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

PP Docket No. 93-253

In the Matter of

Implementation of Section 309(j)
of the Communications Act -
Competitive Bidding

SECOND REPORT AND ORDER

Adopted: March 8, 1994; Released: April 20, 1994

By the Commission:

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I. INTRODUCTION

1. On August 10, 1993, the Omnibus Budget Reconciliation Act of 1993 (the "Budget Act") added Section 309(j) to the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-713 (the "Communications Act"). Section 309(j) gives the Commission express authority to employ competitive bidding procedures to choose among mutually exclusive applications for initial licenses. The Budget Act also requires the Commission to prescribe regulations to implement Section 309(j) within 210 days after enactment (March 8, 1994). The Commission adopted its Notice of Proposed Rule Making in this proceeding on September 23, 1993.[1] This Second Report and Order complies with the Budget Act's requirements.[2]

2. Under Section 309(j)(2)(B) of the Communications Act, the Commission must determine that use of a system of competitive bidding will promote the objectives described in Section 309(j)(3), which, in addition to those in Section 1 of the Communications Act,[3] are

> (A) the development and rapid deployment of new technologies, products, and services for the benefit of the public, including those residing in rural areas, without administrative or judicial delays;
>
> (B) promoting economic opportunity and competition and ensuring that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women;
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> (C) recovery for the public of a portion of the value of the public spectrum made available for commercial use and avoidance of unjust enrichment through the methods employed to award uses of that resource; and
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> (D) efficient and intensive use of the electromagnetic spectrum.

A. Policy Objectives

3. Our purpose in this Second Report and Order is to promulgate competitive bidding rules that, in conjunction with our spectrum allocation rules, promote the public policy objectives set forth by Congress. We believe these objectives are embodied in two broad, basic Commission policy goals: promoting economic growth and enhancing access to telecommunications service offerings for consumers, producers, and new entrants. Structuring our rules to promote opportunity and competition should result in the rapid implementation of new and innovative services and encourage efficient spectrum use, thus fostering economic growth. We also can help to ensure access to new telecommunications offerings by ensuring that all customer segments are served, that there is not an excessive concentration of licenses, and that small businesses, rural telephone companies, and businesses owned by women and minorities will have genuine opportunities to participate in the provision of service. Providing new and innovative services on spectrum acquired via auction will offer licensees the opportunity to earn substantial revenues. We therefore anticipate that our auctions will recover a portion of the value of the public spectrum.

4. *Promoting Economic Growth.* The new wireless services that will be licensed by competitive bidding, such as Personal Communications Services ("PCS"), have great potential to stimulate economic growth and create thousands of jobs for Americans. To advance our statutory goals and to realize this potential, we seek to design a competitive bidding system that will: 1) award licenses through a process that will promote competition among a diverse group of service providers; 2) award licenses to the parties who will provide service and use spectrum most efficiently; and 3) award licenses expeditiously. We seek to implement a licensing system that maximizes the competitiveness of service provision among new licensees and existing providers and avoids creating barriers to efficient license aggregations. Achieving procompetitive economies is particularly important where new entrants (such as broadband PCS providers) will have to compete with existing services (such as cellular telephone providers).

5. Awarding licenses to those who value them most highly, while maintaining safeguards against anticompetitive concentration, will likely encourage growth and competition for wireless services and result in the

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[1] Notice of Proposed Rule Making in PP Docket No. 93-253, 8 FCC Rcd 7635 (1993) (hereinafter "NPRM" or "Notice"). The Commission received 222 comments, 169 reply comments and numerous *ex parte* presentations relating to this proceeding. A list of commenters and reply commenters is attached as Appendix A to this Second Report and Order. Commenters may be referred to herein by the abbreviations noted in Appendix A.

[2] To comply with the requirements of new Section 309(i)(4)(C) of the Communications Act, the Commission prescribed transfer disclosure requirements with respect to licenses awarded by random selection. *See* First Report and Order in PP Docket No. 93-253, FCC 94-32, released February 4, 1994 ("First Report and Order"), petitions for reconsideration pending.

[3] Section 1 of the Communications Act established the Commission, *inter alia*, "so as to make available, so far as possible, to all the people of the United States a rapid, efficient, Nationwide, and world-wide wire and radio communications service with adequate facilities at reasonable charges . . . ." 47 U.S.C. § 151.

rapid deployment of new technologies and services. Because firms have different views of the value of the licenses to be awarded, a firm that expects to be able to offer new or much lower cost services might be willing to pay more for a license than another firm that does not believe it can offer services as competitively. Under other licensing mechanisms, licenses may be more likely to change hands in the post-licensing market (as was true in past cases of cellular licenses).[4] Such secondary market transactions, however, often involve substantial additional costs. In general, competitive bidding is a licensing scheme that should place licenses in the hands of the parties able to use them most efficiently.

6. *Enhancing Access.* The competitive bidding rules we adopt are designed to enhance access to telecommunications services by encouraging broad participation in the provision of spectrum-based services and ensuring that spectrum-based services are available to a wide range of consumers. In order to encourage participation in the competitive bidding process by all qualified bidders, we have adopted a set of open competitive bidding processes and a menu of preferences for certain groups who might otherwise face entry barriers. We will use these preferences to promote the participation of small businesses, rural telephone companies and women- and minority-owned firms (collectively referred to as "designated entities") when we adopt service-specific competitive bidding rules, thereby meeting Congress's mandate by ensuring diversity in the ownership and management of telecommunications facilities, which in turn will increase the diversity of service offerings and better meet the needs of more consumers.

7. By establishing an efficient licensing mechanism that will promote the rapid deployment of a wide range of new products and services in all areas of the country, we seek to increase residential consumer and large user access to new technologies and services. Efficient provision of wireless service may also create alternatives for those not served by traditional wireline providers and should create competition for existing wireline and wireless services.

B. Summary

8. The following five sections of this Report and Order establish general rules and procedures to govern the competitive bidding process. In each of these sections we have selected the rules or procedures that should best serve our basic policy goals and therefore achieve Congress's objectives. Among other things, we are amending Part 1 of our Rules to add a new Subpart Q that would apply to competitive bidding generally. The new rules are set forth in Appendix B.

9. Section II of this Report and Order establishes rules governing the basic requirements for the types of services and licenses that may be subject to auctions. In Section III, we establish a range of competitive bidding methods and auction procedures from which we will choose for auctionable services. Because as yet the Commission has no actual experience with auctions, we will retain the ability to select among the procedures deemed appropriate for each service. This course also complies with the Congressional directive that we "design and test multiple alternative methodologies under appropriate circumstances." *See* Section 309(j)(3). In Section IV, we address procedural and payment issues regarding announcement of auctions and the filing of applications, bidder and licensee qualifications, pre-auction upfront payment and post-auction down payment, and penalties in the event of default or disqualification. These rules are intended to ensure that the competitive bidding process is limited to serious, qualified applicants. Section V establishes specific licensing safeguards, including anti-collusion and unjust enrichment provisions, that will deter possible abuses of the bidding and licensing processes. In Section VI, we identify preferences available for small businesses, rural telephone companies and businesses owned by members of minority groups and women to enhance their participation in the competitive bidding process and in the provision of spectrum-based services.

10. The five sections of this Report and Order summarized above establish general rules and regulations for competitive bidding that will apply to a variety of spectrum-based services licensed by the Commission. In the future, specific rules within the scope of these general rules will be adopted in a Report and Order for each service subject to competitive bidding. These subsequent Reports and Orders will set forth specific competitive bidding rules for each service that meets the criteria in Section 309(j)(2).

II. PRINCIPLES FOR DETERMINING WHETHER LICENSES MAY BE AUCTIONED

11. We discuss below the general statutory criteria that must be met before we may use competitive bidding to award licenses in a particular service. In particular, we also establish the tests we will use to determine whether services or classes of services are excluded from competitive bidding and make determinations with respect to some of these services. Our determinations as to whether specific services are subject to competitive bidding may be found in new Section 1.2102 of the Commission's Rules (*see* Appendix B).

A. General Requirement for Mutual Exclusivity Among Applications for Initial Licenses or Construction Permits Accepted for Filing

12. In the Notice, we observed that Section 309(j)(1) only permits use of competitive bidding if mutual exclusivity exists among applications that have been accepted for filing.[5] Therefore, we concluded, if mutual exclusivity does not exist, a license or class of service would not be subject to competitive bidding. In addition, we noted that Section 309(j)(1) expressly limits our authority to use competitive bidding to the award of "initial" licenses or construction permits. *See also* H.R. Rep. No. 111, 103d Cong., 1st Sess. 253 (1993) ("H.R. Rep. No. 103-111"). Of those commenters that address these issues, none expresses significant disagreement with these conclusions. *See, e.g.,*

[4] With respect to licenses obtained through random selection (lottery) proceedings, the First Report and Order in this docket addressed this issue by relying on existing build-out requirements and by imposing new transfer disclosure requirements.

[5] In general, the Commission considers two or more applications to be "mutually exclusive" if their conflicts are such that the grant of one application would effectively preclude, by reason of harmful electrical interference, the grant of one or more of the other applications.

comments of the Utilities Telecommunications Council. Accordingly, we incorporate these requirements in our rules as follows.

1. Shared Spectrum

13. We will exclude from competitive bidding those classes of services where mutual exclusivity between applications cannot exist because channels must be shared by multiple licensees.[6] In ¶ ¶ 145-146 and n.3 of the NPRM, we proposed to exclude these services from competitive bidding because there can be no mutual exclusivity. The comments generally agree that shared spectrum is inappropriate for competitive bidding for that reason. *See, e.g.,* comments of ITA and AAR.

14. For this reason, the General Mobile Radio Service, any private land mobile radio service below 470 MHz (with the possible exception of the 220 MHz service (*see* ¶ ¶ 27-29)), the 800 MHz air-ground radiotelephone service, and the Amateur Radio services, for example, will not be subject to competitive bidding. For the same reason, we also exclude several other services from competitive bidding. The comments broadly support our determinations with respect to mutual exclusivity. *See, e.g.,* comments of UTC.

2. Licenses Awarded on a "First-Come, First-Served" Basis

15. In some services currently regulated by the Common Carrier and Private Radio Bureaus, some licensing occurs on a "first-come, first-served" basis. At n.132 of the NPRM, we noted that the use of "first-come, first-served" procedures and waiting lists in the 800 MHz Specialized Mobile Radio (SMR) service has generally enabled us to avoid mutual exclusivity among 800 MHz SMR applications.[7] In addition, we have recently adopted rules for 929-930 MHz paging that rely on first-come, first-served procedures for licensing of channels on an "earned exclusivity" basis. *See* Report and Order, PR Docket No. 93-35, 8 FCC Rcd 8318 (1993) (PCP Exclusivity Report and Order).

16. The Notice tentatively concluded that if mutually exclusive applications for SMR[8] or Private Carrier Paging (PCP) frequencies occurred, they should be resolved by competitive bidding. *See* NPRM at ¶ 138 and at n.152. Several commenters favored the auctioning of some or all SMR frequencies. *See, e.g.,* comments of Geotek, GTE, E. F. Johnson, McCaw and Southwestern Bell. Others cautioned the Commission to not create mutual exclusivity inadvertently. *See, e.g.,* comments of NABER. Those commenters who argue that frequencies allocated to the SMR service should be exempted from competitive bidding generally base their arguments on the existing or future lack of mutual exclusivity. *See, e.g.,* comments of AMTA and Cencall. The comments confirm that under some of our existing first-come, first-served procedures for these services, mutual exclusivity will generally not occur because applications are processed in sequence based on filing date and, in some cases, file number. Commenters argue that this process serves the public interest and should be retained. *See, e.g.,* comments of NABER. We agree. Thus, we will not depart from existing first-come, first-served practices which work to avoid mutual exclusivity at this time. *See* Section 309(j)(6)(E) and comments of AMTA.

17. With respect to certain services regulated by the Common Carrier Bureau, however, "first-come, first-served" application procedures can, under the rules for those services, still result in mutual exclusivity. *See, e.g.,* Section 22.31(b) (filing of application opens up 60-day filing window during which competing applications may be filed). Mutual exclusivity in common carrier services generally, and in the Public Mobile Services specifically, will be resolved through the use of competitive bidding. *See* ¶ ¶ 59-62, *infra.* We recognize that our existing first-come, first-served procedures for certain services currently regulated by the Private Radio Bureau are not necessarily consistent with the way similar services are regulated by the Common Carrier Bureau. As we make clear in our decision in GN Docket No. 93-252, *see* n.15, *infra,* we intend in future proceeding to reconcile the regulatory treatment of these services. Such reconciliation may involve modification of existing SMR wait list procedures, as is currently proposed in PR Docket No. 93-144, 8 FCC Rcd 3950, 3958 (1993), and the use of auctions to resolve mutual exclusivity among initial applications for licenses in the Commercial Mobile Radio Services.

18. Similarly, the comments make clear that under our rules, mutual exclusivity among Community Antenna Relay Service (CARS) applicants does not arise because of a *de facto* "first-come, first-served" policy and that therefore, the CARS should not be subject to competitive bidding. *See* comments of Cablevision, *et al.* We agree, and will not subject CARS spectrum to competitive bidding.

3. Mutual Exclusivity Unknown

19. There are a number of other pending proceedings to establish rules for new or recently authorized services in which the likelihood of mutually exclusive applications is unknown or is debated by the commenters. *See, e.g.,* PR Docket No. 92-235, 7 FCC Rcd 8105 (1992) ("refarming" of private radio spectrum below 512 MHz); PR Docket No. 93-61, 8 FCC Rcd 2502 (1993) (Automated Vehicle Monitoring (AVM) in the 902-928 MHz band). Similarly, we do not currently know whether mutual exclusivity will exist in the Digital Audio Radio Service (DARS), or in the Low Earth Orbiting Satellite (LEOs) and the Mobile Satellite/Radiodetermination Satellite Services (MSS/RDSS). At this time it is premature to determine whether mutual exclusivity will or will not occur in the DARS, the AVM service, or the LEO and MSS/RDSS offerings. With respect to pending or future services and any others that are either

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[6] In this context, the term "shared" means a spectrum allocation scheme where each licensee has equal right to use the spectrum and no user has the right to exclusive use of an entire spectrum allocation for that service.

[7] "First-come, first-served" and wait list procedures apply only to 800 MHz SMRs and have not applied when multiple mutually exclusive applications were received when the Commission opened a filing window inviting the submission of applications for licenses to operate on new SMR spectrum. *Cf.* ¶ 63, *infra.* We do not currently accept new 900 MHz SMR applications and we are currently considering proposals to restructure licensing of this service.

[8] As indicated in the NPRM at ¶ 138, we mean the 200 channel pairs at 900 MHz and the 280 channel pairs at 800 MHz available to SMRs under Section 90.617(d) of the Commission's Rules. We do not include those channels from other frequency pools which may be licensed to SMRs through our intercategory sharing rules or to General Category channels. *See* ¶ 47, *infra.*

experimental or interim in nature, the Commission cannot at this time presume that the prerequisites for competitive bidding will exist when we award initial licenses. We will, however, continue to monitor developments in these areas to determine, at a later date, whether competitive bidding for such spectrum might ultimately be appropriate.[9]

B. General Requirement of Subscribers

20. Section 309(j)(2)(A) requires that, to be subject to competitive bidding, the licensee must receive compensation in exchange for providing transmission or reception capabilities to subscribers. Thus, we will exclude from competitive bidding those services or classes of services in which licensees do not receive compensation from subscribers and, hence, are outside the scope of Section 309(j)(2)(A).

1. Broadcast Services Exclusion

21. Section 309's legislative history makes clear that applications for licenses to provide traditional over-the-air broadcast services should not be subject to competitive bidding. *See* H.R. Rep. No. 103-111 at 253. Consistent with the clear legislative intent, we proposed in the NPRM to exclude from the competitive bidding process broadcast television (VHF, UHF, LPTV) and broadcast radio (AM and FM).[10] Those commenters who address this issue generally agree with the Notice. *See, e.g.*, comments of AMTA and MSTV/NAB. One commenter, however, argues that traditional broadcast spectrum should be auctioned. *See* comments of Brown and Schwaninger.

22. Under the plain language of the statute, traditional broadcast services are excluded from competitive bidding because licensees do not receive compensation from subscribers. Moreover, the legislative history confirms Congress's clear intent to exclude these licenses and construction permits. We therefore exclude from the competitive bidding process the broadcast television (VHF, UHF, LPTV) and broadcast radio (AM and FM) as well as the ITFS services.[11] The for-profit subsidiary communications services transmitted by broadcast licensees on subcarrier frequencies that are indivisible from the main broadcast signal and similar services will also be excluded from the competitive bidding process given Congress's express intent to this effect. *See* H.R. Rep No. 103-111 at 253.

2. "Private Services" Exclusion

23. As we pointed out in the NPRM, the legislative history also refers to "private services" as those that do not involve the receipt of compensation from subscribers and thus are not to be subject to competitive bidding. In accordance with the plain language of the statute, we exclude from competitive bidding those services or classes of services in which licensees do not receive compensation from subscribers and, hence, are outside the scope of Section 309(j)(2)(A).

24. The House Report states that the enactment of competitive bidding authority should not affect the manner in which the Commission issues licenses for virtually all private services, including frequencies utilized by Public Safety Services, the Broadcast Auxiliary Service, and for subcarriers and other services where the signal is indivisible from the main channel signal. H.R. Rep. No. 103-111 at 253. In the context of determining eligibility for competitive bidding, however, the term "private services" was not intended to have the same meaning that the Commission has ascribed to private services in other contexts. *See, e.g.*, comments of AT&T and of NYNEX.[12]

25. The comments strongly support our "private services" analysis, including our tentative conclusion that the term "private services" referred to services that did not involve the payment of compensation to the licensee by subscribers, *i.e.*, that were for internal use. *See, e.g.*, comments of the American Petroleum Institute. We affirm our tentative conclusion. Consistent with the express intent of Congress, we also affirm that frequencies allocated to the Public Safety Services, or the Broadcast Auxiliary Services under Subparts D, E, F and H of Part 74 and shared with the Cable Television Relay Service under Part 78 of our Rules, will be exempt from competitive bidding. We also hold that subcarrier-based and similar services, such as those provided via the Vertical Blanking Interval, and for-profit subsidiary communications services transmitted on subcarriers within the FM baseband signal (see Section 73.295), will be exempt from competitive bidding where the underlying service is exempt. *See* H.R. Rep. No. 103-111 at 253. *Accord*, comments of MSTV/NAB.[13]

26. As we proposed in the NPRM at ¶ ¶ 27 and 145-146, and at nn. 123, and 157, application of the private services test leads us to conclude that certain additional services and classes of services should be excluded from competitive bidding as well. These include the 220 MHz channels

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[9] We note that a number of commenters advance additional reasons why competitive bidding for these services at s time appears to be premature. *See, e.g.*, comments of TRW. Furthermore, given the pendency of PR Docket Nos. 92-235 and 93-61, it would be speculative for us to decide on the auctionability of frequencies that may or may not become available as a result of those proceedings. *Cf.* comments of AAA.

[10] Although some television licensees may receive compensation from cable television operators under the "retransmission consent" provisions of the Cable Television Consumer Protection and Competition Act of 1992, these licensees will not be subject to competitive bidding. H.R. Rep. No 103-111 at 254. Similarly, Instructional Television Fixed Service (ITFS) will not be subject to competitive bidding even if ITFS licensees receive payments from Multichannel Multipoint Distribution Service licensees for use of ITFS spectrum because ITFS licensees do not receive compensation from "subscribers" as that term is used in Section 309(j)(2). *See* H.R. Rep. No. 213, 103d Cong., 1st Sess. (1993) (Conference Report) at 481-82.

[11] We defer consideration of whether licenses to provide Direct Broadcast Satellite (DBS) service should be subjected to competitive bidding until the nature of that service becomes clearer.

