sought comment on this proposal and asked how it should group for auction certain categories of spectrum if it decided to conduct more than one auction for the remaining narrowband PCS

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83 *Id. at* 10097-98, ¶¶ 125-126; *see supra* note 69.

84 We note that our analysis underestimates the number of transmitters constructed by nationwide paging licensees because licensees are not required to notify the Commission of each site in their systems. Section 22.165 permits a licensee to construct additional transmitters under certain conditions without notifying the Commission. 47 C.F.R. § 22.165. Therefore, once a nationwide licensee had constructed and notified the Commission regarding a sufficient number of sites to obtain nationwide exclusivity, it was not required to notify the Commission of subsequent construction. Although many licensees continued to file notifications with the Commission voluntarily, many did not. Thus, our licensing records reflect a portion, but not all, of the sites constructed by nationwide paging licensees.

85 *Competitive Bidding Third Report and Order*, 9 FCC Rcd at 2948, ¶ 18.

86 *See generally Competitive Bidding Third MO&O/Further Notice*, 10 FCC Rcd 175.

87 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 12998-13002, ¶¶ 48-58.

88 *Id.* at 13000-13001, ¶ 55.

spectrum.[89] Furthermore, in the *Narrowband PCS R&O/Further Notice*, the Commission sought comment on the manner in which it should auction the one megahertz of reserve spectrum. Specifically, it sought comment on whether it should use its current narrowband PCS rules, as set forth in Part 24, or whether other rules should be adopted to auction this spectrum.[90] In addition, it sought comment on whether or not we should auction the reserve spectrum in conjunction with other narrowband spectrum, whether there should be any special provisions for small businesses, and if so, whether to adopt the small business size definition and special provisions proposed therein.[91] Last, the Commission proposed to modify the activity rule to retain discretion to keep an auction open even if no new valid bids or proactive waivers are received in a single round.[92]

33. Discussion. Following the release of the *Narrowband PCS R&O/Further Notice* in April 1997, the Commission adopted the *Part 1 Third Report and Order,* in which it adopted rules establishing uniform competitive bidding provisions for all auctionable services.[93] Thus, the general competitive bidding rules found in Subpart Q of Part 1 of the Commission's rules, including provisions adopted in the *Part 1 Third Report and Order*, will serve as the general competitive bidding rules for all future auctions, regardless of whether service-specific rules have previously been adopted.[94] Subpart Q of Part 1 of the Commission's rules will apply to narrowband PCS, unless we determine that, with regard to particular matters, the adoption of service-specific rules is warranted.[95] Most commenters that addressed this issue support conducting a single simultaneous multiple round auction for all of the remaining narrowband PCS licenses.[96] Arch contends that having more than one auction would drain the resources of both bidders and the Commission, and therefore would be less efficient.[97] We note that the Balanced Budget Act of 1997 provides that before the issuance of bidding rules, the Commission must provide adequate time for parties to comment on proposed auction procedures.[98] In response to this statutory requirement, the Commission has directed the Bureau, under its existing delegated authority, to seek comment prior to the commencement of each auction on a variety of auction-specific operational issues.[99] Under Part 1 and consistent with this approach, matters such as auction design, license grouping, activity rules, minimum opening bids, and

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89 *Id.*

90 *Id.* at 13002, ¶ 58.

91 *Id.*

92 *Id.* at 13000, ¶ 52.

93 Amendment of Part 1 of the Commission's Rules -- Competitive Bidding Procedures, WT Docket No. 97-82, Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, 4660-4685 MHz, ET Docket No. 94-32, *Third Report and Order and Second Further Notice of Proposed Rule Making,* 13 FCC Rcd 374 (1997) (modified by Erratum, DA 98-419 (rel. March 2, 1998)) (*Part 1 Third Report and Order*).

94 *Id.* at 382, ¶ 5.

95 *See infra* at ¶¶ 46-51 regarding the attribution standard that will be applied for purposes of determining small business status.

96 Ameritech Comments at 9; Arch Comments at 10; Merlin Comments at 8; Preferred Networks Reply Comments at 5. Numerous commenters, however, oppose auctioning the one megahertz of reserve spectrum at this time. *See infra* at ¶¶ 81-83.

97 Arch Comments at 10.

98 *See Part 1 Third Report and Order,* 13 FCC Rcd at 447, ¶ 123 (*citing* Balanced Budget Act of 1997, § 3002(a)(1)(B)(iv)).

99 *Part 1 Third Report and Order,* 13 FCC Rcd at 447-49, ¶¶ 124-25.

reserve prices will be determined by the Bureau pursuant to its delegated authority.[100]

34. We decline to adopt the suggestion that we require applicants to identify each frequency in each market on which they wish to bid and submit upfront payments for each individual license.[101] We believe that our current rules, which require an upfront payment to cover only those licenses on which an applicant intends to bid in any one round, are appropriate because they allow bidders the flexibility to pursue backup strategies during the course of an auction in the event they are unable to obtain their first choice of licenses. As we have noted previously, such flexibility is crucial to an efficient auction and optimal license assignment.[102] We also decline to modify our anti-collusion rule to provide a safe harbor for carriers engaged in negotiations regarding mergers or intercarrier agreements.[103] We have declined to create such a safe harbor in the past,[104] and we have not been presented with an adequate justification for departing from that decision here.[105] Finally, certain commenters urge the Commission to provide auction participants with the identity of all competing bidders.[106] It has generally been our practice to disclose the identity of all bidders in Commission auctions. If, however, in the case of particular auctions a limit on such information appears warranted, the Bureau will, consistent with the Balanced Budget Act of 1997 and current practice, seek comment on the issue in a public notice prior to the auction.

E. Treatment of Designated Entities

1. Effect of *Adarand Constructors, Inc. v. Peña*

35. Background. In the *Narrowband PCS R&O/Further Notice*, the Commission identified three narrowband PCS auction provisions designed to promote participation by women- and minority-owned businesses that were potentially affected by the Supreme Court's decision in *Adarand:* the attribution rules, bidding credits, and installment payments.[107] The Commission tentatively concluded that the record in support of its race-based narrowband PCS rules lacked sufficient evidentiary support to withstand the strict scrutiny required under *Adarand.* The Commission sought comment on whether its provisions promote a compelling governmental interest and, more particularly, whether compensating for discrimination in lending practices and in practices in the communications industry constitutes such an interest.[108] With

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100 *See Part 1 Third Report and Order,* 13 FCC Rcd at 448-49, 454-55, ¶¶ 125, 139; *see also* 47 C.F.R. §§ 0.131(c), 0.331, and 0.332.

101 PCIA Comments at 16-17, Reply Comments at 13; PageMart Comments at 8, Reply Comments at 6-7; PageNet Comments at 23, Reply Comments at 12.

102 *See Paging MO&O/Third Report and Order,* 14 FCC Rcd at 10082, ¶ 90.

103 PCIA Comments at 18-19, Reply Comments at 14.

104 *See Paging MO&O/Third Report and Order,* 14 FCC Rcd at 10084-85, ¶¶ 95-97; *Part 1 Third Report and Order,* 13 FCC Rcd at 466-67, ¶ 162.

105 We note that we have recently sought comment on our anti-collusion rule in our Part 1 proceeding. *See* Amendment of Part 1 of the Commission's Rules – Competitive Bidding Procedures, WT Docket No. 97-82, *Third Further Notice of Proposed Rulemaking,* 14 FCC Rcd 21558 (1999).

106 PCIA Comments at 17, Reply Comments at 13-14; PageMart Comments at 8, Reply Comments at 6-7; PageNet Comments at 23-24, Reply Comments at 12-13.

107 *Narrowband PCS R&O/Further Notice,* 12 FCC Rcd at 13004, ¶ 61. *See also Adarand,* 515 U.S. 200 (1995).

108 *Narrowband PCS R&O/Further Notice,* 12 FCC Rcd at 13004-13005, ¶ 62.

respect to the Commission's gender-based provisions, it sought comment on whether there are remedial or nonremedial goals that would satisfy the "important governmental objective" requirement of the intermediate scrutiny standard, and whether its gender-based rules are "substantially related" to the achievement of such objectives.[109]

36. Finally, based on its tentative conclusions in the *Narrowband PCS R&O/Further Notice*, the Commission proposed to offer only race- and gender-neutral provisions for narrowband PCS. It proposed that bidding credits and installment payments should be made available to small businesses -- including those owned by minorities and women.[110]

37. Discussion. We decline to offer race- and gender-based designated entity provisions for narrowband PCS at this time. Commenters in this proceeding have submitted no evidence or data on the issue of race- or gender-based auction provisions. One commenter believes that the Commission is not able to support race and gender preferences, pursuant to *Adarand*, and, accordingly, supports elimination of the minority-/woman-owned business classification.[111] We conclude that we do not have a sufficient record to support such special provisions at this time.