[12] We thus affirm the difference between the meaning of "private service" in the Section 309(j) auction context and "private mobile service" as that term has been defined in new Section 332(d)(3) as added by Section 6002 of the Budget Act. Private mobile radio services are distinguished from commercial mobile radio services in Section 332 on the basis of several criteria that are not relevant to Section 309(j), *e.g.*, whether interconnected mobile service is provided for a profit to the public or a substantial portion of the public. *See* Section 332 Second Report and Order. Most commenters addressing this issue agree with this analysis. *See, e.g.*, comments of AT&T, API and AAR.

[13] *See also* subsection B.1., *supra* (Broadcast Services Exclusion).

reserved for private service (including public safety), 800 MHz trunked systems operated on a not-for-profit, cooperative sharing basis, or 800 or 900 MHz systems for internal use in non-SMR frequency pools.[14] Most of the comments which address this issue support our proposal. *See, e.g.,* comments of API.

27. We will also defer a decision on whether to auction 220 MHz "local" licenses should the Commission need to conduct additional licensing in that class of service. As we pointed out in the NPRM, the 220 MHz service is a new service and, with the exception of those 220 MHz frequencies the Commission reserved for specific purposes (*e.g.,* the 220 MHz nationwide "commercial" and "noncommercial" channels and the 220 MHz channels reserved for public safety purposes), the 220 MHz "local" channels may be used for private service or for the provision of service to subscribers. Because the service was new, we asked commenters to submit information on the likely use of these frequencies.

28. Almost every commenter who addressed this issue argued that it is still too early to classify the 220 MHz local channels as likely to be used for the provision of service to subscribers or for private use. *See, e.g.,* comments of AMTA, Roamer One, UTC and E.F. Johnson, reply comments of TDS. Based on the record, we will temporarily defer any decision on whether to auction 220 MHz local channels, although our observations of the development of this service to this point lead us to tentatively conclude that it is likely to be a subscriber based service.[15] When the nature of this service becomes clearer, as we anticipate, we will decide whether future applications for 220 MHz local service should be subject to competitive bidding.[16]

29. Future initial applications for 220 MHz Commercial Nationwide licenses will be auctioned if the Commission ever accepts mutually exclusive initial applications again for that service, as it is clear that they are within the ambit of Section 309(j). As we stated at ¶ 135 of the NPRM, these frequencies have been designated for use principally to provide for-profit service to subscribers. *Accord,* comments of NABER. Future initial applications for 220 MHz Noncommercial Nationwide licenses will not be auctioned; as licenses limited to the provision of private service, they are outside the ambit of Section 309(j). *See* comments of UTC.

C. Principal Use Requirement

30. Under Section 309(j)(2)(A), for spectrum to be subject to competitive bidding, the "principal use" of that spectrum must involve, or be reasonably likely to involve, the transmission or reception of communications signals to subscribers for compensation. The Commission has a number of service classifications where a licensee may provide service to itself only, offer communications service to subscribers for compensation, or provide service both to itself and to subscribers.[17] By directing the Commission to identify the "principal use" of spectrum, Congress recognized the existence of such mixed use services.[18]

31. To address these situations and to comply with the statutory intent, we proposed that, in order to be subject to auctions, at least a majority of the use of a Commission regulated service or class of service must be for service to subscribers for compensation. NPRM at ¶ 31. We asked commenters to address the merits of measuring or estimating the extent of private or internal use by information throughput or by the amount of time or spectrum that is devoted to private use. *Id.* at ¶ 32, n.14. We also sought comment on an alternative proposal, a so-called "contaminated band" proposal, under which a service or class of service could be subject to competitive bidding if there were any use, no matter how minimal, in which one or more licensees within a given service or classification of service used that spectrum for the provision of service to

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[14] The fact that SMRs might occasionally be able to access these frequencies through our intercategory sharing rules would not change this result inasmuch as the principal use of these frequencies is clearly for private services. *See* comments of API. It is also clear that the six frequency pairs in the 900 MHz band set aside for the Advanced Train Control Service meet the private service test and should be excluded from competitive bidding. *See* comments of AAR.

[15] This decision is not inconsistent with our decision in GN Docket No. 93-252, Implementation of Sections 3(n) and 332 of the Communications Act, FCC 94-31, released March 7, 1994, ("Section 332 Report and Order") that some 220 MHz local licensees will be Commercial Mobile Radio Service (CMRS) and some will not, depending on whether they meet the statutory criteria for Commercial Mobile Radio Service. *See* Section 332 Report and Order at ¶ 95. Unlike the decision on whether 220 MHz local licensees are CMRS, which is made on a license by license basis, the decision on whether 220 MHz local channels will be subject to competitive bidding will depend on the principal use of that entire class of service. Additional observation of the manner in which the 220 MHz local service develops will provide us with a firmer basis on which to decide whether competitive bidding is appropriate for this class of service.

[16] The Commission has already conducted a lottery for 220 MHz local licenses for the entire United States and granted every license it could from among the applications it received. Licensees are currently in the process of constructing their systems. It is unclear which, if any, of these licensees will have their licenses cancelled for failure to construct or for other reasons. As such, unlike other services, *e.g.* the Interactive Video Data Service (IVDS), there is no immediate need to decide whether future mutually exclusive applications in this service should be subject to competitive bidding before service can be made available to the public.

[17] An example of such a service is the Private Operational Fixed Service ("POFS") licensed under Part 94 of the Commission's Rules.

[18] *See* 47 U.S.C. § 309(j)(3) (Commission to identify "classes of licenses" to be issued by competitive bidding); H.R. Rep. No. 103-111 at 254 (Section 309(j)(2) determination to be made when a service or class of service is defined by Commission).

subscribers for compensation.[19] We received a range of suggestions from commenters on this issue. *Compare* comments of AT&T, ITA and Domestic Automation (favoring principal use determinations on a service or class of service basis) *with* comments of AAA (suggesting a license-by-license approach) and comments of PacBell (supporting the "contaminated band" proposal).

32. As explained below, we will look to classes of licenses and permits to determine their "principal use." In order to determine the principal use in a service, we will compare the amount of non-subscription use made by the licensees in a service as a class with the amount of use rendered to eligible subscribers for compensation on the basis of information throughput, time, or spectrum. We also adopt our proposal that at least a majority of the use of a Commission regulated service or class of service must be for service to subscribers for compensation. We believe that the so-called "contaminated band" proposal is at odds with the express statutory language requiring that the principal use, not any use, of the service or class of service in question be for subscription-based purposes before auctions are permitted.

33. We also reject the arguments by commenters such as AAA that the Commission must examine individual applications to determine each licensee's principal use of the spectrum. We do not agree that the Budget Act mandates that the "principal use" determination be made on a license-by-license basis. Although Section 309(j)(2)(A) of the Act does refer to licensees, it requires that the "principal use of the *spectrum*" be for compensation (emphasis added). Had Congress intended the principal use determination to be made on a license by license basis, the Budget Act would have specifically stated this requirement. Also, Section 309(j)(3) refers to "each *class* of licenses or permits that the Commission grants through the use of a competitive bidding system . . ." (emphasis added). Moreover, the House Report states that the principal use determination should be made when a service or class of service is created by the Commission and that the Commission should review existing services, not licenses, to see if they meet the principal use test. H.R. Rep. No. 103-111 at 8.

34. We therefore believe that the best course is to evaluate classes of licenses and permits, rather than individual licenses, to determine the "principal use" of the spectrum, and further believe that approach is most consistent with Congressional intent.[20] In order to determine the principal use in a service, we proposed to compare the amount of non-subscription use made by the licensees in a service as a class with the amount of use rendered to eligible subscribers for compensation on the basis of information throughput, time, or spectrum. At least a majority of such use would have to be for service to subscribers for compensation in order for a service to be subject to competitive bidding. *See* NPRM at ¶ 32, n.14. This approach found support in the comments (*see, e.g.*, comments of AAR), and we adopt it.[21]

35. For existing services, our experience in regulating communications services will help us to accurately determine principal use. For example, in our experience and using any of the measurements that we proposed, the vast majority of use of the POFS as a class is for private or internal use by the licensee or its affiliates for which no compensation of any kind is paid. Our interpretation of the principal use test led us to propose that applications in the 470-512 MHz private land mobile services also should not be subject to competitive bidding.[22] NPRM at nn.16 and 154. Most commenters agreed with our view of the principal use of these two classes of service. *See, e.g.*, comments of APCO, AAR, UTC and API. We therefore adopt our proposal to exclude the 470-512 MHz private land mobile services and the POFS[23] from competitive bidding.[24] Finally, the few comments we received on the subject argue strongly that the MAS is principally used for private service and are unrebutted. *See, e.g.*, comments of UTC, Fisher Wayland, and Domestic Automation. The comments comport with our own experience and the MAS will therefore be exempted from competitive bidding.[25] We will make other determinations on principal use with regard to other specific services in future Reports and Orders.

36. We also decline at this time to adopt APCO's proposal to exempt from competitive bidding any radio service that has or is likely to have significant use by state and local government licensees. We have already exempted from competitive bidding the public safety services over which APCO expressed the most concern (*see* ¶ 47, *infra*), and believe it would be premature and speculative to try to ascertain what other services are likely to be significantly used by state and local government licensees.

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[19] We noted, however, that such an approach seemed inconsistent with the "principal use" standard. NPRM at ¶ 33.

[20] NYNEX's comments suggested three other tests: (1) a service would be presumed "private" based on majority use of the spectrum but parties would have an opportunity to rebut that presumption; (2) any license issued by the Commission in a service classified as "private" should be conditioned on the licensee's principal use of that spectrum for that purpose; violation of this condition would result in license forfeiture or a penalty; and (3) a service that might be considered private based upon majority use should nevertheless be subject to auction if more than $100,000 is received as compensation from subscribers. We reject NYNEX's last suggestion as essentially equivalent to the "contaminated band" proposal rejected above. NYNEX's first two suggestions appear to be variants of the classification by license scheme we have rejected for the reasons previously stated.

[21] As pointed out by AT&T in its comments, there is no way to anticipate today all of the possible uses of the electromagnetic spectrum. Thus, with respect to the measures to be used in making the principal use determination, we will, as AT&T suggests, retain the ability to use any of the measurement methods described above, as proposed at n.14 of the NPRM.

[22] Most of these frequencies are shared, and therefore applications will not be mutually exclusive with one another. *See* comments of UTC.

[23] We do not adopt API's suggestion that the 18 GHz POFS Video Entertainment stations be treated separately from the rest of the POFS inasmuch as it is speculative whether these stations will function as private carriers as API asserts.

[24] Because the principal use of these classes of services is for private service, in the event that mutual exclusivity should occur among applicants for initial licenses, we are permitted to use lotteries to resolve that mutual exclusivity. *See* Section 309(i)(1).

[25] Since we have found the principal use of MAS to be for private service, Section 309(j) does not authorize us to use competitive bidding to award licenses for mutually exclusive pre-July 26, 1993 MAS applications pending before the Commission. We will therefore lottery these applications.

D. Initial and Modification Applications

37. As we pointed out in the NPRM, Congress apparently expected that applications to modify existing licenses would not be subject to competitive bidding.[26] While the commenters generally agree that modification applications should not be so subject, several commenters ask that the Commission clarify that certain types of mutually exclusive applications to modify existing licenses (*e.g.*, to add radio channels to an existing system), may be so different in kind or so large in scope and scale as to warrant competitive bidding if mutual exclusivity exists. *Cf.* comments of RAM and NABER.[27] Where a modification would be so major as to dwarf the licensee's currently authorized facilities and the application is mutually exclusive with other major modification or initial applications, the Commission will consider whether these applications are in substance more akin to initial applications and treat them accordingly for purposes of competitive bidding.

38. We believe that there is merit in this course. It comports with our objectives of increasing competition and awarding spectrum to those who value it most highly. Accordingly, though as a general rule the Commission will regard mutually exclusive applications to modify existing licenses as not subject to competitive bidding, we may, on our own motion or in response to a petition from an interested party, determine that a major modification application in a particular service, if it is mutually exclusive with other applications, should be treated as an initial application and be subject to competitive bidding.

39. Similar questions of auctionability arise when applicant A files an application to modify its existing license, which in turn opens a window for another applicant, B, to file a competing initial application which is mutually exclusive with that of A. *See, e.g., Maxcell Telecom Plus, Inc. v. FCC*, 815 F.2d 1551 (D.C. Cir. 1987).[28] The statute requires the existence of "mutually exclusive applications [that are] accepted for filing for *any* initial license or construction permit," 47 C.F.R. § 309(j)(1) (emphasis supplied), but the legislative history makes clear that competitive bidding is not permitted "in the case of a renewal or *modification* of the license." H.R. Rep. No. 103-111 at 253 (emphasis supplied). Were we to read the statute literally, since one of the two applications in the example above is an initial applications, competitive bidding is arguably applicable. But such a result would also lead to competitive bidding by a modification applicant.

40. Given this apparent lack of clarity, we intend to deal with these situations on a case-by-case basis as it is impossible to know the factual context within which such mutual exclusivity might occur. We retain the authority to use comparative hearings to resolve mutual exclusivity between initial and modification applications, but also believe that competitive bidding may be appropriate in some of these cases as well.[29]

E. Intermediate Links

41. In the NPRM, we proposed that a license for frequencies used in a service as an "intermediate link" in the provision of a continuous, end-to-end service, *i.e.*, one used by a licensee as part of a service offering to subscribers, but not one on which subscribers directly send or receive communications signals, would be subject to competitive bidding. NPRM at ¶ 29.[30] We believed that such a result would be administratively efficient because it would eliminate the necessity of determining the exact nature of the use to be made of a particular license by a particular applicant.

42. As noted, in order for a license to be subject to competitive bidding, Section 309(j)(2)(A) requires that the subject spectrum enable subscribers to "receive communications signals" or to "transmit directly communications signals." The comments strenuously and almost unanimously opposed the Commission's proposal, in part on the basis that by definition, an intermediate link cannot transmit communications signals directly. *See, e.g.*, comments of AT&T. Other commenters believe that auctions would not promote the objectives of Section 309(j)(3).

43. We have decided not to adopt the NPRM's proposal. Before employing competitive bidding for intermediate links, we are still required to determine that mutual exclusivity exists and that such bidding would promote the objectives of Section 309(j)(3)(A) through (D). As to mutual exclusivity, we note that on those types of frequencies most often utilized as intermediate links, mutual exclusivity is very rare because of frequency coordination efforts made prior to the time an application is filed. *See, e.g.*, reply comments of Alcatel. We are also concerned that auctioning intermediate links might lead to significant delays in

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[26] *See* NPRM at ¶ 22; *see also* H. R. Rep. No. 103-111 at 253. *Cf.* Maxcell Telecom Plus, Inc. v. FCC, 815 F.2d 1551 (D.C. Cir. 1987).

[27] The May 14, 1992 Public Notice (Mimeo No. 23115) referenced by Alcatel in its reply comments was not issued for the purpose of determining what constitutes a "modification" of a microwave license. Therefore, its comment is inapposite. *Cf.* 47 C.F.R. Sec. 94.45.

[28] This scenario was raised by AllCity Paging in its comments. AllCity noted that under Section 22.33(c)(1) of our Rules, when a common carrier public mobile service applicant seeks to add one or more transmitters and which meets certain criteria is faced with a mutually exclusive initial applicant, the first applicant is entitled to request a comparative hearing to determine which application should be granted. AllCity requests the retention of this procedure notwithstanding that the Commission has proposed elimination of this rule in CC Docket No. 92-115, 7 FCC Rcd 3658 (1992). Telocator, however, suggested that such mutual exclusivity be resolved through competitive bidding.

[29] In the specific hypothetical raised by AllCity Paging, for example, we are inclined to believe that if the modification application that is filed by the first applicant is substantial enough to require prior permission from the Commission, *see, e.g.*, Section 22.9(d) of our Rules, it is the equivalent of a new or initial application and we are thus permitted to use auctions to resolve the mutual exclusivity.

[30] Examples of such intermediate links include cellular carriers transmitting subscriber traffic between cell sites and its Mobile Telephone Switching Office, or a local exchange telephone company using microwave links as one means of transmitting local exchange telephone service. Similarly, point-to-point microwave frequencies in the CARS are often used by cable television companies to transmit television programming to different points within or among systems although not directly to their subscribers. Another type of intermediate link is the so-called "MSS feederlink" discussed by several of the commenters. *See* reply comments of Loral Qualcomm.

the provision of services thus hindering the development and rapid deployment of new technologies, products and services for the benefit of the public. *See, e.g.*, comments of Southwestern Bell. Further, such auctions would impose significant administrative costs on licensees and on the Commission, particularly relative to the likely value of these licenses. It is thus unclear whether using auctions to award licenses for intermediate links would promote the objectives in Section 309(j)(3)(C). Therefore, intermediate links, including MSS feederlinks, CARS frequencies,[31] and point-to-point microwave frequencies regulated under Parts 21[32] and 94[33] of the Commission's rules will not be subject to competitive bidding.[34]

F. Services For Which Competitive Bidding Would Not Further Section 309(j)(3) Objectives

44. As exemplified above in our consideration of whether intermediate links should be auctioned, a system of competitive bidding may only be used if it would promote the objectives of Section 309(j)(3), even if the principal use of the spectrum otherwise satisfies the requirements for competitive bidding. Based on the comments, we have identified a number of circumstances where auctions do not appear to be consistent with these statutory objectives or are otherwise inconsistent with Congressional intent.

45. In response to n.174 of the NPRM, a number of commenters noted that the Basic Exchange Telephone Radio Service (BETRS) and certain paging services use the same spectrum and that mutual exclusivity between them was possible. *See, e.g.*, comments of Interdigital. The Rural Radio Service, including the BETRS, is a fixed service regulated under Subpart H of Part 22 of our Rules. The frequencies in these services are most commonly used in the provision of telephone service to remote locations where it is impractical or uneconomic to provide such service via landline. *See* comments of GTE. Because rural radio, including BETRS, frequencies are co-primary with certain common carrier mobile services, it is possible that mutual exclusivity may occur between BETRS applications and other common carrier applications.[35]

46. The commenters argue that it would not serve the public interest to subject rural radio frequencies to competitive bidding because doing so would frustrate the important goals of universal service embodied in Section 1 of the Communications Act, which are incorporated by reference in Section 309(j)(3). *See* comments of NTCA. We agree. It would not serve the public interest for the Commission to establish services such as the BETRS as a potential less costly alternative to landline service[36] and then require a BETRS applicant to bid against a radio common carrier applicant for those frequencies. *Accord,* reply comments of Southwestern Bell. Therefore, we will not conduct auctions to resolve mutual exclusivity between initial BETRS or rural radio applications and common carrier mobile service applications.[37] We note that this is consistent with our decision on General Category frequencies discussed below.

47. In the NPRM, we proposed to exclude from competitive bidding procedures certain private radio channels known as the General Category[38] channels as well as other classes of frequencies subject to intercategory sharing. *See* NPRM at ¶ ¶ 139-141. These frequencies can be used by both SMRs, who are commercial mobile radio service providers, as well as for internal private service. Subjecting the General Category or non-SMR intercategory shared frequency pools to competitive bidding, however, might force police departments, for example, to bid against SMRs for spectrum. This would be contrary to Congressional intent and disserve the public interest. The comments strongly support this conclusion. *See* comments of APCO, AMTA, and AAA. Therefore, we will exclude from competitive bidding General Category channels and other intercategory classes of frequencies.[39]

G. Specific Services Subject to Competitive Bidding

48. In ¶ ¶ 114-166 of the NPRM, we identified a number of services and classes of services that appeared to fall within the ambit of the competitive bidding provisions of the Budget Act if mutually exclusive initial applications were accepted for filing. Most spectrum-based common carrier services, some private mobile radio services,[40] some

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[31] As we pointed out earlier at ¶ 18, CARS applications are not subject to mutual exclusivity and are therefore exempt from competitive bidding for this reason as well.