38. We remain committed to meeting the statutory objectives of promoting economic opportunity and competition, avoiding excessive concentration of licenses, and 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. We believe the bidding credits we adopt here for small businesses will assist in meeting these objectives because many minority- and women-owned entities are small businesses and will therefore qualify for these special provisions.[112] We also believe that our standardization of the rules regarding definitions of eligible entities, unjust enrichment, and bidding credits in the *Part 1 Third Report and Order* will assist small and minority- and women-owned businesses because the resulting predictability will facilitate effective business planning and capital accumulation.[113] We note too that the Commission's Office of Communications Business Opportunities has initiated several studies to gather information regarding barriers to entry faced by minority- and women-owned firms that wish to participate, or have participated, in Commission auctions. Further, we have recently commenced several new studies to explore additional entry barriers and to seek further evidence of racial and gender discrimination against potential licensees. In addition, we will continue to track the rate of participation in our auctions by minority- and women-owned firms and evaluate this information with other data gathered to determine whether provisions to promote participation by minorities and women can satisfy judicial scrutiny. If a sufficient record can be adduced, we may consider race- and gender-based auction provisions in the future.

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109 *Id.* at 13005, ¶ 63. *See also United States v. Virginia*, 518 U.S. 515 (1996) (*VMI*). In *VMI*, the Supreme Court reviewed a state program containing gender classification and held it was unconstitutional under an intermediate scrutiny standard of review. This standard requires that "[p]arties who seek to defend gender-based government action must demonstrate an 'exceedingly persuasive justification' for that action." *Id.* at 531. Under this test, the government must show "at least that the [challenged] classification serves 'important governmental objectives and that the discriminatory means employed' are 'substantially related to the achievement of those objectives.'" *Id.* at 524.

110 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 13005, ¶ 64.

111 CONXUS Comments at 18-19.

112 *See infra* at ¶¶ 43-44.

113 *See Part 1 Third Report and Order*, 13 FCC Rcd at 386, ¶ 14.

2. Designated Entity Provisions

a. Small Businesses and Rural Telephone Companies

39. Background. In the *Competitive Bidding Second Memorandum Opinion and Order*, the Commission concluded that it would define small businesses on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service.[114] In the *Narrowband PCS R&O/Further Notice*, the Commission proposed to limit eligibility for bidding credits and installment payments to small businesses. It proposed a "two-tiered" approach in defining small businesses, based on a $40 million and $15 million definition.[115] Specifically, the Commission sought comment on whether $40 million and $15 million are appropriate thresholds, and whether such tiers are necessary to ensure that small businesses, including those owned by minorities and women, have the opportunity to participate in providing service on an MTA, regional, and nationwide basis. The Commission asked whether the thresholds should be higher or lower, based on the types of companies that are likely to benefit from the special provisions proposed, and whether different definitions of small businesses should be used for different channel blocks.[116]

40. Discussion. We will define a small business as an entity with average annual gross revenues not to exceed $40 million for the preceding three years and a very small business as an entity with average annual gross revenues not to exceed $15 million for the preceding three years. We note that these are the same definitions of small and very small business that apply to broadband PCS C and F blocks.[117] Most commenters who address the issue favor the adoption of small business designations.[118] Merlin supports the proposed small business designations yet opposes the establishment of different definitions of small business for different channel blocks.[119] We agree with Merlin that having different definitions of small business for different blocks would be unduly complicated. We also find that our decision not to establish more regional and nationwide licenses makes it unnecessary to further consider this issue. Therefore, we will not adopt different definitions and thresholds for different channel blocks.

41. Two commenters, RTG and NTCA, believe the Commission has violated Section 309(j) of the Communications Act by failing to consider rural telephone companies or provide them with opportunities to participate in the provision of narrowband PCS. We disagree. We are not persuaded by their argument that the Commission should provide special bidding credits for rural telephone companies in order to meet its obligation to ensure that rural telephone companies have the opportunity to participate in spectrum-based services.[120] We have no

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114 Implementation of Section 309(j) of the Communications Act – Competitive Bidding, PP Docket No. 93-253, *Second Memorandum Opinion and Order*, 9 FCC Rcd 7245, 7269, ¶ 145 (1994). The Commission also affirmed in the *Part 1 Third Report and Order* that it would continue this approach. *Part 1 Third Report and Order*, 13 FCC Rcd at 388, ¶ 18.

115 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 13006, ¶ 66.

116 *Id.* at 13006, ¶ 67.

117 *See* 47 C.F.R. § 24.720(b).

118 Benbow Comments at 16-17; Celpage Comments at 14-15; CONXUS Comments at 19; Merlin Comments at 9-10; PCIA Comments at 20.

119 Merlin Comments at 10-11.

120 RTG Comments at 2-5; NTCA Reply Comments at 2.

evidence that large rural telephone companies encounter barriers to capital formation comparable to those faced by other designated entities. Moreover, the vast majority of rural telephone companies that have participated in the Commission's auctions to date have identified themselves as small businesses and have qualified for bidding credits on that basis.[121] Thus, we believe that small business bidding credits are sufficient to ensure that rural telephone companies have opportunities to participate in spectrum-based services, and we do not believe that rural telephone companies will be unable to compete in narrowband PCS auctions or the messaging marketplace without special financial preferences. We also note that PageNet contends that rural telephone companies have advantages related to substantial existing infrastructures in their service areas.[122] We therefore decline to adopt financial preferences designed specifically for rural telephone companies.

b. Bidding Credits

42. Background. In the *Narrowband PCS R&O/Further Notice*, the Commission proposed to eliminate the bidding credit scheme previously adopted, under which women- and minority-owned businesses were eligible for a bidding credit for certain designated channels. The Commission proposed to replace this scheme by offering bidding credits to all small businesses on a "tiered" basis. It proposed that very small businesses with gross revenues of not more than $15 million for the preceding three years be entitled to a 15 percent bidding credit and small businesses with gross revenues of not more than $40 million for the preceding three years be entitled to a 10 percent bidding credit.[123]

43. Discussion. The majority of commenters who address this issue generally support the adoption of bidding credits for small businesses.[124] However, commenters hold varying views concerning the proposed level of bidding credits. While RTG states generally that the proposed bidding credits are appropriate to allow designated entities to compete for BTA-based licenses, it contends that rural telephone companies should receive a 20 percent bidding credit when bidding on BTA-based licenses.[125] RTG further argues that the Commission should, if it adopts larger license areas, award small businesses and rural telephone companies a 40 percent bidding credit for nationwide and regional licenses and a 30 percent bidding credit for MTA licenses[126] and award very small businesses a 50 percent bidding credit for nationwide and regional licenses and a 40 percent credit for MTA licenses.[127] Merlin argues that it would be appropriate to have a bidding credit of 25 percent for small businesses at the $40 million level and a bidding credit of

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121 To date, 89 percent of rural telephone companies participating in Commission auctions of wireless licenses have identified themselves as small businesses.

122 PageNet Reply Comments at 9.

123 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 13009, ¶ 74.

124 Benbow Comments at 16-17; Celpage Comments at 14-15; CONXUS Comments at 19-22; PCIA Comments at 19; RTG Comments at 17-20; Merlin Comments at 16-20; Narrowband PCS Companies Reply Comments at 3. *But see* AirTouch Reply Comments at 8-10 (arguing that bidding credits skew auction results); PageNet Comments at 24 (arguing that bidding credits are not necessary); PageMart Comments at 8-9 (arguing that bidding credits would likely inflate prices without a concurrent beneficial effect).

125 RTG Comments at 5, 17.

126 *Id.* at 19.