[32] In the event that we receive mutually exclusive applications for common carrier point-to-point microwave facilities that would provide service to subscribers, we might conduct comparative hearings to resolve such mutual exclusivity. *See* Section 309(i)(1)(B). We expect such instances to be rare, however.

[33] As noted elsewhere, Part 94 point-to-point microwave users are exempt from competitive bidding because the principal use of these frequencies is for private service. *See, e.g.*, comments of APCO.

[34] In view of our intent not to auction any point-to-point microwave licenses, whether private or common carrier, our proposal to exempt from competitive bidding those entities forcibly relocated by our orders in ET Docket No. 92-9 is moot. *See* NPRM at ¶ 128, n.118.

[35] Because local exchange carriers generally operate under exclusive franchises, we do not anticipate mutual exclusivity between BETRS applications.

[36] *See* Basic Exchange Telecommunications Radio Service, 3 FCC Rcd 214 (1988).

[37] Because the principal use of both of these services is for the provision of service to subscribers for compensation, the Commission would have to resolve such mutual exclusivity through a comparative hearing. *See* Section 309(i)(1). We are confident, however, that applicants can negotiate to resolve such mutual exclusivity.

[38] General Category channels are frequencies at 800 MHz that have been allocated to eligibles for conventional operations. *See* 47 C.F.R. § 90.615. Some of the General Category channels may be licensed for commercial use by Specialized Mobile Radio licensees.

[39] In addition, it also appears that General Category channels are not subject to competitive bidding because they are not principally used for subscriber based services. *See* comments of UTC. Similarly, channels in non-SMR frequency pools may in some cases be accessed by SMRs, but only if SMR frequencies are unavailable. *See, e.g.*, Section 90.621(g) of our rules. The principal and primary use of these non-SMR frequencies is for the services to which they have been allocated. *See, e.g.*, Section 90.617.

[40] A licensee could be classified as a provider of private mobile radio service for purposes of Section 332 and still be subject to competitive bidding under Section 309(j). An SMR that provides only dispatch service and is not interconnected with the public switched network, for example, would be regulated as a private mobile radio service under Section 332, yet still be

private fixed services,[41] and commercial mobile radio services will be subject to competitive bidding, assuming the other statutory criteria are met. We have determined that several of those services and classes of services should be auctioned, and discuss them further below.

1. Interactive Video Data Service

49. In ¶ ¶ 142-144 of the NPRM, we proposed to auction any future mutually exclusive applications for the Interactive Video Data Service (IVDS) for we believed that this new service fulfilled all of the statutory prerequisites for competitive bidding. A number of commenters speculate that IVDS will have no subscribers on the basis that the service will be provided free to consumers and supported by advertising revenues or revenues from transactions conducted using the interactive features of IVDS. They therefore urge that the Commission not utilize auctions to award IVDS licenses in the future. *See, e.g.*, comments of Quentin L. Breen, Independent Cellular Consultants, Professor Andrea Johnson, and Richard L. Vega Group and reply comments of America 52 East, Kingswood Associates and Harry Stevens, Jr.[42]

50. We disagree. While it may be true that the business plans of some would-be IVDS applicants contemplate that the consumer of the IVDS service will pay nothing for the response transmitter units (RTUs), we remain convinced that IVDS will primarily "provide information, products, or services to individual subscribers."[43] We note, for example, that Radio Telecom and Technology, Inc. (RTT), a developer of IVDS equipment and a longtime participant in the Commission's proceedings which created IVDS, argues that IVDS licenses should be awarded pursuant to competitive bidding.[44] Moreover, the Commission recently received an *ex parte* presentation from Eon Corporation (formerly TV Answer, Inc.). Eon is a developer of IVDS equipment and a longtime participant in our proceedings creating IVDS, and has obtained FCC certification for its equipment. Eon indicates that IVDS will include a substantial number of services that are compensated by subscribers. Eon further believes that in order to be successful, IVDS cannot be supported on a non-subscription, free to the consumer basis.

51. Based on the record, we must try to predict whether the principal use of IVDS will be "reasonably likely to involve" the receipt of compensation from subscribers. The record indicates that it will. We accord great weight to the views of RTT and Eon because these parties have been associated with IVDS since its early days. They have invested substantial amounts of time and money in developing the service and are in a position to understand the likely use of IVDS.

52. We also believe that the use of competitive bidding will promote the objectives of Section 309(j)(2)(B) as follows. First, the use of auctions for IVDS is likely to contribute to the rapid deployment of this new technology and will promote the efficient and intensive use of the electromagnetic spectrum. When we established the IVDS, we prescribed an application fee of $1400 and still received hundreds of applications for the first nine IVDS markets. Since we have lowered the IVDS application fee from $1400 to $35,[45] we anticipate being inundated with thousands of applications. Given the length and expense of comparative hearings, we do not believe that such hearings are a realistic alternative means of resolving mutual exclusivity among-IVDS applicants. Without auctions, we fear that licenses would not quickly be awarded to parties able to efficiently use them, which, combined with the administrative burdens of processing thousands of applications and the associated litigation that is likely to ensue, will unreasonably delay deployment of this new service. Second, under the rules we shall establish for designated entities, use of auctions to award IVDS licenses should also fulfill the Congressional objective of promoting economic opportunity and competition as well as dissemination of licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women. Finally, auctions will also recover for the public a portion of the value of the public spectrum.

53. We note in addition that the use of auctions for IVDS is fully consistent with the intent of Congress. Congress clearly envisioned that the IVDS would be subject to competitive bidding, for the Budget Act's legislative history states that the exception permitting the Commission to conduct lotteries for pre-July 26, 1993 applications would "permit the Commission to conduct lotteries for the nine Interactive Video Data Service markets for which applications have already been accepted. . . ."[46] Had the Congress not expected that the Commission would auction IVDS applications generally, it seems that there would have been no need for this statement. We therefore hold that auctioning of mutually exclusive IVDS applications will further the objectives of Section 309(j)(3).[47]

2. Personal Communications Services

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subject to competitive bidding if mutual exclusivity existed inasmuch as we have generally classified all frequencies allocated to SMRs as subject to competitive bidding. *Compare* ¶ 63, *infra*, with Section 332 Report and Order at ¶ 90.

[41] *See, e.g.*, the discussion concerning the Interactive Video Data Service, *infra*.

[42] Others, however, urge that future mutually exclusive IVDS applications be auctioned. *See* comments of the Chase McNulty Group, NYNEX, and Radio Telecom and Technology, Inc.

[43] *See* Amendment of Parts 0, 1, 2, and 95 of the Commission's Rules to Provide Interactive Video Data Service, 7 FCC Rcd 1630, 1637 (1992).

[44] We discount America 52 East's speculation in its reply comments that RTT's comments are unworthy of consideration because they are based solely on the latter's pecuniary interest. America 52 East's assurances that to receive IVDS service a customer need only go to any electronics store and purchase the necessary equipment and that there will be no subscription fee are similarly unconvincing since IVDS is not yet available.

[45] *See* Second Reconsideration in PR Docket No. 91-2, 8 FCC Rcd 2787 (1993).

[46] *See* Conference Report at 498. The Commission held lotteries on September 15, 1993, for licenses in first nine IVDS markets, applications for which were filed prior to July 26, 1993.

[47] Because we classify IVDS as a whole as subject to competitive bidding, we disagree with the comment of Professor Andrea Johnson, who seems to argue for a license-by-license classification of IVDS, an approach we reject.

54. We proposed in §¶ 115-130 of the NPRM to award both narrowband and broadband PCS licenses by competitive bidding in case of mutual exclusivity and tentatively concluded that PCS would meet all of the prerequisites for such bidding, including the requirement of subscribers. We noted our expectation, judging from the nature of the comments and the myriad *ex parte* presentations that we have received in the various PCS proceedings, as well as the identity of the commenters, that many PCS licensees will operate in the manner contemplated by new Section 309(j)(2)(A). *See* NPRM at ¶ ¶ 115-119. The vast majority of the commenters who addressed this issue either agreed that mutually exclusive PCS applications should or must be subject to the competitive bidding process, or simply assumed that such applications will be auctioned. *See, e.g.,* comments of Arch Communications, BellSouth, Bell Atlantic, TDS, Time Warner, and UTC, reply comments of Telocator.

55. Only one commenter seriously disputed the Commission's tentative conclusion that PCS licenses should be awarded by competitive bidding. Millin Publications, a publisher of specialized information services, intends to file PCS applications to provide service in a manner akin to the broadcast industry, *i.e.,* without subscribers. Millin's PCS network would allow purchasers of goods to pay for their items electronically using hand-held personal digital assistants free of charge except for the cost of hardware. Compensation would be paid by the vendor. It argues that, given that PCS does not yet exist and the very flexible regulations proposed for the service, the Commission should not find that PCS is reasonably likely to be a primarily subscription service technology.

56. We disagree. An overwhelming number of the commenters either actively support or implicitly assume that the principal use of licensed PCS spectrum is likely to be for the provision of service to subscribers for compensation.[48] Our own experience confirms this: of the scores of experimental PCS applications that the Commission has granted, a clear majority have proposed some variation of a charge on subscribers, whether for airtime or for the lease of subscriber equipment or both. Many of these licensees have submitted market studies on the effect of various pricing schemes on consumer demand.[49] In view of this evidence, we believe that the principal use of narrowband and broadband PCS licenses is "reasonably likely to involve the licensee receiving compensation from subscribers."[50] And, even assuming that some PCS licensees may ultimately not provide a subscriber-based service to their customers, the Commission must look to the likely principal use of spectrum in narrowband and broadband PCS when determining whether competitive bidding is applicable.[51]

57. We also confirm that the use of competitive bidding will speed the development and rapid deployment of PCS service to the public, including those residing in rural areas, with minimal administrative or judicial delays, as required by Section 309(j)(3)(A). Because we have confirmed that PCS would operate in the manner contemplated by Section 309(j)(2)(A), new Section 309(i)(1)(B) does not permit the Commission to utilize lotteries to choose from among mutually exclusive PCS applicants, leaving comparative hearings as our sole alternative. As we stated in the NPRM, our experience with the comparative hearing process has been less than satisfactory in terms of both administrative and judicial delay: competitive bidding should avoid this time consuming litigation.[52] Likewise, in contrast with comparative hearings, auctions will promote the objectives of Section 309(j)(3)(C) by recovering for the public a portion of the value of the spectrum made available for commercial use. We have also promulgated general rules, applicable to PCS, which are designed to avoid unjust enrichment as well as rules to ensure the opportunity for participation in auctions by the entities designated by Congress.

58. Finally, in accordance with subsection (j)(3)(D), we believe competitive bidding will promote efficient and intensive use of the spectrum in the case of PCS. We have defined PCS broadly as composed of a "wide array of mobile, portable and ancillary communications services to individuals and businesses." *Narrowband PCS Order,* ET Docket No. 92-100 and GEN Docket No. 90-314, FCC 93-329 (released July 23, 1993) at ¶ ¶ 13-14. Auctions are therefore likely to reinforce the desire of licensees to make efficient and intensive use of PCS spectrum. Auctions make explicit what others are willing to pay to use the spectrum, and the licensees' need to recoup the out-of-pocket expenditure for a license should provide additional motivation to get the most value out of the spectrum.

3. Common Carrier and Commercial Mobile Radio Services

59. Common carriers have subscribers; by definition, their services are offered indifferently to the public for hire[53] and therefore satisfy the requirements of Section 309(j)(2)(A). The new CMRS providers, who are treated as common carriers under Section 332(c), also have subscribers and thus also satisfy 5Section 309(j)(2)(A).[54] We proposed that spectrum-based common carrier services and commercial mobile radio services should be subject to auction if they met the other criteria for competitive bidding. *See* NPRM at ¶ 26. We discuss below specific common carrier and commercial mobile radio services that will be subject to competitive bidding.

60. *Public Mobile Services.* The Public Mobile Services are regulated under Part 22 of the Commission's Rules and include the Public Land Mobile Service (Subpart G), the Rural Radio Service (Subpart H), the Domestic Public Cellular Radio Telecommunications Service (Subpart K), the Offshore Radio Telecommunications Service (Subpart

[48] *See, e.g.,* comments of UTC.M

[49] *See, e.g.,* Amendment of the Commission's Rules to Establish New Personal Communications Services, Third Report and Order in GEN Docket No. 90-314, et al., FCC 93-550, released February 3, 1994.

[50] We anticipate that this would be the case with both "wideband" and "narrowband" PCS services. Our analysis, of course, does not apply to unlicensed PCS.

[51] For purposes of this discussion, we need not resolve whether the service described by Millin is, in fact, a non-subscription service within the meaning of Section 309(j)(2).

[52] *See, e.g.,* Kwerel and Felker, "Using Auctions to Select FCC Licensees," OPP Working Paper Series No. 16, May 1985. In our experience, most comparative hearings for licenses in rural areas do not proceed appreciably faster than comparative hearings for licenses in most urban areas.

[53] Section 3(h), Communications Act, 47 U.S.C. § 153(h).

[54] A commercial mobile radio service is a "for-profit" service and is treated as common carriage under Title II of the Act. 47 U.S.C. §§ 332(c)(1)(A) and (d)(1). The Commission has adopted rules governing the regulatory treatment of commercial mobile radio services. *See* Section 332 Second Report and Order, *supra.*

L) and the 800 MHz Air-Ground Radiotelephone Service (Subpart M). In the NPRM, we asked whether each of these services should be subject to competitive bidding. The comments we received with respect to these services focussed almost exclusively on two issues: the applicability of competitive bidding to certain cellular radio applications pending with the Commission on July 26, 1993,[55] and the applicability of competitive bidding to the Basic Exchange Telecommunications Radio Service (BETRS) and the Rural Radio Service.[56]

61. Outside of the two issues mentioned above or where the statute was unclear,[57] no commenter seriously disputed the applicability of auctions to mutually exclusive initial applications in the Public Mobile Services. Neither did any commenter seriously dispute our tentative finding in ¶ 147 of the NPRM that competitive bidding would promote the objectives of Section 309(j). Unless specifically excluded,[58] such applications will be subject to competitive bidding.

62. *Multipoint Distribution Service (MDS) and the Multichannel Multipoint Distribution Service (MMDS).* In the NPRM, we specifically proposed that future mutually exclusive MDS and MMDS initial applications be subject to competitive bidding, believing that doing so would promote the objectives of Section 309(j).[59] Although we do not address in this Second Report and Order the applicability of competitive bidding to MDS and MMDS applications which were filed prior to July 26, 1993,[60] we believe that new initial applications for these common carrier services are otherwise eligible for competitive bidding. Very few comments were filed on this subject, but those that addressed it did not oppose competitive bidding. *See, e.g.,* comments of Wireless Cable Association International. No commenter seriously disputed the applicability of competitive bidding to mutually exclusive initial applications in the MDS and MMDS or our tentative finding in ¶ 147 of the NPRM that competitive bidding would promote the objectives of Section 309(j). Therefore, at such time as the Commission accepts additional initial applications for MDS and MMDS licenses, we will resolve any mutual exclusivity between these channels by using competitive bidding. Because it is unclear when the existing freeze on new applications will be lifted, however, we defer promulgation of specific rules until that time.

63. *SMR and Exclusive PCP Services.* If multiple SMR initial applicants file for the same channels in the same location on the same day and if the Commission's existing procedures do not avoid mutual exclusivity, or if two or more PCP systems in the future file mutually exclusive initial applications, we intend to use competitive bidding to select from among competing applications.[61] Our rules explicitly contemplate and expect that these licensees will provide service to eligible subscribers for compensation.[62] We know from experience that this is the principal use of SMR and exclusive PCP spectrum, and the comments support our determination. *See, e.g.,* comments of GTE and McCaw.

64. We also believe that the use of competitive bidding will speed the development and rapid deployment of SMR service, including those residing in rural areas, with minimal administrative or judicial delays as required by Section 309(j)(3)(A). Because we have confirmed that SMR providers operate in the manner contemplated by Section 309(j)(2)(A), new section 309(i)(1)(B) does not permit the Commission to utilize lotteries to choose from among mutually exclusive initial SMR applicants, leaving comparative hearings as our sole alternative to resolve such mutual exclusivity. Such hearings are likely to be lengthy, contentious, and complex. Given this prospect, we believe that competitive bidding is likely to be a faster means of delivering service to the public. With respect to promoting the objectives of Section 309(j)(3)(C), we also believe that competitive bidding will recover for the public a portion of

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[55] *See, e.g.,* comments of John G. Andrikopoulos, *et al.*, Abby Dilley, various partners in The Quick Call Group, John Dudinsky, Jr., M. Kathleen O' Connor, and James F. Stern. As noted, we will address the applicablility of competitive bidding to certain cellular radio applications filed prior to July 26, 1993, in a separate order. These applications present unique issues because of the special rule that Congress adopted in Section 6002(e) of the Budget Act that is applicable only to mutually exclusive applications filed prior to that date. The status of the applications at issue in *McElroy Electronics v. FCC*, 990 F.2d 1351 (D.C. Cir. 1993), will likewise be decided at that time since they present similar issues.

[56] *See, e.g.,* comments of Interdigital. The applicability of competitive bidding to the BETRS and the Rural Radio Service is discussed in subsection F, *supra*.

[57] *See, e.g.,* comments and reply comments of AllCity Paging.

[58] *See, e.g.,* the discussion at ¶ ¶ 45-46 excluding the BETRS from competitive bidding on grounds that auctioning licenses in these services would not further the objectives in Section 309(j)(3). In some cases, Public Mobile Service licenses are available to end users as well as common carriers. *See, e.g.,* Section 22.100 (Offshore Radio Service may be licensed to end users) and Section 22.600 (Rural subscriber stations may be licensed to individual users of the service). We defer resolution of the issue of mutually exclusive applications between common carriers and end users to a later date inasmuch as mutual exclusivity in these classes of services is extremely rare; should it occur, we will decide the appropriate course at that time. The 800 MHz air-ground radiotelephone service (although not the 450 MHz air-ground radiotelephone service, which has exclusive frequencies) will be excluded from competitive bidding because those frequencies are shared. *See* Section 22.31(h) of our Rules.

[59] *See* NPRM at ¶ ¶ 147-151. No MDS or MMDS applications are currently being accepted, due to a freeze which the Commission has placed on the filing of such applications. *See* Public Notice, "MDS/MMDS Applications Filing Freeze," released July 28, 1993.

[60] *See, e.g.,* comments of MW TV. We will address this issue in a separate order.

[61] In light of our past experiences with the release of new SMR spectrum, we believe that mutual exclusivity is highly likely if we were to release new SMR spectrum at the conclusion of PR Docket Nos. 93-144 and 89-553, the 800 MHz and 900 MHz SMR proceedings. *See* PR Docket No. 93-144, 8 FCC Rcd 3950 (1993); PR Docket No. 89-553, 8 FCC Rcd 1469 (1993). Due to the uncertainty over the outcome of these proceedings, however, we decline to confirm, as requested by AMTA and Cencall, that the licenses which may be issued as a result of those proceedings will not be the result of "initial" applications. *See* ¶ 66, *infra*. If at the conclusion of those proceedings we decide that 800 or 900 MHz SMR applications may fairly be characterized as modification applications, then we will not subject them to competitive bidding. AMTA's argument that the Congressional objective of effective and intensive use of the spectrum is unlikely to be satisfied if the Commission employs auctions to award 900 MHz licenses outside the Designated Filing Areas (the largest 50 markets in the U.S.) is speculative.

[62] *See* NPRM at ¶ 136 and n.129; PCP Exclusivity Report and Order, *supra*.

the value of SMR and exclusive PCP spectrum made available for commercial use and avoid unjust enrichment for the same reasons explained in conjunction with PCS service.

65. In the NPRM, we requested specific comments on how we should treat mutually exclusive finder's preferences which are currently governed by Section 90.611(d) of our Rules. Under that rule, members of the public may submit to the Commission information that results in the takeback of SMR and other categories of channels. Above, we have determined generally that frequencies allocated to the SMR service should, in the event of mutual exclusivity, be awarded pursuant to competitive bidding. We see no reason to treat mutually exclusive finder's preference requests for SMR frequencies differently from mutually exclusive applications for SMR frequencies. Therefore, we hold that in such event, the licenses should be awarded pursuant to competitive bidding. *Accord,* reply comments of Southwestern Bell. Conversely, if mutually exclusive finder's preference requests target General Category or non-SMR frequencies, they would not be subject to competitive bidding.

66. Although we believe that SMR services should be subject to competitive bidding, we note that we currently have before us proceedings that propose significant changes to our current 800 and 900 MHz SMR licensing policies. To attempt to promulgate competitive bidding rules governing mutually exclusive SMR licensing in the face of these licensing uncertainties is likely to be difficult, if not impossible.[63] As we move closer to resolving these issues, however, we intend to promulgate rules detailing how competitive bidding would apply in these services.

67. Although we conclude that mutually exclusive 900 MHz PCP applications should be subject to competitive bidding, we recognize that exclusivity in the 900 MHz PCP service is a very recent phenomenon and it is not clear whether or how frequently mutual exclusivity will arise where first-come, first-served licensing is ongoing. In addition, we believe that alternative measures, such as frequency coordination and private settlement among conflicting applicants, can resolve most, and perhaps all, potential conflicts among PCP applicants. *See* Section 309(j)(6)(E). Because these efforts may obviate the need for competitive bidding, we leave the promulgation of specific auction rules for this class of service to a time when we can be reasonably certain that they will be needed.

III. COMPETITIVE BIDDING DESIGN

A. Introduction

68. In this section, we adopt simultaneous multiple round auctions as our primary auction methodology. We believe that, for most licenses that the Commission intends to auction, this method will best meet the Congressional goals that we set forth in Section I. However, our analysis of the record in this proceeding has convinced us that there is no single competitive bidding design that is optimal for all auctionable services. Moreover, Congress has directed us to "design and test multiple alternative methodologies under appropriate circumstances." *See* Section 309(j)(3). For these reasons, we shall not adopt a single auction design herein. Instead, we will identify a number of auction design options, indicating in general terms the service characteristics for which each option is appropriate. We will issue further Reports and Orders in this docket to adopt auction rules for each auctionable service or class of service. When we announce individual auctions to award licenses in specific services, a Public Notice will include detailed auction procedures. The choice of service specific rules and auction procedures will be governed by the criteria set forth in this Report and Order.

69. This section will discuss the impact of bidding design on our policy objectives, discuss the choice of design criteria to meet those objectives with respect to varying service characteristics, and examine several important bidding procedure issues. As discussed in more detail in subsection B, we have concluded generally that awarding licenses to those parties that value them most highly will foster our policy objectives. Subsection C elaborates on our conclusions regarding auction design: (1) licenses with strong value interdependencies should be auctioned simultaneously; (2) multiple round auctions, by providing bidders with information regarding other bidders' valuations of licenses, yield higher revenues and more efficient allocations of licenses, especially where there is substantial uncertainty as to value; and (3) because they are relatively expensive to implement and time-consuming, simultaneous and/or multiple round auctions become less cost-effective as the value of licenses decreases. Subsection D contains our discussion of preferred auction designs, and subsection E discusses various bidding procedure issues.

B. Effect of Design on Policy Objectives

70. *Awarding Licenses to the Parties that Value Them Most Highly.* Our auction design choices are calculated to advance the goals set forth in Section I. Analysis of the record in this proceeding leads us to confirm our tentative view, advanced at ¶ 34 of the Notice, that auction designs that award licenses to the parties that value them most highly will best achieve those goals.[64] Those parties are most likely to deploy new technologies and services rapidly, promote the development of competition for the provision of those and other services (including, but not limited to cellular, SMR, paging, and other wireless services), and thus foster economic growth. We note that this conclusion is subject to the provison that certain safeguards to prevent undue market concentration, spectrum warehousing, and to promote economic opportunity may be needed. In general, however, the market value assigned

[63] In PR Docket No. 93-144, for example, we propose a two-step method of licensing proposed wide-area 800 MHz SMRs: in the first step, applicants would negotiate in the hopes of avoiding mutual exclusivity; if they are unable to do so, we propose having lotteries or competitive bidding to resolve the remaining instances of mutual exclusivity. Cencall proposes that if the Commission does auction SMR frequencies that will be licensed as a result of PR Docket Nos. 89-553 and 93-144, the Commission should auction those frequencies one by one and only for individual contested frequencies associated with mutually exclusive applications. *See* comments of Cencall. This is but one example of the complexities that we would face were we to attempt to promulgate service-specific auction rules for SMRs at this time.

[64] To the extent that the initial auction does not award licenses to those who value them most highly, after-market transactions will perform this function to some degree, but not without delays and additional transaction costs.

to licenses via the auction process can be expected to reflect the benefits to both consumers and producers, now and in the future.

71. The conclusion that licenses generally should be awarded to those who value them most highly received substantial support in the comments, particularly by the academic commenters. As stated by Professor Milgrom:

> Since a bidder's abilities to introduce valuable new services and to deploy them quickly, intensively, and efficiently increase the value of a license to a bidder, an auction design that awards licenses to those bidders with the highest willingness to pay tends to promote the development and rapid deployment of new services in each area and the efficient and intensive use of the spectrum.[65]

72. The Association for Independent Designated Entities (AIDE), however, disagrees with our presumption that licenses should be awarded to those who value them most highly.[66] It also argues that the Commission cannot lawfully design its competitive bidding system to maximize auction revenue, citing §§ 309(j)(7)(A) and (B) of the Act, but should base its decisions in this proceeding upon traditional public interest factors and the specific statutory objectives of competitive bidding. Likewise, PageMart argues that Congress has affirmatively directed the Commission to encourage a diverse and competitive marketplace even if the so-called allocative efficiency of the market is "somewhat" disturbed as a result.[67] PageMart further argues that auction schemes that focus on efficiency alone must be rejected.

73. We disagree with AIDE's implicit assumption that our purpose is to maximize auction revenue. While Congress has charged us to recover a portion of the value of the public spectrum made available via competitive bidding, this does not amount to maximizing revenue, nor is it our sole objective. To the contrary, our goals are to encourage the rapid deployment of service, efficient use of the spectrum, and the other goals enumerated in Section I. Pursuing these objectives is in full accordance with the statutory purpose of auctions as set forth in § 309(j)(3). And, we have concluded, based on our analysis of the record, that we can best achieve these objectives by generally awarding licenses to the parties that value them most highly. Moreover, this approach is permitted by § 309(j)(7)(C), which provides that §§ 309(j)(7)(A) and (B) do not prevent the Commission from considering "consumer demand," such as by assigning licenses to those who would provide services most highly valued by the public.

74. In addition, contrary to PageMart's contention, the development of a diverse and competitive marketplace is only one of the several goals that the Congress required the Commission to consider in designing systems of competitive bidding. That objective must be balanced with other objectives of the Act, such as § 309(j)(3)(D)'s requirement that we promote efficient and intensive use of the spectrum.

75. While we believe that the overall presumption should be that those who are willing to pay the most for a spectrum license should receive it, we have established an extensive menu of programs to ensure that the entities designated by Congress have an equitable opportunity to participate in the competitive bidding process. Because of concerns over competition, we havealso created safeguards to prevent undue market concentration, such as placing limits on the amount of broadband PCS spectrum that cellular carriers may acquire and similarly limiting the amount of narrowband PCS spectrum that a single entity can acquire.[68] Given these and other steps we have taken, we cannot agree with the proposition that our proposed auction designs promote efficiency to the exclusion or subordination of all other goals.

76. *Facilitating Efficient Aggregation.* In designing auctions to best meet all our goals, we must take into account the value interdependency among many of the licenses that we propose to auction. As discussed in more detail below, when licenses are highly value-interdependent, *i.e.*, when the value of a license to a bidder depends on the other licenses that the bidder acquires, it is particularly important that we implement auction designs that facilitate efficient (but not anticompetitive) aggregation of such licenses.

77. *Awarding Licenses Rapidly.* It is also important to award licenses to the appropriate parties rapidly, since the sooner the licenses are awarded to the parties that value them most, the sooner new service is likely to be available, and the sooner consumers will benefit from competition among new suppliers and between new suppliers and incumbent firms. We therefore seek to employ bidding procedures that can be implemented efficiently and within a reasonable time period.

78. *Avoiding Excessive Implementation Costs and Complexity.* Finally, in selecting auction methods the Commission must take into account the costs of implementation both for the Commission and potential bidders. We therefore intend to select bidding procedures that are not overly complex relative to the task that they are meant to accomplish and which ensure that the full range of qualied bidders have access to the process.

C. Alternative Competitive Bidding Designs

79. There are several auction design elements which, in combination, produce many different auction types. The two most important design elements are: 1) the number of auction rounds (single or multiple); and 2) the order in which licenses are auctioned (sequentially or simultaneous-

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[65] Comments of PacBell, Attachment by Paul R. Milgrom and Robert B. Wilson at 7. Professors Harris and Katz agree: "Because its overall supply is limited, it is important to allocate spectrum to those license holders who will use it to generate the greatest social benefits. The overall presumption should be that those who are willing to pay the most for the spectrum are the ones who will put it to the most valuable use." Harris and Katz concur with us that safeguards against undue market power and measures to ensure appropriate participation of designated entities may be needed. *See* comments of NYNEX, Attachment by Robert G. Harris and Michael L. Katz: "A Public Interest Assessment of Spectrum Auctions for Wireless Telecommunications Services" at 1-2.

[66] Comments of AIDE at 4-5.

[67] Reply comments of PageMart at 4.

[68] *See, e.g.*, Second Report and Order in GEN Docket No. 90-314, 8 FCC Rcd 7700 (1993), *recon. pending;* First Report and Order in GEN Docket No. 90-314, 8 FCC Rcd 7162 (1993), *recon.* FCC No. 94-30, released March 4, 1994.

ly). These two elements can be combined to create four basic auction designs: sequential single round, simultaneous single round, sequential multiple round, and simultaneous multiple round. A third element of auction design is whether to permit all or nothing bids for combinations of licenses, *i.e.*, combinatorial bidding. Before addressing which of these auction designs will be our preferred design, it is useful to discuss the basic design elements and describe their advantages and disadvantages.

1. Multiple v. Single Round Bidding

80. Auctions may have either a single round or multiple rounds. Single round auctions are often referred to as sealed bid auctions (*see* NPRM at ¶ 40). In a single round auction, a single bid is submitted and the license awarded to the high bidder. In multiple round auctions, bidders have the opportunity to top the high bids from the previous round. Typically such auctions end when no bidders are willing to top the bids from the previous round. A common form of a multiple round auction is the oral auction, also known as an open outcry or English auction (*see* NPRM at ¶ 37) in which bids are submitted orally in an auction hall.[69]

81. *Alternative Multiple Round Bidding Designs.* Multiple round auctions may differ in both the interval between bidding rounds and the method of bid submission. In a traditional open outcry auction, bids are made continuously, one after another, and items often sell within minutes. In other multiple round auctions, there are discrete intervals between the periods during which bids are submitted.[70] With discrete rounds, the Commission can control the pace at which the auction proceeds. The method of bid submission depends in part on whether the auction rounds are continuous or discrete. In continuous auctions, bids may be submitted orally, by telephone, or computer. Telephone bidding is currently used for auctioning financial instruments and the current high bids for these assets are made available to bidders on specially designed computer bulletin boards. If there are discrete bidding rounds bids could also be submitted on paper or computer disks.

82. *Advantages of Multiple Round Bidding.* The principal advantage of a multiple round auction is the information that it provides bidders regarding the value other bidders place on licenses. This information increases the likelihood that licenses are assigned to bidders that value them most highly and will generally yield more revenue in auctions where there is much uncertainty about common factors that affect the value of a license to all bidders (common value auctions).[71] In a single round auction, bidders must guess about the value that other bidders place on a license in trying to submit a single bid that just exceeds the next highest bid. Thus the party who values the license most highly may not submit the highest bid. In a multiple round auction, bidders need not guess about the value the second highest bidder places on the license because bidders have the opportunity to raise their bids if they are willing to pay more than the current high bidder. Multiple round bidding is also more likely than single round bidding to be perceived as open and fair. No bidder can argue that it did not have the opportunity to obtain a license if it was willing to pay enough.

83. Auction theory shows that multiple round bidding tends to increase revenue in common value auctions by reducing the incentive of bidders to shade down bids to avoid the winner's curse -- the tendency for the winner to be the bidder who most overestimates the value of the item for sale.[72] Common value aspects of spectrum licenses arise from common technological possibilities, common demand for the services, and the presence of a common aftermarket. Multiple round bidding provides information about other bidders' estimates of common values, allowing all bidders to improve their estimates of these common values. With better information, sophisticated bidders will have less incentive to bid cautiously so as to avoid falling victim to the winner's curse.

84. Several commenters stress the importance of providing bidders with information in common value auctions via multiple round bidding.[73] For example, Professor McAfee states that "ascending bid auctions tend to produce more efficient outcomes and higher average prices" than first-price, single round sealed bid auctions, and, after noting sources of bidder uncertainty about the value of PCS licenses, asserts that "the auction should be designed to provide bidders with as much information as possible, which means providing information about other bidders' estimates of the licenses' value in the process of running the auction."[74] Multiple round bidding will maximize the provision of such information.

85. *Advantages of Single Round Bidding.* On the other hand, multiple round bidding does involve some increased administrative cost. Therefore, a single round (*i.e.*, sealed bid) procedure may be an appropriate option for relatively low value licenses in which the costs of implementing a multiple round auction may outweigh the benefits. A sin-

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[69] Many commenters favored the use of oral auctions exclusively. *See, e.g.,* comments of McCaw, Quentin L. Breen, and U.S. Intelco Networks. Commenters favoring this method praise its openness, ease of administration, familiarity, and high degree of information dissemination. *See also* comments of BellSouth. Professor R. Mark Isaac, commenting on behalf of CTIA, asserted that auction theory predicts that oral sequential auctions for single units will be efficient, approximately demand revealing, and generate the same revenue as the other methods.

[70] An example of such a procedure is the recently completed bidding for control of Paramount Communications, which was conducted in intervals over a five month period.

[71] In a pure common value auction, the item up for auction has the same value to everyone, but bidders' valuations at the time of the auction differ because they have different estimates of that underlying true value.

[72] John McMillan, *Games, Strategies and Managers*, (New York: Oxford University Press), at 142-143. When bidders are risk averse there is another effect on revenue opposite to that of the winner's curse -- risk aversion tends to raise bids more in single round bidding than multiple round bidding. John Riley and William Samuelson, "Optimal Auctions," *American Economic Review*, Vol. 71, No. 3 (June 1981)

[73] Only when there are common value elements can bidders improve estimates of their own value of an item based on observing bids of others on that item.

[74] Comments of PacTel Attachment by R. Preston McAfee: "Auction Design for Personal Communications Services" at 4-5. *See also* comments of Bell Atlantic, Attachment by Barry J. Nalebuff and Jeremy I. Bulow: "Designing the PCS Auction" at 12, 20-21, and comments of NYNEX, Attachment by Robert G. Harris and Michael L. Katz at 7-9. For a more detailed discussion of common value models, *see* comments of NTIA, staff paper by Mark Bykowsky and Robert Cull: "Issues in Implementing a Personal Communications Services Auction" at 20-28.

gle round of bidding may also be appropriate in certain auctions where eligibility requirements limit participation to very few bidders.[75] With a small number of bidders, bidding cartels are easier to organize and may reduce auction revenue below fair market value (although not necessarily result in any efficiency loss). Using a single sealed bid could reduce the likelihood of such collusive behavior since it provides colluding bidders a greater incentive to defect. With a single sealed bid, retaliation must come in later auctions, if any, while with multiple round bidding, retaliation against a cartel defector can come immediately. In opting for single round over multiple round bidding, the Commission must weigh the benefits of deterring collusion and lower administrative expenses against the costs of a lower likelihood of awarding licenses to the bidders who value them most highly and the loss in revenue associated with a stronger winner's curse.

2. Sequential v. Simultaneous Bidding

86. Licenses may be auctioned either sequentially or simultaneously. In a pure sequential auction, licenses are auctioned one at a time. That is, bidding ends on one item before bids are accepted for another item, as is typically the case in an open outcry auction. In a pure simultaneous auction, all licenses are put up for auction at the same time. That is, bidding is open on all licenses at once until no more bids are received on any license. There are intermediate designs between pure sequential and pure simultaneous auctions. Related licenses may be placed into groups and all licenses within the group auctioned simultaneously, but the groups can be auctioned one after another, *i.e.*, sequentially. In this case, a choice must be made as to how to group licenses and the sequence in which groups will be auctioned.

87. *Simultaneous Bidding for Homogeneous Licenses.* An important special type of simultaneous bidding, which we will refer to as a single combined auction (which could incorporate either one or multiple rounds of bidding),[76] may be useful when auctioning multiple homogeneous licenses.[77] Under this approach, the Commission would combine bidding for two or more homogeneous licenses.[78] Licenses would be awarded to the highest bidders until the available licenses are exhausted, *e.g.*, four virtually identical licenses would be awarded to the four highest bids. Single combined auctions could also be used for licenses that are close, but not perfect, substitutes. Small differences among licenses could be accounted for by allowing winning bidders to choose among the licenses in descending order of their bids, *i.e.*, the party with the highest winning bid would pick first. Single combined auctions are used by the U.S. Department of the Treasury to sell (perfectly homogeneous) U.S. securities (*see* NPRM at ¶ 43). In such Treasury auctions the sales price is generally the bid price. However, Treasury has recently experimented with single-price auctions in which all successful bidders pay the same price -- the highest losing bid.

88. *Comments.* Many of the comments and papers written by academic auction theorists strongly favored the use of simultaneous multiple round bidding.[79] Those favoring simultaneous multiple round bidding argue that it permits bidders to receive greater information during the bidding process and allows bidders back up strategies that take account of the value of interdependencies among licenses. Other academic papers, however, while incorporating a certain degree of simultaneity in their auction design, favored greater reliance on sequential bidding.[80]

89. *Advantages of Simultaneous Multiple Round Bidding.* Simultaneous multiple round bidding has a number of important advantages over sequential auctions for awarding interdependent licenses. First, they are more likely to award interdependent licenses efficiently -- to those who value them the most and aggregated in the way that is most valuable. This increased efficiency derives from the information about the value of interdependent licenses provided to bidders during the bidding process and the opportunity to use that information because all such licenses are available until the close of the auction. Second, simultaneous multiple round auctions are likely to raise more revenue than sequential auctions because they mitigate the effect of the winner's curse. Third, they avoid the need to choose the sequence of bidding.[81]

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[75] A minority of commenters strongly support sealed single round bidding. They argue that it is less subject to manipulation than oral bidding and is easier to implement than oral bidding. *See* comments of Richard S. Myers. Others support using sealed bids only in limited circumstances, as when there are only two or three bidders. *See* comments of AT&T, Cellular Communications, Inc. and Calcell Wireless.

[76] This is a special case of a simultaneous auction because bids are accepted on multiple (identical) items at the same time.

[77] Two or more licenses are perfectly homogeneous if they are perfect substitutes, *i.e.*, if bidders are indifferent about which one they acquire. Licenses in the same spectrum band, with the same amount of spectrum, and in the same geographic license area may, however, not be perfectly homogeneous for two reasons. First, there may be differences in the amount and location (geographic and frequency) of spectrum occupied by incumbent users, as in the case of broadband PCS licenses. Second, a bidder seeking to operate in more than one license area may prefer that all the spectrum be on the same channel. Acquiring spectrum on the same channel tends to simplify coordination of interference at boundaries, thus lowering the cost of providing service.