127 *Id.*

40 percent for very small businesses at the $15 million level.[128] Merlin contends that applicants for narrowband PCS licenses need higher bidding credits than applicants in similar narrowband commercial mobile radio services because narrowband PCS is unencumbered spectrum that winning bidders will have to develop from the ground up. It further asserts that larger bidding credits are "absolutely necessary" if the Commission shifts to regional and nationwide licenses.[129] CONXUS contends that similarly situated applicants in the narrowband PCS auction must be afforded the same financing options provided in the F block broadband PCS rules, *i.e.*, 15 percent for small businesses and 25 percent for very small businesses, on the grounds that the slight difference in regulatory treatment of these two similar services may harm a narrowband PCS licensee's ability to compete with its broadband PCS competitor purely.[130]

44. In the *Part 1 Third Report and Order,* the Commission established a standard schedule of bidding credits for small businesses.[131] While these bidding credits are higher than some previously adopted for specific services, the Commission concluded in the *Part 1 Third Report and Order* that, based on its auction experience and the fact that it had decided to suspend the use of installment payments, the schedule adopted would provide adequate opportunities for small businesses to participate in spectrum auctions.[132] We believe that the levels of bidding credits in this schedule, which are higher than those proposed in the *Narrowband PCS R&O/Further Notice*, are sufficient to promote the participation of small businesses in the provision of narrowband PCS. We therefore see no reason to deviate from them here, and we decline to adopt higher levels as recommended by Merlin and RTG. Thus, as provided in Section 1.2110(e)(2) of our rules, small and very small businesses will be eligible for bidding credits as follows: Small businesses, *i.e.*, those entities with average annual gross revenues for the preceding three years not exceeding $40 million, will receive a 15 percent bidding credit.[133] Very small businesses, *i.e.*, those entities with average annual gross revenues for the preceding three years not exceeding $15 million, will receive a 25 percent bidding credit.[134] These bidding credits will be available on all channels for which licenses are auctioned. Thus, we will not restrict bidding credits to certain channels.

c. Attribution

45. Background. In the *Narrowband PCS R&O/Further Notice*, the Commission proposed to replace the "control group" structure established for narrowband PCS in the *Competitive Bidding Third Memorandum Opinion and Order* with a "controlling principal" standard by which it would attribute the gross revenues of all controlling principals and affiliates of an applicant in order to determine whether it qualifies as a small business.[135] Moreover, for purposes of determining small business status, the Commission proposed not to impose specific equity requirements on the controlling principals that meet our small business definition.[136] It

128 Merlin Comments at 17.
129 *Id.* at 17-18.
130 CONXUS Comments at 20.
131 *Part 1 Third Report and Order,* 13 FCC Rcd at 402-04, ¶¶ 45-48; 47 C.F.R. § 1.2110(e).
132 *Id.* at 403-04, ¶ 47.
133 47 C.F.R. § 1.2110(e)(2)(iii).
134 47 C.F.R. § 1.2110(e)(2)(ii).
135 *Narrowband PCS R&O/Further Notice,* 12 FCC Rcd at 13007-13008, ¶ 70.
136 *Id.*

also proposed to eliminate the $40 million individual net worth limitation.[137]

46. Discussion. Most commenters who address this issue generally urge the Commission to adopt a simplified attribution test for determining eligibility for small business preferences,[138] and certain commenters support the use of a controlling principals test.[139] While supporting such a test, Merlin encourages the Commission to give guidance to the public regarding what factors it will consider in evaluating whether an applicant meets the tests for *de facto* or *de jure* control.[140]

47. We will adopt, with a slight modification, our proposal to attribute the gross revenues of the applicant, the applicant's controlling principals, and its affiliates. Thus, we will consider "controlling interests" rather than "controlling principals," in making determinations regarding small business status. This approach is consistent with the standard proposed in the *Part 1 NPRM,* wherein the Commission proposed a "controlling interest" standard as the general attribution rule for all future auctions.[141] Under this standard, eligibility for small business provisions would be determined by attributing the gross revenues of the applicant, its controlling interests, which are defined to include those that exercise either *de jure* or *de facto* control, and its affiliates.[142] Typically, *de jure* control is evidenced by holdings of greater than 50 percent of the voting stock of a corporation or, in the case of a partnership, general partnership interests. *De facto* control is determined on a case-by-case basis, and includes the criteria set forth in *Ellis Thompson.*[143] The "controlling interest" definition we adopt here also provides specific guidance on calculation of various types of ownership interests. For purposes of calculating equity held in an applicant, the definition provides for full dilution of certain stock interests, warrants, and convertible debentures.[144] In addition, the definition provides for attribution of partnership and other ownership interests, including stock interests held in trust, non-voting stock, and indirect ownership through intervening corporations.