[78] This approach was proposed by Bell Atlantic, see comments of Bell Atlantic Personal Communications Inc., Attachment by Barry Nalebuff and Jeremy Bulow at 4-5. It can be used in conjunction with any auction type.

[79] *See* comments of PacTel, Attachment by R. Preston McAfee; comments of PacBell, Attachment by Paul R. Milgrom and Robert B. Wilson; and comments of NYNEX, Attachment by Robert G. Harris and Michael L. Katz.

[80] *See* comments of Bell Atlantic, Attachment by Professors Barry Nalebuff and Jeremy Bulow; and comments of TDS, Attachment by Professor Robert J. Weber: "A Proposed Auction Methodology for PCS Licenses." Some of the academicians modified their original proposals in response to the comments of others. *See* reply comments of Bell Atlantic and of PacBell.

[81] The analysis of simultaneous single round bidding for interdependent licenses is very different from that of simultaneous multiple round bidding. Although a single round of sealed bids for all licenses would be fast and administratively simple, it is the least likely method to achieve our other auction objectives for two reasons. First, such an auction generates no information about license values until after the auction closes, when the information cannot be used by bidders. This factor tends to decrease bid levels and to reduce the efficiency of the license assignment. Second, the method provides bidders no opportunity to pursue back-up strategies, except in the after-market, where transactions costs may be high.

90. The magnitude of the advantages of simultaneous multiple round bidding depends on the degree of interdependence among licenses. Licenses may be interdependent either because they are substitutes or because they are complements. With substitutes, the lower the price of one license, the less a bidder would be willing to pay for another. Perfect substitutes are highly interdependent because the price of one puts an absolute cap on the amount a bidder is willing to pay for the other. If, for example, licenses A and B are perfect substitutes and a bidder knew that license A could be purchased for $100, that bidder would be willing to pay no more than $100 for license B.

91. With complementary licenses, on the other hand, the lower the price of one, the more a bidder would be willing to pay for another. One way to think about complementary licenses is that they are worth more as part of a package than individually. For example, bidders are likely to be willing to pay more for two geographically contiguous PCS licenses than two equivalent non-contiguous licenses, and a single bidder may be willing to pay more for two licenses than would two separate bidders. Commenters have identified several sources of such interdependence among PCS licenses. First, common ownership of licenses in adjacent areas facilitates roaming by users. Professor Daniel Vincent argued that consumer demand for a service that will allow them to use their handset across regions is the main source of interdependence.[82] NTIA agreed, noting that the value of roaming has already been clearly demonstrated in the cellular industry.[83] Second, ownership of multiple licenses both across geographic areas and within a given area provides economies of scale arising largely from spreading of fixed costs over more units of output.[84] Marketing, system engineering, switching and standard setting are examples of activities with important elements of such fixed costs. Third, common ownership of geographically adjacent licenses on the same spectrum block reduces problems of controlling interference at license boundaries.[85] There may be additional economies of scope from common ownership of contiguous licenses, whether or not they are on the same spectrum block.

92. The greater efficiency of simultaneous multiple round auctions in awarding interdependent licenses follows in part from the fact that they reduce the need for bidders to guess about outcomes in later auction rounds. With sequential auctions bidders in initial rounds must guess about prices in later rounds. A bidder may pay too much for a license in an early round on the mistaken expectation of a low price for a complementary license (or a high price for a substitute license) in a later round. Alternatively, a bidder may bid too little for a license in an early round in the hope that a close substitute will sell for less in a later round. Either situation could result in award of licenses to those who do not value them the most, but we will illustrate the potential for inefficiency only for the latter case. Suppose that there are two licenses that are close substitutes, for example the A and B PCS licenses in the same region. If the two parties that value these licenses most highly hold back on bidding when the first license is offered in a sequential auction, the first license would be awarded to the bidder with the third highest valuation. In contrast, with simultaneous auctions, the two bidders with the highest valuations would generally win the two licenses. A simultaneous auction also allows bidders to pursue backup strategies. With sequential auctions, a bidder may learn too late that, given the licenses it has won and those it failed to win, it is now willing to pay more than the high bids for licenses that were awarded in earlier rounds.

93. By providing more information to bidders about the value of interdependent licenses, simultaneous auctions are also likely to raise more revenues by alleviating the winner's curse. With sequential auctions bidders are likely to be especially cautious in their bidding on initial licenses. If the largest PCS regions were to be put up for bid first in a sequential auction, the revenue loss could be significant.

94. Finally, simultaneous auctions reduce the need to choose the sequence in which licenses within a service are auctioned. With pure simultaneous auctions, no choice of sequence would be necessary since all available licenses within a service would be auctioned at the same time. In the case of a sequence of simultaneous auctions, the Commission would need to choose which licenses to auction together and the sequence in which such groups would be auctioned. Within each group, however, no choice of auction order would be necessary. In contrast, with a pure sequential auction, the Commission must decide on the order in which to auction every individual license. Different bidders are likely to want licenses auctioned in different sequences to favor their particular business plans, and there is no agreement among the commenters on the appropriate sequence.

95. *Disadvantages of Simultaneous Multiple Round Bidding.* On the other hand, simultaneous multiple round auctions may have some disadvantages. First, as recognized in the Notice, such auctions have only limited precedent for use and could be more difficult to implement. Second, they may appear more complex to bidders because of the number of licenses that must be monitored during the bidding process. Third, a bidder interested in only one or a few licenses would need to participate over a longer period of time in a simultaneous auction than in sequential auctions. Fourth, with all licenses being auctioned simultaneously, bidders cannot be absolutely certain which licenses they have won until the end of the auction. In sequential auctions bidders know which licenses they have won in early rounds before having to bid in later rounds.

96. These difficulties are emphasized by those academic commenters who favor primary use of sequential bidding.[86] With regard to the problem of added complexity, Nalebuff and Bulow, for example, argue that simultaneous auctions

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[82] *Ex parte* presentation, February 17, 1994 at 2.

[83] Comments of NTIA, Bykowsky-Cull staff paper at 15-16.

[84] *See ex parte* comments of Professor Paul R. Milgrom, February 14, 1994, at 9. Many of the academic commenters specifically mentioned the potential benefit of aggregating licenses within a given geographic area. *See, e.g.*, commnets of NTIA, Bykowsky-Cull staff paper at 16.

[85] *See ex parte* comments of Professor Paul R. Milgrom, February 14, 1994, at 9.

[86] Even the academics who general favor sequential auctions advocate incorporating a limited degree of simultaneity into their preferred auction designs. For example, Nalebuff and Bulow would "allow some simultaneity into the process by combining the bidding across the two 30 MHz licenses within an MTA, the three 10 MHz licenses within a BTA, and running the two designated license auctions simultaneous with the auction for the other three BTA license." Reply comments of Bell Atlantic, Attachment by Barry J. Nalebuff and Jeremy I. Bulow

present too many decisions to be made at once.[87] However, we believe that by providing adequate time for bidding, *e.g.*, one round per day, each bidder will have ample time to analyze their options for the subset of licenses in which it is interested. Indeed, for those bidders interested in only a few licenses, a simultaneous auction would have the advantage of providing far more time per license to make bidding decisions than in sequential auctions. Moreover, most of the time, a bidder in a simultaneous auction merely needs to make incremental decisions -- whether to raise its bids on the properties on which it is already bidding. Only occasionally might a bidder have to make a major decision -- whether to switch to a backup strategy and bid for a different group of licenses. Indeed, the strategic decisions in a simultaneous auction may be less complex than in sequential auctions, where a bidder must decide in early auctions how much it is willing to pay for a license without knowing what it will have to pay in later auctions for other licenses that are important to its aggregation strategy.

97. With regard to a bidder's lack of certainty about which licenses it has won until the end of a simultaneous auction, those advocating sequential auctions claim that the "quality" of information released by sequential auctions is higher because actual prices of licenses auctioned earlier are available to bidders in later auctions.[88] That is, advocates of sequential auctions appear to be claiming that only the final, equilibrium price of a license provides useful information about valuation. However, we have concluded that, with appropriate activity and stopping rules (*see* discussion *infra*), simultaneous auctions provide bidders with significant useful valuation data at a time when they can use it.[89] In contrast, bidders in the early sessions of a sequential auction have little or no information about prices of licenses to be auctioned later. In later auctions, while they do have good information about prices from the earlier auctions, they are unable to go back and change their bids in earlier auctions, based on what happens in later auctions.

3. Combinatorial Bidding

98. Combinatorial bid techniques permit bidding for multiple licenses as all or nothing packages. It could be implemented with either simultaneous or sequential auction designs. If a package bid were to exceed the sum of the highest bids for the licenses that comprise the package (individually or in smaller packages), then the package bid wins. The range of packages for which bids are permitted could be defined by the Commission (*e.g.*, all PCS licenses in band A) or bidders could be allowed to choose their own packages.[90] NTIA is the primary proponent allowing bids on any combination of licenses, *i.e.*, full.combinatorial bidding.[91]

99. *Advantages of Combinatorial Bidding.* Combinatorial bidding may promote efficient aggregation of licenses that are worth more as a package than individually. It may also simplify bidding strategy since bidders can avoid the problem of determining how to allocate the added value of a package among individual bids. Without combinatorial bidding bidders risk paying too much for part of a desired package while losing the rest of the package to other bidders. The magnitude of this exposure depends on the specifics of the auction design and the value bidders put on various packages of licenses. This exposure is greater in a sequential auction than a simultaneous auction because bidders have less information about the likely prices of complementary licenses. It is also greater the more severe the consequences of bid withdrawal. Exposure risk is greatest when the value of a package is severely diminished by the absence of a single part. Finally, the risk of exposure is greater when bidders do not agree on how licenses should be combined. When bidders generally want the same packages of licenses, if a firm is outbid on part of a package it is likely to be outbid on the entire package, and thus not likely to be stuck holding a piece of a package that is of little value without the rest of the package.

100. There is also some limited experimental support for the use of combinatorial bidding. Laboratory experiments conducted at Caltech found that full combinatorial bidding as proposed by NTIA resulted in more efficient outcomes than any of the individual bidding alternatives tested including various sequential and simultaneous auction forms. The Caltech experiments also found that full combinatorial bidding also generally raised more revenue than the simultaneous independent auction form tested.[92]

101. *Disadvantages of Combinatorial Bidding.* On the other hand, a simultaneous auction design offers the possibility of efficient license aggregation without combinatorial bidding and combinatorial bidding appears to bias auction results in favor of the combination bid. This is due to the "free rider" problem. Bidders for individual licenses (or smaller packages) may be reluctant to raise

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at 26. Moreover, Nalebuff and Bulow note that "reasonable people could hold different opinions" regarding the utility of simultaneous auctions. *Id.* at 10-11.

[87] *Id.* at 11.6

[88] *See, e.g.*, reply comments of Bell Atlantic, Attachment by Nalebuff and Bulow at 13 ("Although there is a lot of information, it can still be hard to interpret. Until the auction is over, nothing has been determined.") *See also* Letter from Robert Weber to Professor John McMillan, Jan. 9, 1994 (Simultaneous auctions "bring relatively little meaningful information into the public domain until near the very end," whereas appropriately structured sequential auctions "will bring the most important information into the public domain early").

[89] *See ex parte* submission of Paul R. Milgrom, Feb. 14, 1994, at 12-14. *See also* reply comments of PacTel, Attachment by R. Preston McAfee at 1-2, 7-8.

[90] The NPRM proposed a nationwide combinatorial bid for broadband PCS licenses. *See* ¶ ¶ 57-60 and 120 of the NPRM. This proposal was criticized by commenters as inequitable as well as economically inefficient. *See, e.g.*, comments of NTIA, Bykowsky-Cell staff paper at 48-49 (combinatorial bidding limited to a single package would result in some PCS licenses being assigned to bidders that do not value them most highly); comment of PacBell, Attachment by Milgrom and Wilson at 8-13 (proposal would create free rider problems among bidders for individual licenses); comments of Arch Communications at 9 (FCC's proposal too complex).

[91] NTIA argues that where licenses exhibit high degrees of interdependency, full combinatorial simultaneous multiple round bidding is likely to produce more efficient license assignments and more revenues than other auction forms. *See* comments NTIA, Bykowsky-Cull staff paper, and Letter from Larry Irving, Assistant Secretary for Communications and Information, NTIA, to Reed Hundt, Chairman, Federal Communications Commission, *ex parte* submission in PP Docket No. 93-253, February 28, 1994.

[92] *Ex parte* submission of NTIA, February 28, 1994.

their own bids in order to beat a combinatorial bid for a larger package because they hope that other bidders for other parts of the larger package will raise their bids. Since all individual bidders can be expected to reason this way, it is likely to be difficult to put together a coalition of bidders to raise their bids enough to beat a combinatorial bid for a larger package.[93]

102. Combinatorial bidding would also add one more layer of complexity to implementing an auction. Implementation problems are especially difficult if parties are permitted to bid for any combination of licenses as proposed by NTIA. First, there are a huge number of such possible combinations. For example, Professor Weber calculated that if there were five licenses available in each of six geographic areas there would be over one billion possible packages of licenses.[94] Second, full combinatorial bidding would require computer software that has not yet been fully developed for use on a large scale and would risk computer or other administrative failure. Third, full combinatorial bidding is non-transparent, that is, it would be difficult for bidders to determine in advance what constitutes a high bid. This could lead losing bidders to challenge the procedure in court.

103. Limiting combinations to a small number would reduce complexity but require a determination of the most valuable packages prior to the auction. There is no simple way to make such a determination, and if there is a wide diversity of desired license groupings, offering only a limited set will not accommodate all preferences and may not enhance efficiency.

104. We also note that some of the conditions under which the advantages of combinatorial bidding are apt to be the greatest are not likely to be present for most FCC auctions. First, while certain licenses are likely to be worth more as part of packages, there is no evidence of an extreme discontinuity in value if one or more licenses in the package are not acquired. Certainly there is no reason to believe that the entire benefit of aggregation is lost if a single license is not included in the package. Second, both the existence of an after-market and the proposed bid withdrawal penalty *(see infra)* limit the risk associated with failing to acquire all the licenses in a desired package. Whether a bid is withdrawn or a license acquired and resold in the after-market, the cost is likely to be limited to about one bid increment.

105. Although the Caltech experiments suggest empirical advantages of full combinatorial bidding it is difficult to assess their significance. First, the results are sensitive to the assumptions about benefits of aggregation, and we can not know the extent to which these assumptions reflect reality until after the auctions. However, it appears that the experimenters generally assumed an unrealistically large premium from acquiring an entire package.[95] Second, the experiments were conducted on a small scale. The complexity of running and participating in a full combinatorial auction may be manageable with 10 bidders and 54 licenses, but it may not be with hundreds of licenses and bidders.

D. Preferred Competitive Bidding Designs

1. Primary Method: Simultaneous Multiple Round Bidding

106. After carefully considering all of the comments presented in this proceeding, we conclude that in most circumstances the best method to advance the goals for competitive bidding expressed in Section I, *supra*, is a sequence of simultaneous multiple round auctions. Compared with other bidding mechanisms, simultaneous multiple round bidding for interdependent licenses generates the most information about license values during the course of the auction and provides bidders with the most flexibility to pursue back-up strategies. Thus, it is most likely to award interdependent licenses to the bidders who value them most highly. It will also facilitate efficient aggregation across spectrum bands and geographic areas, thereby resulting in vigorous competition among several strong competitors who will be able to introduce rapidly a wide variety of services that will be highly valued by end users. Because of the superior information and flexibility it provides, this method is also likely to yield more revenue than other auction designs. Thus, we find that the use of simultaneous multiple round auctions will generally be preferred.

107. However, the Commission must balance the informational and bidding flexibility advantages of simultaneous multiple round auctions with the greater cost and complexity of running such auctions. For example, it is not our intention to put all PCS licenses up for bid at the same time, even though there is likely to be some degree of interdependence. Such a large simultaneous auction would most likely be unmanageable. As a result, we expect to have a sequence of simultaneous auctions. Licenses that are highly interdependent will be grouped together and auctioned simultaneously.

108. We do not now plan to use combinatorial bidding in the simultaneous multiple round auction context. We reach this conclusion because (1) the simultaneous multiple round auction design offers many of the aggregation

[93] The stand-by queue in the Banks-Ledyard-Porter AUSM mechanism proposed by NTIA mitigates the problem of bidders for individual licenses or smaller packages coordinating bids against bidders for larger packages. J. S. Banks, J. O. Ledyard, and D. P. Porter, "Allocating Uncertain and Unresponsive Resources: An Experimental Approach," *Rand Journal of Economics* 20, 1989: 1-22. According to NTIA, the stand-by queue "allows parties seeking individual licenses to coordinate their bids in order to beat the currently prevailing bid for a combination of licenses. The stand-by queue displays the amount that other bidders are willing to pay for the licenses that are part of a combination bid. A bidder can determine from the sum of these amounts how much to raise his or her own bid in order to surpass the current winning bid." *Ex parte* submission of NTIA, February 28, 1994, at 4, n. 6. Although the stand-by queue facilitates coordination it does not eliminate the free rider problem. Moreover, as the information in the stand-by queue grows with the number of bidders and licenses, bidders will have increasing difficulty efficiently combining contingent bids in the queue. Finally, there is the danger that some bidders for large combinations of licenses may strategically flood the queue with numerous contingent bids in order to prevent it from functioning.

[94] Robert J. Weber, "A Proposed Auction Methodology for the Allocation of PCS Licenses: Simultaneous Ascending-Bid Auctions," September 4, 1993, at 6.

[95] *See ex parte* submission of NTIA, February 28, 1994, Attached staff paper by Mark Bykowsky and Robert Cull. *See also ex parte* submission of Paul R. Milgrom, February 14, 1994, at 10. Professor Milgrom states that the Caltech experiments assumed that all the benefits of aggregating a group of licenses are lost if a single license is missing from the package.

advantages of combinatorial bidding without creating a free rider problem that may bias the outcome in favor of combinatorial bids, (2) full combinatorial bidding is highly complex and we lack a general methodology to simplify the full combinatorial procedure by choosing a limited set of combinations on which to allow bidding, and (3) the software for implementing full combinatorial bidding on a large scale does not now exist, and would be difficult to develop in a short time frame. In the future, however, we may decide to use a combinatorial bidding technique in simultaneous multiple round auctions if significant advances are made in the development of combinatorial procedures and they have been proven to work on a large scale.

109. *License Characteristics Leading to Selection of Preferred Design.* The two primary characteristics that will determine our choice of auction design are: (1) the degree to which licenses are interdependent, and (2) the expected value of the licenses being auctioned. Because we expect most licenses to be interdependent and of relatively high value, we have concluded that simultaneous multiple round auctions will generally best achieve the Commission's goals and therefore should be the Commission's preferred auction design.

110. When licenses values are interdependent, simultaneous multiple round auctions provide the information and flexibility for efficient bidding. In such auctions, if two licenses are substitutes, bidders will quickly switch from bidding on one license to bidding on the other if the price disparity does not reflect differences in value. This ensures that equivalent licenses will sell for equivalent prices. When licenses are complementary, bidders will have full flexibility to construct efficient aggregations of licenses based on simultaneous information about their prices. Thus, we would be inclined to select a simultaneous auction design when we believe that license values are significantly interdependent.

111. The other major factor leading us to select simultaneous multiple round auctions as our preferred option is the expected value of the licenses being auctioned. While in some instances, license values may be so low that the administrative costs, both to the Commission and to bidders, of conducting simultaneous multiple round auctions would exceed the value of the license, we anticipate that most licenses can be expected to have a relatively high value. However, as the value of licenses falls, the benefits of simultaneous multiple round bidding diminish relative to the cost and complexity of such auctions.[96] In such cases, the Commission may choose to employ less complex auction methods.