48. When an applicant cannot identify controlling interests under the definition, the revenues of all interest holders in the applicant and their affiliates will be counted. For example,

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137 *Id.* at 13008-13009, ¶ 72. *See* 47 C.F.R. § 24.309(c)(2)(iii).

138 Arch Comments at 14-15; Celpage Comments at 9; CONXUS Comments at 19; Merlin Comments at 12; Preferred Network Reply Comments at 5-6;.

139 Merlin Comments at 12; CONXUS Comments at 19. *See also* Celpage Comments at 9.

140 Merlin Comments at 12.

141 Amendment of Part 1 of the Commission's Rules -- Competitive Bidding Proceeding, WT Docket No. 97-82, *Order, Memorandum Opinion and Order and Notice of Proposed Rule Making,* 12 FCC Rcd 5686, 5703, ¶ 28 (*Part 1 NPRM*). *See also Part 1 Third Report and Order,* 13 FCC Rcd at 477-78, ¶ 185-86.

142 In the *Part 1 Second Further Notice of Proposed Rule Making,* we sought comment on whether we should impose a minimum equity requirement (*e.g.*, 15 percent) on any person or entity identified as a controlling interest. *See Part 1 Third Report and Order,* 13 FCC Rcd at 478, ¶ 186.

143 *See Ellis Thompson Corp.*, 76 Rad. Reg. 2d (P & F) 1125, 1127-28, 9 FCC Rcd 7138, 7140-42 (1994) (*Ellis Thompson*), in which the Commission identified the following factors used to determine control of a business: (1) use of facilities and equipment; (2) control of day-to-day operations; (3) control of policy decisions; (4) personnel responsibilities; (5) control of financial obligations; and (6) receipt of monies and profits. *See also Intermountain Microwave*, 24 Rad. Reg. (P & F) 983 (1963) (*Intermountain Microwave*), in which the Commission set forth guidelines for evaluating control of a business; Stephen F. Sewell, *Assignments and Transfers of Control of FCC Authorizations Under Section 309(d) of the Communications Act of 1934,* 43 FED. COMM. L.J. 277 (1991); In re Application of Baker Creek Communications, L.P., *Memorandum Opinion and Order,* 13 FCC Rcd 18709 (1998).

144 *See* 47 C.F.R. § 1.2110(b)(4)(v).

if a company is owned by four entities, each of which has 25 percent voting equity and no shareholders' agreement or voting trust gives any one of them control of the company, the revenues of all four entities and their affiliates must be counted. Treating such a corporation in this way is similar to our treatment of a general partnership—all general partners are considered to have a controlling interest. This rule looks to substance over form in assessing eligibility for small business status.

49. Our intent is to provide flexibility that will enable legitimate small businesses to attract passive financing in a highly competitive and evolving telecommunications marketplace. At the same time, we believe that this controlling interest threshold will function effectively to ensure that only those entities truly meriting small business status are eligible for small business provisions. In particular, we believe that the *de jure* and *de facto* concepts of control used to determine controlling interests in an applicant and the application of our affiliation rules will effectively prevent larger firms from illegitimately seeking status as a small business. Moreover, as we discuss below, we believe that requiring detailed ownership information, as set forth in Part 1 of our rules, will ensure that applicants claiming small business status qualify for such status.[145]

50. Merlin suggests that, in setting out guidelines, the Commission should be sure that its rules are broadly written to adapt to various new business structures, such as limited liability companies (LLCs), without forcing the new businesses to fit into archaic business structure patterns.[146] Merlin argues that the Commission should treat widely held LLCs as if they were widely held companies, allowing them to exclude as attributable investors those equity holders who are not in control of the applicant, as envisioned by *Intermountain Microwave*.[147] Merlin also suggests that, for purposes of defining whether a company is widely held, whatever its form of business organization, the Commission should formulate its rules to state that a widely held company is one in which no single equity holder has 15 percent or more of the equity of the applicant.[148] We find that the controlling interest standard we adopt today, along with the definition of "affiliate" set forth in Part 1 of our rules,[149] adequately addresses Merlin's concerns. In light of this standard, which provides specific guidance on the calculation of various types of ownership interests, we find that it is unnecessary to adopt separate rules for widely held companies as Merlin suggests.