2. Alternative Methods

112. *Sequential Bidding.* We intend to tailor the auction design to fit the characteristics of the licenses that are to be awarded. Given the diverse characteristics of the various services that may be subject to auctions, simultaneous multiple round auctions may not be appropriate for all licenses. The less the interdependence among licenses, the less the benefit to auctioning them simultaneously. Because simultaneous auctions are more costly and complex to run, we may to choose a sequential auction design when there is little interdependence among individual licenses or groups of licenses. Such a design may include sequential oral auctions of individual licenses and a sequence of simultaneous auctions of multiple licenses.

113. *Single Round Bidding.* When the values of particular licenses to be auctioned are low relative to the cost of implementing a simultaneous multiple round auction, we will consider auction designs that are relatively simple, with low administrative costs and minimal costs to the auction participants. For example, with large numbers of low value licenses we may decide to implement single round sealed bidding to reduce implementation cost and expedite the licensing process. Because of the risk of collusion, the Commission may also wish to consider a single round of bidding in certain auctions where eligibility requirements limit participation to very few bidders.

114. *Combinatorial Bidding.* If we should choose a sequential auction design or single round bidding for some relatively low value licenses, and if we determine that there are some benefits of a particular level of aggregation for those licenses, we may accept combinatorial bids on a limited set of packages. While this does not have the administrative complexities or risks of full combinatorial bidding, it does raise the possibility of bias toward the combination bid. We therefore may consider instituting a premium, *i.e.*, the combinatorial bid would win only if it exceeded the sum of the bids for the individual licenses by at least a specified amount, in order to offset the free rider bias. A premium for combinatorial bids would also increase the incentive of bidders seeking packages of licenses to participate actively in the bidding for individual licenses. If we do decide to permit combinatorial bids, we would also need to specify whether these bids would be accepted before, after, or simultaneously with the individual bids, and when the combinatorial bids would be announced.

115. *Testing Alternative Methods.* The Congressional directive to "design and test multiple alternative methodologies under appropriate circumstances," 47 U.S.C. § 309(j)(3), implies that we should periodically reevaluate the efficiency of the auction designs we utilize and, where appropriate, test alternative auction design methodologies. Accordingly, in future Reports and Orders where we establish service-specific auction rules we will indicate a preferred auction design method for each particular service and specify any alternative auction design methods that we may test in auctioning licenses within that particular service. In each case, we will indicate the circumstances under which we may test an alternative design methodology and the procedures that will be applied when an alternative methodology is tested.

E. Bidding Procedures

116. We discuss below certain procedures that may be needed to implement the competitive bidding designs described in subsection C, *supra*. We may choose to incorporate certain of these procedures into the service-specific rules that we will adopt in future Reports and Orders for each auctionable service.

[96] The point is that the choice of auction technique should take into account the cost of running the auction. In some cases the likely benefits of a more complex auction technique may not exceed the additional costs of implementing it.

1. Sequencing

117. Whether we use our preferred approach of a sequence of simultaneous auctions or sequential individual auctions, the Commission must choose the sequence of what is auctioned. The importance of the choice of sequence increases with the degree of interdependence among the individual items or groups of items auctioned in sequence. We intend to minimize the importance of the choice of sequence by auctioning licenses sequentially only when there is not a high degree of value interdependence across the licenses (or groups) that are offered in sequence. As noted above, the groupings of the licenses into the various simultaneous auctions will be accomplished by aggregating together those licenses exhibiting the greatest degree of interdependence so that there will be limited interdependence across groups. Generally, we will announce the sequence in which licenses will be auctioned in the service-specific rules adopted in future Reports and Orders. For some services, the sequence of licenses to be auctioned will be announced by Public Notice prior to the auction.

118. Even if there is only limited interdependence among the licenses (or groups of licenses) to be auctioned sequentially, there still may be some tradeoffs in the choice of sequence, especially when implementing new auction procedures. In general, the highest value licenses or groups of licenses should be auctioned first because there is a cost to the public of delaying licensing, and the greater the value of the licenses the greater that cost. However, when implementing novel auction procedures, this general principle may not be appropriate. Auctioning groups of lower-value licenses first would allow the Commission to use its initial auction experience to improve the subsequent auctions for groups of higher-value licenses. Improvements in auction design and procedures are likely to have greater total value when applied to groups of higher-value licenses than lower-value licenses.

119. To the extent that some value interdependence remains among licenses (or groups of licenses) auctioned sequentially, there is an additional justification for auctioning licenses (or groups) in descending order of value. High value licenses or groups of licenses may be linchpins of aggregation strategies for certain bidders.[97] For example, a bidder may feel that it is crucial to obtain a license to serve the New York City metropolitan area in order to develop a service in the Northeastern United States. In a sequential auction, such a bidder would prefer the New York licenses auctioned before other Northeast markets. Knowing who has won such large markets is likely to be more important for bidding decisions about small markets than the converse. For this reason, the NPRM proposed that if individual PCS licenses are auctioned sequentially, regions should be offered in descending order of population. *See* NPRM at ¶ ¶ 53 and 125.

120. Auctioning high value licenses first may also increase auction revenue. Auctioning high value license first would increase the present value of revenue by tending to collect the largest payments first. Furthermore, to the extent that ordering interdependent licenses (or groups) large to small increases efficiency, it increases potential revenue, and might increase actual revenue realized by the government. On the other hand, selling first the licenses that can be expected to have the highest value may reduce overall revenues because of the effect of the winner's curse. If bidders in later auctions learn about common elements of license values from bids in earlier auctions, the incentive to shade down bids to avoid the winner's curse will be greatest with the first licenses, when the least information is available.

2. Duration of Bidding Rounds

121. In simultaneous multiple round auctions, bids can be submitted continuously with the high bids announced continuously, or bidding can occur in discrete rounds with high bids announced at the end of each round. NTIA's proposed "electronic iterative combinatorial auction," as demonstrated at Caltech on January 27, 1994, operated in real time with the high bids reported almost instantaneously.[98] PacBell and PacTel, on the other hand, both propose discrete rounds. With discrete rounds, the Commission can more readily control the pace at which the auction proceeds.

122. In determining the appropriate pace of the auction, we must trade off the benefits of rapidly completing the auction -- possibly earlier initiation of service -- against the benefits of providing bidders time to deliberate. With large numbers of high value licenses that may be combined across spectrum blocks and regions, bidders may need a significant amount of time to evaluate backup strategies and consult with their principals. For this reason, PacBell and PacTel argue that for broadband PCS, the benefits of simultaneous auctions are unlikely to be achieved if the auction proceeds too rapidly.[99] Specifically, PacBell proposes one bid per day and PacTel proposes three business days per round for broadband PCS.[100] Such a deliberate pace may not be appropriate, however, when license values are lower and fewer licenses are put up for auction simultaneously. In that case it may be appropriate to have several bidding rounds per day. The number of anticipated bidders may also affect our choice of the length of bidding rounds and duration between rounds. With more bidders the Commission may need to provide a longer period during which to submit bids, and a longer interval between rounds in which to process bids.

123. The duration of bidding rounds and the interval between rounds in simultaneous multiple round auctions will be announced in service-specific Reports and Orders, and may be varied by announcement during the course of an auction.[101] We generally intend to give bidders a single business day to submit bids, and conduct a new bidding

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[97] *See, e.g.*, comments of Bell Atlantic, Atttachment by Barry Nalebuff and Jeremy Bulow at 14.

[98] *Ex parte* submission of NTIA, February 28, 1994, Bykowsky-Cull staff paper at 5.

[99] PacBell reply comments, attachment by Milgrom and Wilson at 15-16; PacTel reply comments, attachment by McAfee at 4-6.

[100] Comments of PacBell, Attachment by Milgrom and Wilson at 19; comments of PacTel, Attachment by McAfee at 16.

[101] If we find that bidding is proceeding excessively slowly, we may decide to shorten the duration of rounds and/or intervals between rounds. On the other hand, we may increase the duration of rounds and/or intervals between rounds if an unexpectedly large number of bidders participate in the auction.

round each business day. We may, however, choose other round lengths and intervals between rounds. To the extent that we do, the length of rounds and the interval between rounds will generally vary directly with the number of licenses put up for bid simultaneously, the anticipated value of the licenses, and the number of bidders expected by the Commission.

3. Bid Increments

124. In multiple round auctions, whether they be sequential or simultaneous, the Commission will generally specify minimum bid increments. The bid increment is the amount or percentage by which the bid must be raised above the previous round's high bid in order to be accepted as a valid bid in the current round.[102] Imposing a minimum bid increment speeds the progress of the auction and, along with activity and stopping rules, discussed below, helps to ensure that the auction comes to closure within a reasonable period of time. Establishing an appropriate minimum bid increment is likely to be especially important in a simultaneous auction with a simultaneous closing rule. In that case, all markets remain open until there is no bidding on any license. A delay in closing one market would delay the closing of all markets.

125. For broadband PCS, commenters have suggested a minimum bid increment of five percent. PacTel, for example, argues that this provides a reasonable compromise between the goal of completing the auction quickly and that of revealing information about the distribution of valuations among bidders.[103] PacTel also has suggested, in the context of simultaneous auctions where markets close one by one, that the auctioneer should vary the bid increment, reducing it as the number of active bidders declines, in order to bring bidding on all licenses in the auction to a close at approximately the same time. PacBell, in the context of auctions that stop simultaneously, notes that reducing the bid increments in later stages of the auction may also be beneficial (attachment to reply comments at 25). This would move the auction quickly at the beginning while still allowing finer price movements when approaching final prices. Such a refinement would reduce chances of ties by allowing bidders to express relatively small differences in valuations. If any ties do occur, however, licenses will be awarded in the order the bids were received, starting with the earliest bid. This rule would provide bidders an incentive to submit bids early, reducing the chance of the FCC having to accept a large number of bid submissions just prior to the end of each bidding round.

126. We reserve the right to specify minimum bid increments in dollar terms as well as in percentage terms. The dollar minimum may be needed to ensure that the auction moves forward expeditiously if bidding begins at a very low dollar level. Based on the comments, our preferred basic minimum bid increment is five percent or x dollars, whichever is larger, where the dollar amount is set at approximately five percent of the expected license value. We shall retain discretion in future Reports and Orders establishing service specific rules to set and, by Public Notice before or announcement during the auction, vary the minimum bid increments for individual licenses over the course of an auction. We also may wish to vary the minimum bid increments with respect to different licenses being awarded in one auction. The dollar minimum bid increment would likely vary across classes of license, with larger bid increments set for more valuable licenses.

4. Stopping Rules for Multiple Round Auctions

127. Prior to each multiple round auction, the Commission will announce by Public Notice a stopping rule for determining when the auction is over. We seek a stopping rule that will (1) terminate the auction in a reasonable period of time, (2) be simple and clearly understood by participating bidders and observers of the auction process, and (3) in the case of simultaneous auctions, close all markets at approximately the same time. If markets were to close at very different times, important back-up bidding strategies could be foreclosed as in sequential auctions -- once the auction for a particular license has closed it is too late to bid on that license as additional price information becomes available during the course of an auction.

128. When licenses are auctioned one at a time, deciding when to close a multiple round auction is a largely a matter of determining how long to wait after bidding ceases.[104] Typically, such auctions close when a brief amount of time passes with no one offering to raise the current high bid by the minimum bid increment. In oral auctions this is generally a matter of seconds. In the case of discrete bidding rounds, one must specify the number of rounds. For example, we could specify that, if there were no valid new bids for one round, the auction would close. Such a rule would be simple and help bring the auction to

[102] PacTel proposes a "suggested" minimum bid increment instead of a required minimum bid increment. Under this proposal (described in further detail *infra*), if two bids were submitted and both were below the suggested minimum bid, the auction would close with the license awarded to the highest bidder. On the other hand, if both bids were above the minimum suggested bid the auction would continue. This mechanism is intended to provide bidders an incentive to increase bids by a minimum increment without making it an absolute requirement. *See* comments of PacTel, Attachment by R. Preston McAfee at 16-17. The Commission retains the discretion to use this approach instead of a mandatory minimum bid increment.

[103] Comments of PacTel, Attachment by R. Preston McAfee at 16.

[104] Stopping rules in the context of a single auction (or simultaneous auctions with markets closing one at a time) are not uniquely defined in terms of the length of time or the number of discrete rounds without bids. For example, McAfee, as noted above, proposes a stopping rule that differs depending on whether bids are below or above a "suggested minimum bid." Under McAfee's proposal, a market would close if no new bids are submitted in a round or if bids are submitted but there are fewer than two that exceed the previous round's high bid by more than the suggested bid increment. Comments of PacTel, Attachment by R. Preston McAfee at 16. The second part of this rule would appear to provide bidders an additional incentive to participate actively in an auction. Under this provision, a high bidder in the previous round would not have the opportunity to make a counter offer to the high bidder in the current round if there is only a single bid which exceeds the suggested minimum bid. This would seem to provide an added incentive for the high bidder to continue to raise its bid by the suggested bid increment in each round. The Commission retains the discretion to employ such a stopping rule.

a close quickly. Allowing more than one round might cause bidders to hold back (absent any activity rules) since they would not face the risk of losing the license if they did not bid in a given round. This same reasoning would apply to simultaneous auctions in which markets close one at a time and there is no activity rule. However, in a simultaneous auction with an activity rule to deter such holding back, it may be desirable to allow several rounds to pass without bidding before closing the auction. This would avoid any surprise endings to an auction, thus minimizing the possibility that a bidder is thwarted from exercising a back-up bidding strategy. It could also prolong the auction, however, and PacBell, the main proponent of simultaneous auctions with activity rules, proposes that a such auctions close if a single round passes in which no new acceptable bids are submitted for any license.[105]

129. *Stopping a Simultaneous Auction Market-by-Market.* In simultaneous auctions, the stopping rules must also specify whether to close markets individually or simultaneously. PacTel proposed allowing markets to close one at a time, but also proposed a mechanism to increase the likelihood that all markets close at approximately the same time. Under PacTel's plan, minimum bid increments would be reduced as bidding activity (as measured by the number of active bidders) slows down. This would tend to result in rapid price movement in markets far away from final prices and slow movement in markets close to final prices. However, this mechanism may not work well when the top few bidders have much higher valuations than the other bidders. In this case the presence of only a few bidders does not indicate that the current high bid is close to the final price. But under their mechanism the bid increments would be small and bidding could continue for a long time, resulting in that market closing later than others. PacTel estimates that an auction conducted under its proposal would close after approximately one month (assuming its timetable of three days between bids and initial bidding increment of five percent).

130. *Stopping a Simultaneous Auction at the Same Time in all Markets.* PacBell, on the other hand, proposed closing bidding simultaneously -- bidding would remain open on all licenses until bidding stops on every license. This approach has the advantage of providing bidders full flexibility to bid for any license as more information becomes available during the course of the auction, but it may lead to very long auctions. Bidders might hold back (absent the activity rules proposed by PacBell in its reply comments) because there would be a cost of committing oneself early to a bid with little offsetting benefit since the chance of the entire auction closing before they could bid would be slight. Furthermore, such a stopping rule might be vulnerable to strategic delay. An incumbent wireless provider, for example, might prolong the auction by increasing bids on low value licenses simply to delay closure on higher value licenses. In its reply comments, PacBell addresses these concerns about speed of closing. To assure that bidders do not hold back, it proposes an activity rule (*see* discussion *infra*) that requires bidders to be active in each round. PacBell estimates that a simultaneous auction of all broadband PCS licenses would take 40 to 60 rounds using their stopping and activity rules. As a fail safe mechanism, in part to address the possibility of strategic delay, it proposes that if an auction conducted using its stopping and activity rules does not close after 40 rounds, the Commission could announce that, after one additional round of bidding, the auction would close.[106]

131. *Hybrid Stopping Rules.* Hybrid stopping rules are also possible. A simultaneous stopping rule, along with a relatively complex activity rule, might be used for higher value licenses where the magnitude of the benefits of simultaneous closing are great. For lower value licenses, where the loss from eliminating some back-up strategies is less, markets might be allowed to close individually. For example, in the broadband PCS context, a simultaneous stopping rule might be applied to all Major Trading Area (MTA) licenses while a simultaneous auction for Basic Trading Area (BTA) licenses might be allowed to close market by market. A more complex hybrid would be to close the largest 10 or 15 MTAs simultaneously, while closing the remaining markets on an individual basis once the top markets had closed. That is, when three rounds have passed without bids on any of the top licenses, then all licenses on which there has been no bidding would close. Each remaining market would close when bidding stops in that market. Under this approach the outcome of large markets would be known before bidding closed on smaller properties. This plan would, however, prevent bidders on large MTAs from using information about small MTAs that becomes available subsequent to the close of the large markets. But, presumably information about prices and ownership of large markets is more important in making bidding decisions about small markets than vice versa. Such hybrid approaches might simplify and speed up the auction process without greatly sacrificing efficiency and revenue.

132. *Preferred Stopping Rules.* Based on the foregoing analysis we prefer the following stopping rules: (1) when auctioning licenses one at a time, or simultaneously and closing markets one at a time -- a market closes if a single round passes in which no new acceptable bids are submitted for that license; (2) when auctioning licenses simultaneously and closing markets 9 simultaneously -- all markets close if a single round passes in which no new acceptable bids are submitted for any license. We favor these rules because they are simple and are likely to promote an expeditious close to auctions. We are also persuaded, for the reasons discussed above, that simultaneously closing markets for interdependent license is most likely to award licenses to the bidders who value them most highly. We recognize, however, that this approach may be more costly to implement for both the Commission and bidders, and thus may wish to adopt a hybrid approach in which markets for lower value licenses close one at a time. Moreover, we will retain the discretion to declare by announcement at any point during a multiple round auction that the auction will end after one additional round (or some other specified number of additional rounds). This will ensure ultimate Commission control over the duration of the auction. We also reserve the right to vary the interval at which bids are accepted by announcement during the course of a

[105] Comments of PacBell, Attachment by Paul Milgrom and Robert Wilson at 19.

[106] Reply comments of PacBell, Appendix to attachment by Milgrom and Wilson at 5. Professors Milgrom and Wilson propose that if this procedure is invoked the Commission would accept final bids only for licenses on which the highest bid increased in one of the last three rounds. No new bids would be accepted for other licenses.

simultaneous auction (*e.g.*, run two rounds per day rather than one), in order to move the auction toward closure more quickly.

5. Activity Rules

133. In order to ensure that simultaneous auctions with our preferred simultaneous stopping rule close within a reasonable period of time, an activity rule is likely to be necessary to prevent bidders from waiting until the end of the auction before participating. Because our preferred simultaneous stopping rule generally keeps all markets open as long as anyone wishes to bid, it also creates an incentive for bidders to hold back until prices approach equilibrium before making a bid and risking paying a penalty for withdrawing. As noted above, this could lead to very long auctions. An activity rule is less important when markets close one by one because failure to participate in any given round may result in losing the opportunity to bid at all if that round turns out to be the last. This Order adopts rules which retain the flexibility to decide on an auction-by-auction basis whether we will use an activity rule, and if so what type. We will announce the activity rule, if any, that will be used in each auction by Public Notice before the auction.

134. Where we decide to employ an activity rule, we will seek one that (1) moves auctions along at an appropriate speed, (2) provides bidders with the sufficient flexibility to pursue a wide range of alternative bidding strategies, and (3) is simple and clearly understood by participating bidders. Designing an effective activity rule involves making tradeoffs among these objectives. For example, any incentive to induce bidders to actively participate (beyond a single license) in early rounds constrains the flexibility to pursue some bidding strategies (*e.g.*, holding back). The intention is to design an activity rule which, when used in conjunction with a simultaneous stopping rule, forecloses fewer important bidding strategies than would auctions in which markets close individually.

135. *Activity Rules Proposed by Milgrom and Wilson.* The most detailed discussion in the record on activity rules is in the papers prepared by Professors Paul Milgrom and Robert Wilson and submitted by PacBell.[107] The initial Milgrom-Wilson proposal simply required each bidder to be active on at least one license in each round of bidding. In a particular round of bidding, a bidder is considered "active" with respect to a particular license if the bidder (1) has the high bid for that license from the previous round, or (2) has submitted a bid that exceeds the previous round's high bid for that license by at least the minimum bidding increment. Requiring each bidder to be active on at least one license is simple and does not foreclose any back-up bidding strategies of any serious bidder, but may not be adequate to ensure that an auction with a simultaneous stopping rule closes in a reasonable amount of time. Using this rule, we would also run the risk that it may become necessary to close an unreasonably long auction in a crude fashion, for example by announcing that only one more round of bids will be accepted. In such a case, the auction may generate little information and important bidding opportunities may be foreclosed.

136. At the cost of some added complexity and some limitation on bidding flexibility, we may wish to impose a more stringent activity rule in auctions with simultaneous closing rules. Professors Milgrom and Wilson, in their attachment to PacBell's reply comments (Milgrom and Wilson attachment at 22 and appendix at 7), suggest such a stricter activity rule. The rule encourages bidders to participate in early rounds by limiting their maximum participation to some multiple of their minimum participation level. Milgrom and Wilson propose that bidders be required to declare their maximum eligibility in terms of MHz-pops, and make an upfront payment equal to two cents per MHz-pop. (*See* Section IV.B., *infra.*) That is, bidders would be limited to bidding on licenses encompassing no more than the number of MHz-pops covered by their upfront payment. It is important to note that bidders would have the flexibility to shift their bids among any licenses for which they have applied so long as the total MHz-pops encompassed by those licenses does not exceed the number for which they made an upfront payment. Moreover, bidders would be able to ensure themselves the freedom to participate at whatever level they deemed appropriate by making a sufficient upfront payment.[108] To preserve their maximum eligibility, however, bidders would be required to maintain some minimum activity level during each round of the auction.

137. Under the Milgrom-Wilson proposal, the minimum activity level, measured as a fraction of the self declared maximum eligibility, would increase during the course of the auction. Milgrom and Wilson divide the auction into three stages. During the first stage of the auction, a bidder would be required to be active on licenses encompassing one-third of the MHz-pops for which it is eligible. The penalty for falling below that activity level would be a reduction in eligibility. At this stage, bidders would lose three MHz-pops in maximum eligibility for each MHz-pop below the minimum required activity level. Put another way, each bidder would retain eligibility for three times the MHz-pops for which it is an active bidder, up to the MHz-pops specified in the bidder's upfront payment. For example, if a bidder made an upfront payment on 600 million MHz-pops, the minimum activity level would be 200 million MHz-pops during the first auction stage. If it bid on only 150 million MHz-pops, its eligibility would be reduced to a total of 450 million MHz-pops.

138. In the second stage, bidders would be required to be active on two-thirds of the MHz-pops for which they are eligible. The penalty for falling below that activity level would be a loss of 1.5 MHz-pops in eligibility for each MHz-pop below the minimum required activity level. In other words, each bidder would retain eligibility for 1.5 times the MHz-pops for which it is an active bidder, up to the MHz-pops specified in the bidder's upfront payment. For example, a bidder who made an upfront payment on 600 million MHz-pops would have a minimum activity level of 400 million MHz-pops during the second stage of the auction. If it bid on only 300 million MHz-pops, its eligibility would be reduced to a total of 450 million MHz-pops.

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[107] *See* comments of PacBell, Attachment by Milgrom and Wilson at 19; reply comments of PacBell, Attachment by Milgrom and Wilson at 21-25.

[108] The cost of buying additional initial eligibility would depend on the difference between a bidder's opportunity cost of funds and the rate of interest, if any, paid by the Commission on the upfront payments.

139. In the third stage, bidders would be required to be active on licenses encompassing all of the MHz-pops for which they are eligible. The penalty for falling below that activity level would be a loss of one MHz-pop in eligibility for each MHz-pop below the minimum required activity level. Each bidder thus would retain eligibility equal to its current activity level (1 times the MHz-pops for which it is an active bidder).

140. Milgrom and Wilson propose moving from stage one to stage two when, over three rounds of bidding, the high bid has changed on five percent or fewer of the licenses (measured in terms of MHz-pops) being auctioned. Stage three would begin when the high bid has changed on two percent or fewer licenses over three rounds.[109] Finally, to avoid the consequences of clerical errors and to compensate for "unusual circumstances that might delay a bidder's bid preparation or submission on a particular day," Milgrom and Wilson propose that each bidder could request and automatically receive a waiver of the activity rule once every three rounds. We believe that some waiver procedure is a critical element of the Milgrom-Wilson activity rule, since the Commission would not wish to reduce a bidder's eligibility due to an accidental act or circumstances not under the bidder's control.

141. *Other Activity Rules.* The Milgrom-Wilson activity rule could be modified by adjusting the percentages specified in the transition rule between auction stages, changing the number of stages, adjusting the minimum required activity level during each stage, or altering the waiver procedure. For example, the first stage could be eliminated and the auction could start with the two-thirds minimum activity requirement of the second stage. Other activity rules may be possible as well. The Commission could, for example, require that a bidder's activity level remain within a single range throughout the auction. That is, a bidder's eligibility would be reduced to its current activity level only if it is active on less than some percent (*e.g.*, 75 percent) of the MHz-pops it specified in its upfront payment. This rule would be simpler than the Milgrom-Wilson rule, but provide less bidding flexibility. Rules that would be more complex but provide greater bidding flexibility are also possible. Instead of a reduction in eligibility for bidding at less than the required activity level, the activity rule could specify a bid premium for later expanding bidding activity beyond the level that would be allowed under the Milgrom-Wilson rule. The premium could be directly proportional to the number of MHz-pops in excess of that level. Bidders would not, however, be permitted to bid on more MHz-pops than covered by their upfront payments. The waiver procedure proposed by Milgrom and Wilson could be modified as well. A simpler alternative would be to allow bidders five automatic waivers during the course of an auction (for failure to meet the minimum activity requirement) and the discretion to issue additional waivers for circumstances beyond a bidder's control, such as an earthquake.

142. *Choosing Among Alternative Activity Rules.* In choosing auction specific activity rules, it is important to keep in mind the tradeoffs among simplicity, flexibility, and speed of auction completion. For example, eliminating stages one and two of the Milgrom-Wilson activity rule would simplify the procedure at the expense of reduced bidding flexibility and could result in an auction that closes too quickly to allow adequate time for consideration when there are many interdependent high-value licenses. Starting an auction with the third stage of the Milgrom-Wilson activity rule would prevent a bidder from initially bidding on certain core licenses critical to its business plans and then expanding its bidding to other licenses if prices turn out to be low enough that it can do so within its budget. Instead, it would need to bid initially on the largest collection of licenses it might want. If prices turn out to be higher than expected, the bidder would need to scale back, but it might get stuck with the wrong properties. That is, it might find that it risks being outbid on its core properties but not on the less essential ones. It would then need to withdraw its high bids on its non-essential properties in order to have sufficient capital to ensure that it could pay for its core properties. This problem would be less likely to occur under the three stage activity rule proposed by Milgrom and Wilson, because the bidder would not need to commit itself to the additional properties until stages two or three, when price information would be relatively reliable.

143. We are concerned, however, about the possible complexity of a three stage Milgrom-Wilson activity rule. One way to reduce this complexity from the perspective of bidders, without sacrificing auction flexibility or speed, would be to develop appropriate bidding software. It is our intention to develop such software and make it available to all bidders in auctions in which a Milgrom-Wilson type activity rule is used. Such software which would (1) automatically calculate the activity level associated with any possible bid on a license or licenses, (2) show the minimum required activity level for the current auction stage, (3) automatically alert the bidder, prior to submitting a bid, if a bid falls below the bidder's minimum activity level, and show the consequences in terms of future eligibility of submitting such a bid, (4) show the bidder's eligibility in terms of MHz-pops, (5) automatically inform the bidder, prior to bid submission, as to whether a bid is valid, and (6) show the number of automatic waivers the bidder has used and the number still available.

144. *Preferred Activity Rule.* In light of the foregoing analysis, when the Commission employs a simultaneous stopping rule, its preferred activity rule will be a three stage Milgrom-Wilson rule. The specific parameters of the rule, including the minimum required participation level during each stage and the overall activity level specified in the transition rule between auction stages will be determined in subsequent service specific Reports and Orders.[110] However, the Commission retains the flexibility to choose among the following other activity rules on a case-by-case basis: (1) a Milgrom-Wilson rule with one or two stages, (2) the requirement that bidders be active on a single license, (3) a rule, as described above, that a bidder's activity level remain within a single range throughout the auction, (4) a rule, as described above, that replaces the maximum al-

[109] To avoid the risk of an excessively long auction, they also propose that the Commission retain the ability to declare at any time during an auction that the auction is moving to the next stage.

[110] The Commission would also retain the ability to speed up an auction by announcing, at any time during an auction, that the next stage of the auction (with a higher minimum participation level) will begin in the next bidding round.

lowed bidding levels in the Milgrom-Wilson rule with a bidding premium for exceeding those maximums, or (5) a combination of the foregoing rules.

145. We also conclude that while some waiver procedure is necessary in conjunction with a Milgrom-Wilson activity rule, a rule less complex than the one they proposed is likely to be adequate. Our preferred procedure will be to allow bidders five automatic waivers during the course of an auction (for failure to meet the minimum activity requirement) and the discretion to issue additional waivers for circumstances beyond a bidder's control. We retain the flexibility, however, to adjust the number of automatic waivers, or to institute a rule that allows one free waiver during a specified number of bidding rounds.

6. Bid Withdrawal and Default

146. In either sequential or simultaneous auction designs, a bidder may wish to withdraw one or more of its high bids. As discussed below, if a high bid is withdrawn prior to the close of a simultaneous multiple round auction, the Commission will impose a penalty equal to the difference between the withdrawn bid and the amount of the winning bid the next time the license is offered by the Commission.[111] No withdrawal penalty will be assessed if the subsequent winning bid exceeds the withdrawn bid. If a winning bidder defaults after the close of such an auction, the defaulting bidder will be required to pay the foregoing penalty plus an additional penalty discussed below.

147. *Bid Withdrawal Penalty.* Allowing bidders to withdraw bids without ever paying a penalty would encourage insincere bidding. Insincere bidding, whether purely frivolous or strategic, distorts the price information generated by the auction process and reduces its efficiency. Strategic bidding is likely to be the most damaging. For example, a strategic bidder might attempt to deter a rival from acquiring a regional collection of licenses (or from entering altogether) by bidding up the price of key licenses and then withdrawing.

148. An excessive bid withdrawal penalty, on the other hand, would tend to discourage the efficient aggregation of licenses. Absent full combinatorial bidding, bidders attempting to put together a collection of licenses face the risk that they may be left holding licenses they no longer want. In either sequential or simultaneous auctions, a bidder may bid high on one property in the expectation that it will also win a complementary property, only to find that it is outbid on the complementary property. If the penalty for bid withdrawal is too high, bidders will tend to be too cautious in attempting to aggregate licenses.

149. A point to note in considering the appropriate level of bid withdrawal penalty is that the existence of an after-market generally places an upper limit on the amount that bidders will pay to the government for bid withdrawal. If the bid withdrawal penalty is set too high, winning bidders who realize that they bid too much will generally pay for the license and resell it in the after-market. The cost of doing this would be the difference between the bid price and the price obtained in the after-market plus any transaction costs (including the cost of financing the initial purchase). Only those bidders who cannot raise sufficient capital to acquire the license for later resale, or those who are disqualified from acquiring the license would choose to withdraw and pay the government significantly more than this.[112]

150. Professor R. Preston McAfee, in a January 10, 1994, *ex parte* filing on behalf of PacTel, proposes a bid withdrawal penalty, in the context of simultaneous multiple round auctions, which we believe generally provides an appropriate balance between the risks of too high a penalty and those of too low a penalty. He proposes that the penalty for withdrawing a high bid equal the difference between the amount bid and the amount the government ultimately receives for the license. If the amount ultimately received for the license is greater than the amount of the withdrawn bid, no payment would be required.[113]

151. We believe, for the following three reasons, that this is an appropriate penalty where the high bid is withdrawn during the course of a simultaneous multiple round auction.[114] First, it provides bidders with appropriate incentives to avoid withdrawing bids. It compels bidders who may ultimately withdraw to consider the external consequences of both how much they bid and the timing of their withdrawal. The more the price is bid up above the final sales price the greater the distortion in information generated by the auction, and the greater the potential for strategically limiting entry of potential competitors. Thus it is appropriate that the bid withdrawal penalty should increase with the amount of the withdrawn bid, when that amount exceeds the market price. Similarly, the later in

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[111] If a license is re-offered by auction, the "winning bid" refers to the high bid in the auction in which the license is re-offered. If a license which is the subject of withdrawal or default is instead offered to the highest losing bidders in the initial auction, the "winning bid" refers to the bid of the highest bidder who accepts the offer. Losing bidders would not be required to accept the offer, *i.e.*, they may decline without penalty. We wish to encourage losing bidders in simultaneous multiple round auctions to bid on other licenses, and therefore will not hold them to their losing bids on a license for which a bidder has withdrawn a bid or on which a bidder has defaulted.

[112] In determining the maximum amount that could be charged for a bid withdrawal penalty one must take into account the fact that the price at which a license can be transferred in the after-market is uncertain. Risk averse bidders would be willing to pay a fixed withdrawal penalty which exceeds the expected value of the difference between the bid and final sales price plus transaction costs.

[113] McAfee also proposes that the license reverts to the second highest bidder, who may withdraw without penalty. Alternatively, the Commission could restart bidding at some fraction of the withdrawn bid, say 80 percent, or at a fraction of the second highest bid. We generally favor the last approach. Using a fraction of the second highest bid instead of a fraction of the withdrawn bid would avoid the problem of setting the starting price too high in the event that there is a large gap between the highest and second highest bids. It would also take into account the possibility that the second highest bidder is no longer willing to pay as much as it originally bid. Finally, this approach would be administratively less burdensome than checking whether the second highest bidder wanted the license. If no bids are received at the suggested starting price the Commission would retain the right either to lower the price or to accept bids that are below the price.

[114] In the unlikely event that there is more than one withdrawal on the same license, we will hold each withdrawing bidder responsible only for the difference between its withdrawn bid and the amount of the winning bid the next time the license is offered by the Commission. This procedure ensures that each bidder who withdraws is responsible for its bid. In our view, §§ 309(j)(3) and (4)(B) afford us ample authority to impose such penalties for bid withdrawal.

the auction a high bid is withdrawn, the higher the penalty should be and the higher it is likely to be. The damage to the auction process is greater when bids are withdrawn late in the process because other bidders have fewer opportunities to adjust their strategies and thus there is less the chance the license will be awarded to the bidder who values it most highly. For the same reason, the ultimate sales price is likely to be less, and hence the bid withdrawal penalty likely to be higher. The penalty compels bidders to consider the costs imposed on the auction process along with the benefits they expect to receive from withdrawal.

152. Second, the penalty precisely protects the government from loss of revenue associated with bid withdrawal. A fixed withdrawal penalty would be too great when the gap between the final sales price and bid price is small and too little when it is large.

153. Third, the bid withdrawal penalty adopted here is likely to be fairer to designated entities, who are less likely to have the option of purchasing a license and reselling it as an alternative to bid withdrawal. As discussed above, most bidders would not pay a fixed bid withdrawal penalty if it would be less costly to purchase the license and resell it in the after-market. But capital constrained firms, and firms subject to strict resale limitations would not have this option. In contrast to a fixed bid withdrawal penalty, the penalty adopted here would result in equal treatment for all firms, since the penalty for bid withdrawal would approximate the loss incurred by accepting a license and then reselling it.

154. *Default Penalty.* If a bid is withdrawn after a simultaneous multiple round auction has closed, *i.e.*, the winning bidder "defaults," the winning bidder will be required to pay the foregoing penalty plus an additional penalty equal to three (3) percent of the amount of the winning bid the next time the license is offered by the Commission, or three percent of the amount of the defaulting bidder's bid, whichever is less. The additional penalty is intended to provide an incentive for bidders wishing to withdraw their bids to do so prior to the close of the auction. It is appropriate to create such an incentive because a withdrawal that occurs after an auction closes (default) is likely to be more harmful than one that occurs before closing. First, default reduces the efficiency of the assignment process. If withdrawal occurs before the auction closes other bidders will have greater opportunities to revise their bidding strategies to account for the availability of the withdrawn license. Once the auction closes, however, only those licenses on which bidders defaulted (plus any licenses not sold during the auction) will be put up for re-auction, so other bidders will have little opportunity to revise their strategies. Thus, default would reduce the likelihood that licenses will be assigned to those who value them the most. Second, default imposes extra costs on the government. If a bidder defaults, the government must generally incur the additional expense of re-auctioning the license.[115] In contrast, the administrative cost of announcing a bid withdrawal prior to the close of an auction and accepting additional bids would be minimal.

155. In setting the additional penalty for default, the Commission must take into account the presence of the after-market as a limitation on the maximum collectable penalty. Based on the fact that brokers of cellular licenses typically charge a three percent commission (*See* Notice of Proposed Rulemaking and Tentative Decision in GN Docket No. 90-314 and ET Docket No. 92-100, 7 FCC Rcd 5676 (1992), at n.41), we estimate the after-market transaction costs to be approximately three percent. We believe that this is an appropriate additional penalty for default. If the Commission were to charge this additional penalty, we would expect most bidders to prefer paying the default penalty than purchasing and reselling the licenses in the after-market, because the Commission is likely to be able to re-auction licenses more quickly and to get higher sales prices assuming it puts all defaulted (and otherwise unsold) licenses up for bid shortly after the auction closes. If the Commission were to set a substantially higher penalty, few bidders would default but would instead resell unwanted licenses in the after-market. Not only would this be unfair to entities unable to rely on the after-market, it would likely reduce the efficiency of the auction process, because we anticipate that FCC simultaneous auctions of defaulted (and otherwise unsold) licenses will generally assign licenses more efficiently than license-by-license transactions in the after-market. On the other hand, an additional penalty of substantially less than three percent would not sufficiently discourage default.

156. *Penalties in Open Outcry Auctions.* In the case of open outcry auctions, the Commission may choose not to impose any penalty for bid withdrawal during the course of an auction and instead rely only on the default penalty described above to discourage insincere bidding. The default penalty will be assessed if a bidder fails to make the down payment on a license, fails to pay for a license or is disqualified after the close of an auction. There are two reasons for this possible modification. First, the damage from bid withdrawal is less when only one license is up for auction at a time than when multiple licenses are auctioned simultaneously. In a simultaneous auction, bids on one license will affect other bidders' decisions about other licenses. In an open outcry auction, however, bids during the course of the auction will have little or no effect on other decisions. Provided that other bidders are also not held to their bids (so they are not committed to bids based on faulty estimates of common values inferred from the withdrawn bid), the only damage from such withdrawal would be delay. In an open outcry auction such delay may be minimal. Second, in open outcry auctions the possibility for mistaken bids is greater than when bids are submitted electronically or in writing.

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[115] In the event that a winning bidder in a simultaneous multiple round auction defaults on its down payment obligations, the Commission will generally re-auction the license either to existing or new applicants. If, however, only a small number of relatively low value licenses are to be re-auctioned, the Commission may choose to offer the license to the highest losing bidders (in descending order of their bids) at their final bids, since the cost of running an auction may not exceed the benefits. If a high bidder defaults or is disqualified after having made its down payment, the Commission will conduct another auction for the license. New applicants will be given the opportunity to participate in such an auction, because so much time is likely to have passed that different parties may be interested in bidding and existing applicants may have different valuations of the license.