51. The one commenter addressing the issue of individual net worth limitations supports the Commission's view that such a requirement under the existing narrowband PCS rules should be eliminated.[150] We continue to believe that the obstacles faced by small businesses, including women- and minority-owned small businesses, in raising capital are not necessarily confined to small business principals and affiliates with limited personal net worth. Moreover, personal net worth limits are difficult to apply and enforce. We will therefore eliminate the $40 million individual net worth limitation currently applicable in our narrowband PCS rules.

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145 *See* 47 C.F.R. § 1.2112. *See infra* ¶¶ 76-77.

146 Merlin Comments at 13. *See also* Celpage Reply Comments at 5 (suggesting that the Commission adopt rules defining *de jure* control for non-corporate entities such as partnerships and LLCs).

147 Merlin Comments at 13 (*citing Intermountain Microwave*, 24 Rad. Reg. (P & F) 983 (1963)).

148 *Id.* at 13-14.

149 47 C.F.R. § 1.2110(b)(4). *See also Part 1 Third Report and Order*, 13 FCC Rcd at 392, ¶¶ 26-27.

150 CONXUS Comments at 19.

3. Payment Matters

52. Background. In the *Narrowband PCS R&O/Further Notice*, the Commission tentatively concluded that quarterly installment payments were appropriate for small businesses acquiring licenses for narrowband PCS. At that time, the Commission believed that installment payments would promote participation by small businesses that, because of their size and lack of access to capital, need such incentives to participate in new spectrum opportunities such as narrowband PCS. The Commission sought comment on a proposal to establish installment payment plans for two categories of small businesses and on alternative installment payment plans.[151] In addition, it proposed provisions concerning late payments and interest accruing during grace periods.[152]

53. Discussion. We decline to adopt installment payment plans for small businesses participating in narrowband PCS auctions in the future. In the Part 1 proceeding we determined on the basis of the record that installment payments should not be used in the immediate future as a means of financing small business participation in our auction program.[153] There, we noted, *inter alia*, that our experience has demonstrated that installment payments may not be necessary to ensure a meaningful opportunity for small businesses to participate successfully in our auction program.[154]

54. We continue to believe that bidding credits, coupled with the Commission's partitioning and disaggregation policies, are sufficient to overcome barriers faced by small businesses seeking to participate in the narrowband PCS marketplace. As a result of our decision to suspend installment payments, and our adoption of rules governing late payments and defaults in Part 1, Subpart Q, [155] issues related to installment payments regarding interest, late payment fees, and payment schedules raised in the *Narrowband PCS R&O/Further Notice* are now moot. Current licensees paying for their licenses in installments are subject to the late payment and default provisions in Part 1.

4. Unjust Enrichment, Holding Period and Transfer Restrictions

55. Background. In the *Narrowband PCS R&O/Further Notice*, the Commission sought comment on the applicability of unjust enrichment, assignment, and transfer restrictions to our proposed narrowband PCS rules, as they apply to designated entities.[156] It also sought comment on whether it should eliminate the service-specific unjust enrichment rule for narrowband PCS in favor of the rule proposed in its *Part 1 NPRM*, which conforms with the broadband PCS unjust enrichment rules.[157] Furthermore, in light of its decision not to establish an entrepreneurs' block

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151 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 13011, ¶¶ 79-80.

152 *Id.* at 13011-12, ¶¶ 81-82.

153 *Part 1 Third Report and Order*, 13 FCC Rcd at 397-98, ¶ 38. Several commenters support the use of installment payments. Benbow Comments at 16-17; Celpage Comments at 14-15, Reply Comments at 7; CONXUS Comments at 21-22; PCIA Comments at 19; Narrowband PCS Companies Reply Comments at 5. *But see* PageMart Comments at 9; PageNet Reply Comments at 8 (opposing installment payments).

154 *Part 1 Third Report and Order*, 13 FCC Rcd at 397-98, ¶ 38.

155 *See* 47 C.F.R. § 1.2110(f)(4).

156 *Narrowband PCS R&O/Further Notice*, 12 FCC Rcd at 13014, ¶ 86.

157 *Id. (citing Part 1 NPRM*, 12 FCC Rcd at 5713, ¶ 43).