157. *Penalties in Single Round Bidding.* In the case of single round bidding, the foregoing analysis of penalties for withdrawal and default must be modified to reflect the fact that bids cannot be withdrawn during the course of an auction because there is only a single round. If a bid is withdrawn before the bids are opened no harm would be done and no penalty will be assessed. If a high bid is withdrawn after the bids are opened but before the high bidder has been notified the harm would also be minimal. The Commission can quickly proceed to offer the license to the party with the next highest bid and the situation would be as if the first high bid had not been made. If, however, a high bidder in a single round auction defaults after it has been notified, the licensing process is likely to be delayed. To provide bidders in single round auctions an incentive to avoid default Cand the associated delays, and to protect the government against the revenue loss from default, we intend to impose a default penalty equal to the difference between the high bid and the next highest bid.[116] No additional three percent penalty will be charged because the two justifications for its imposition in multiple round auctions do not apply. In a single round auction, the argument about creating an incentive to withdraw during the course of an auction does not apply since there would be only a single bidding round and the Commission would not incur additional costs because it will not generally need to run another auction.

7. Releasing Bid Information

158. In multiple round auctions the Commission must decide how much bid information to release during the auction. One option (proposed by PacBell) would be to announce all bids plus the identities of the high bidder in each round.[117] Maximizing the information available to bidders minimizes bidder uncertainty and thus may increase bids by alleviating the winner's curse. It may also increase efficiency of license assignments by providing bidders with useful information about the likely availability of complementary services and standards both inside and outside the areas they wish to serve. On the other hand, releasing the identities of the high bidders may foster strategic manipulation, *e.g.*, bidding up licenses critical to rivals' business plans.[118] It also facilitates collusion among bidders by identifying high bidders to each other and enables parties to enter into bid rigging agreements. We believe that the risk of collusion and strategic manipulation outweighs the benefits of additional information from releasing the identities of the high bidders. We therefore will adopt an intermediate option of announcing bidder identification numbers and bid amounts but not the identities of the bidders. This option provides some useful information to bidders without significantly increasing the risk of anticompetitive behavior.

8. Delay, Suspension or Cancellation of Auction

159. By Public Notice or by announcement during an auction, the Commission may delay, suspend or cancel an auction in the event of a natural disaster, technical obstacle, evidence of auction security breach, unlawful bidding activity, administrative necessity, or for any other reason that affects the fair and competitive conduct of the competitive bidding. In such cases, the Commission may, at its sole discretion, resume the auction starting from the beginning of the current or some previous round or may cancel the auction in its entirety.

IV. PROCEDURAL, PAYMENT AND PENALTY ISSUES

160. This section establishes general rules and procedures that will govern the competitive bidding process, including procedures for the filing of applications and rules concerning bidder and licensee qualifications, upfront and down payments, penalties that will be assessed in certain circumstances, and the use of minimum bid and reservation prices. These rules are structured to ensure that bidders and licensees are qualified and will be able to construct systems quickly and offer service to the public. By ensuring that bidders and license winners are serious, qualified applicants, these rules will minimize the need to re-auction licenses and prevent delays in the provision of service to the public.

A. Pre-Auction Procedures and Bidder and Licensee Qualifications

161. Section 309(j)(5) provides that no party may participate in an auction "unless such bidder submits such information and assurances as the Commission may require to demonstrate that such bidder's application is acceptable for filing." 47 U.S.C. § 309(j)(5). Moreover, "[n]o license shall be granted to an applicant selected pursuant to this subsection unless the Commission determines that the applicant is qualified pursuant to [Section 309(a)] and Sections 308(b) and 310" of the Communications Act. *Id.* As we noted in the NPRM, the legislative history explains that the Commission may require that bidders' applications contain all information and documentation sufficient to demonstrate that the application is not in violation of Commission rules and that applications not meeting those requirements may be dismissed prior to the competitive bidding. *See* NPRM at ¶ 96, *citing* H.R. Rep. No. 103-111 at 258.

162. In the NPRM, we made a number of proposals to implement this statutory provision that were designed to streamline the processing of auction applications. NPRM at ¶ ¶ 96-101. We proposed that, in response to a Commission Public Notice of a filing window or cut-off date in services that are subject to competitive bidding, all applicants interested in participating would be required to file a short-form application (modeled on the Commission's "Transmittal Sheet for Cellular Applications"). *Id.* at ¶ 97.

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[116] If there are multiple defaults each bidder would be responsible for the difference between its bid and the next highest bid. Holding each bidder in a single round auction responsible for the difference between its bid and the next highest bid would discourage cascading defaults. Moreover, the argument made above (for the case of simultaneous multiple round auctions) that losing bidders should not be held to their bids does not apply here because single round bidding does not provide losing bidders with the opportunity to switch bidding strategies within the auction.

[117] Comments of PacBell, Attachment by Milgrom and Wilson at 19. *See also* reply comments of PacBell, Attachment by Milgrom and Wilson at 26.

[118] *See* comments of NYNEX, Attachment by Harris and Katz at 9.

Submission of a short-form application prior to the auction, we noted, would reduce the administrative burdens of the initial stages of the auction process, avoid unnecessary delay in the initiation of service, and encourage applicants to participate in the process. We asked whether applicants should also be required to submit a long-form application and an application fee prior to the auction, or whether the long-form application should be submitted subsequent to the auction. *Id.*

163. The comments generally support the Notice's proposals to streamline the processing of auction applications, particularly as they would apply to PCS applications.[119] The majority of commenters addressing this issue agree that we should require only a short-form application prior to competitive bidding, and that only winning bidders should be required to submit a long-form license application after the auction.

164. Generally, we intend to adopt the following procedures for conducting auctions.[120] Usually, no less than 75 days before each scheduled auction the Commission will release a Public Notice announcing the auction. This Public Notice may be issued either by Commission order or Bureau release. The initial Public Notice will normally contain the following information: the license(s) to be auctioned and the time, place and method of competitive bidding to be used, including applicable bid submission procedures, bid withdrawal procedures and penalties, stopping rules and activity rules. This Public Notice will also specify the filing window, if any, for short-form applications and bidder certifications, as well as the amounts and deadlines for submitting the applicable filing fee, upfront payment and down payment. We will not accept applications filed before or after the dates specified in Public Notices.[121] Applications submitted before release of a Public Notice announcing an auction for particular license(s), or before the opening date of the filing window specified therein, will be returned as premature. Applications submitted after the deadline specified by Public Notice will be dismissed, with prejudice, as untimely. Soon after release of the initial Public Notice, an auction information package would be made available to prospective bidders.

165. In order to reduce the administrative burdens on bidders and the FCC and minimize the potential for delay, bidders will be required to submit only short-form applications and bidder certifications together with any applicable filing fee[122] prior to the auction.[123] As indicated above, short-form applications will be due on a date to be specified by Public Notice or Commission rule. If the Commission receives only one application that is acceptable for filing for a particular license, mutual exclusivity would be lacking and the Commission would be prohibited from using competitive bidding to award the license. Under these circumstances, the Commission will issue a Public Notice cancelling the auction for this license and establishing a date for the filing of a long-form application, the acceptance of which would trigger the relevant procedures permitting petitions to deny.

166. The short-form applications and bidder certification forms will normally require applicants to provide the following information: 1) the license(s) for which the applicant wishes to bid;[124] 2) the applicant's name;[125] 3) the identity of the person(s) authorized to make or withdraw a bid; 4) certifications that the applicant is legally, technically, financially and otherwise qualified pursuant to Section 308(b) of the Communications Act, and is in compliance with the foreign ownership provisions contained in Section 310 of the Communications Act and any other service-specific qualification rules applicable to the

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[119] *See, e.g.*, comments of Cellular Service, Inc. at 15; GCI at 14; Liberty Cellular at 5; and Pacific Telecom Cellular, Inc. at 5-6. The Association for Independent Designated Entities (AIDE) argues in its comments and again in its reply comments that we have not afforded sufficient notice in the NPRM to permit us to promulgate rules for the auction of PCS. We disagree. The NPRM was sufficiently specific to draw numerous and extensive comments from interested parties on the proposed procedures. *See, e.g.*, NPRM at ¶ ¶ 120-130, 167-175. The Commission proposed to base its PCS application filing and processing rules on existing rules used for the processing of other mobile radio services, such as the cellular radio service and the private land mobile radio services, and proposed the use of a one-day filing window for PCS applications. We made reference to specific rules in the cellular service and in the private land mobile radio service. We proposed use of both a short-form and a long-form application to speed processing, and asked when we should consider petitions to deny. We further asked whether we should use combinatorial bidding, proposed to auction the biggest markets first in both broadband and narrowband PCS, and proposed a specific upfront payment in dollars for nationwide narrowband PCS. We proposed that no modifications be allowed until after a winning bidder emerged, and proposed which forms applicants should use to apply for PCS licenses. Finally, we proposed the application fees we proposed to charge and advanced numerous other proposals as well. We received voluminous comments from many parties on these issues. In view of the extensive and detailed comments we received on all aspects of our proposal, we disagree with AIDE's conclusion that we must issue a further notice of proposed rule making before adopting specific procedural rules for PCS. We shall announce those rules in a subsequent Report and Order in this proceeding.

[120] We may decide in the future to alter some or all of the procedures detailed herein, or to tailor them to specific service rules, after we have had an opportunity to assess their effectiveness.

[121] We may decide in some services to accept applications before scheduling an auction. This will be the case in services where mutually exclusive applications are filed during filing windows that open automatically by operation of our Rules. In these situations, we will provide through a subsequent Public Notice relevant information concerning the auction in which these licenses will be awarded.

[122] This fee would be based on the applicable processing fee for the service in question. *See* 47 U.S.C. § 158(g); 47 C.F.R. Part 1, Subpart G. Whenever funds are remitted to the Commission, applicants must file FCC Form 159.

[123] Applicants should submit one paper original and one microfiche original of their application, as well as two microfiche copies.

[124] Several commenters suggested that we consider a "consolidated" short form -- one form that could be used for bidding on multiple licenses. We are currently assessing the feasibility of this option.

[125] If the applicant is a corporation, then the short-form application will require the name and address of the corporate office and the name and title of an officer or director. If the applicant is a partnership, then the application will require the name, citizenship and address of all partners, and, if a partner is not a natural person, then the name and title of a responsible person should be included as well. If the applicant is a trust, then the name and address of the trustee will be required.

particular service; and 5) certification that the applicant satisfies any financial qualifications requirements for the service in question. If the applicant seeks to take advantage of any special provisions adopted for designated entities (*see* Section VI, *infra),* the short-form application would also contain a statement to that effect and a declaration under penalty of perjury that the applicant is qualified as a designated entity under the Commission's eligibility rules. For the reasons discussed in Section V, *infra,* the bidder certification will also require bidders to identify all parties with whom they have entered into partnerships, joint ventures, consortium or other agreements, arrangements or understandings of any kind which relate to the licenses being auctioned, including any such agreements relating to the post-auction market structure. In addition, as discussed more fully below, bidders will be required to certify that they have not entered into any agreements, arrangements or understandings of any kind with other bidders (who are not members of identified partnerships, joint ventures or other bidding csortia) regarding the amount of their bid, bidding strategies or the particular licenses on which they will or will not bid. We may also ask applicants to submit additional information purely for informational purposes so that we can compile the report to Congress required by section 309(j)(12)(D)(iv).

167. In the NPRM, we tentatively concluded that short-form applications should be judged by a letter-perfect standard. *See* NPRM at ¶ 100. Several commenters, however, opposed subjecting short-form applications to a letter perfect standard of review, and proposed that the Commission allow a brief period for correcting errors in short-form applications. *See, e.g.,* comments of AT&T at 30-31, BellSouth at 36-37. But *cf.* comments of Comcast at 16, n.25. We now believe, as a general matter, that the public interest would be better served by encouraging maximum bidder participation in auctions. Therefore, we have decided to adopt a more liberal standard in most cases.[126] Applicants whose short-form applications are substantially complete, but contain minor errors or defects, will be provided an opportunity to correct their applications prior to the auction.[127] However, applicants will not be permitted to make any major modifications to their applications, including ownership changes or changes in the identification of parties to bidding consortia. In addition, applications that are not signed or that fail to make the requisite certifications will be dismissed as unacceptable.

168. After reviewing the short-form applications, the Commission will issue a second Public Notice listing all defective applications and notify applicants of the specific defect. Applicants will be given an opportunity to cure defective applications and resubmit a corrected version.[128] After reviewing the corrected applications, the Commission will release a third Public Notice announcing the names of all applicants whose applications have been accepted for filing. Applicants identified in this Public Notice will then be required to submit the full amount of their upfront payment[129] to the Commission's lock-box bank by a date certain, which generally will be no later than 14 days before the scheduled auction. After the Commission receives from its lock-box bank the names of all applicants who have submitted timely upfront payments, the Commission will issue a fourth Public Notice announcing the names of all applicants that have been determined to be qualified to bid.[130] Each applicant listed on this fourth Public Notice will be issued a bidder identification number and further information and instructions regarding the auction procedures. During an auction, bidders will be required to provide their bidder identification numbers when submitting bids.

B. Upfront Payment

169. To ensure that only serious, qualified bidders participate in our auctions, we proposed that all participants in any auction tender in advance to the Commission a substantial sum (an "upfront payment") as a condition of bidding. NPRM at ¶ 102. We proposed that the upfront payment be set using a formula based on the amount of spectrum and population (or "pops") covered by the license or licenses for which parties intend to bid. *Id.* at ¶ 103. We proposed to set the upfront payment at $0.02 per pop per megahertz. *Id.* We reasoned that an upfront payment requirement would ensure the validity of the information generated during auctions and increase the likelihood that licenses are awarded to the qualified bidders who value them the most, thus promoting the rapid deployment of new technology.

170. There is substantial support in the comments for the Commission's proposal to require prospective bidders to make substantial upfront payments prior to auction. *See, e.g.,* comments of Comcast at 18, PacBell at 28, Nextel at 16, and AWCC at 31-32. Though some favor a fixed upfront payment set by the Commission prior to the auction (*see, e.g.,* comments of Edward M. Johnson at 2, and LuxCel Group, Inc. at 8), most support the Commission's proposed $0.02 per pop per MHz formula, which would enable prospective bidders to tailor their upfront payment to their bidding strategies (*see, e.g.,* comments of PacBell at 28, Telocator (now PCIA) at 13, CTIA at 30, and Rochester Telephone Corporation at 13). Commenters suggest that there should be some fixed minimum on the amount of upfront payment made prior to auction (suggestions range from $2,500 to $100,000 for different services). *See, e.g.,* comments of Telocator at 20-21, Cellular Communications, Inc. at 15, AT&T at 34, and BellSouth at 41. Some commenters also favor setting a maximum upfront payment, pointing out that our proposed formula yields very high payments Jin the broadband PCS context. *See, e.g.,* comments of Southwestern Bell at 38-40 (arguing generally

[126] We may, however, on a service-specific basis decide to employ a letter-perfect standard in appropriate circumstances; any such decision would be noted in the service-specific rules.

[127] The general rules governing submission of fees would, however, apply. *See* 47 C.F.R. § 1.1101 *et seq.* These rules currently provide for dismissal of an application if the application fee is not paid, is insufficient, is in improper form, is returned for insufficient funds or is otherwise not in compliance with our fee rules.

[128] On the date set for submission of corrected applications, applicants that on their own discover minor errors in their applications (*e.g.,* typographical errors, incorrect license designations, etc.) also will be permitted to file corrected applications.

[129] *See* subsection B, *infra.*

[130] An applicant who fails to submit a sufficient upfront payment to qualify it to bid on any license being auctioned will not be identified on this Public Notice as a qualified bidder.

for a maximum deposit of $50 million for all markets), and AT&T at 34 (supporting a maximum upfront payment of $5 million, with a down payment following the auction).

171. We conclude that, in most cases, some form of upfront payment is necessary to deter frivolous or insincere bidding. In determining the amount of upfront payment required, we are balancing the goal of encouraging bidders to submit serious, qualified bids with the desire to simplify the bidding process and minimize implementation costs that will be imposed on bidders. This balancing may yield different results depending on the particular licenses being auctioned, so we have determined that the best approach is to retain the flexibility to determine the amount of upfront payment on an auction-by-auction basis. In this way, we will be able to tailor the upfront payment requirement to the auction design we select and to the characteristics of the licenses being auctioned.[131]

172. As a general rule, however, we will use the formula proposed in the Notice for determining upfront payments: a bidder must submit an upfront payment equal to $0.02 per pop per MHz for the largest combination of MHz-pops the bidder anticipates bidding on in any single round of bidding.[132] Thus, the upfront payment may vary by bidder and will reflect the capabilities of each bidder. We believe that this approach will, in most circumstances, best achieve the Commission's goals in requiring an upfront payment while burdening bidders the least. By the time the upfront payment is due, bidders already will have applied for the licenses on which they may wish to bid, and should know approximately the population they ultimately wish to serve. The upfront payment will define the upper bound of MHz-pops on which a bidder will be permitted to bid in any round, and so should be calculated by bidders to reflect the maximum MHz-pops from any combination of licenses on which they may want to bid in a single round.[133] This formula links upfront payment requirements to the total number of MHz-pops bidders plan to bid on and potentially to win, and relates closely to the Milgrom-Wilson activity rule we described above.[134]

173. Using this formula, bidders will be limited in an auction to bidding on licenses encompassing only the number of pops and MHz that their upfront payment covers. However, it provides a bidder with the flexibility to change its strategy during the auction and to bid on a larger number of smaller licenses or a smaller number of larger licenses, so long as the total MHz-pops combination does not exceed that reflected in the upfront payment. Under the formula, bidders will also avoid having to submit an upfront payment for each license on which they potentially might bid. For example, a bidder wishing to be awarded a 30 MHz broadband PCS license in the Chicago MTA would be required to submit an upfront payment equal to the Chicago MTA population of 8.2 million times 30 MHz times $0.02, or $4.9 million. This would allow such a bidder to bid on either the A or B block license (assuming these licenses are sold at the same auction). If both of these licenses are found to be too expensive, the bidder could alter its strategy and bid on the A or B block licenses in smaller MTAs whose total population is less than or equal to 8.2 million (assuming it has filed applications for these licenses).

174. A bidder may file applications for every license being auctioned, but its actual bidding in any round of an auction will be limited by the amount of its upfront payment. Thus, if licenses covering the nation in a particular service are being auctioned simultaneously, a bidder would not be required to file an upfront payment representing national coverage unless it intends to bid on or hold licenses covering the entire nation.[135] Under this system of upfront payments, bidders will retain greater flexibility and be able to more easily effectuate alternative bidding strategies. We will announce the population covered by each license (which will be based on census figures for the licensed service areas) for the purpose of computing the upfront payment in a Public Notice issued prior to the auction, and bidders will be able to calculate the necessary upfront payment for each license on which they wish to bid at any one time.

175. We believe that using a formula that bases the size of the upfront payment on the amount of spectrum and population on which a bidder is interested in bidding at any one time is a rational way for the Commission to be provided assurance that each bidder is a *bona fide* applicant and that each bid is sincere. The size of the upfront payment will thus directly relate to the size and capabilities

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[131] One commenter, Devsha Corporation, questions the Commission's authority to require upfront payments at all. Comments of Devsha Corporation at 4. However, Devsha provides no serious analysis, legal or otherwise, to support its assertion that the upfront payment requirement may overstep the Commission's statutory authority. Devsha states only that the Commission's justification for such a payment "appears to be premised on revenue maximization, a prohibited concern." *Id.* To the contrary, as we clearly stated in the Notice, the upfront payment requirement was proposed "[t]o ensure that only serious, qualified bidders participate in our auctions." NPRM at ¶ 102. We take this opportunity to reiterate that we will adopt upfront payment rules because we believe they will provide the necessary "assurances" required by Section 309(j)(5) and deter frivolous and insincere bidding by discouraging speculators who may otherwise be tempted to "game" our competitive bidding process. Upfront payments also give force to the bid withdrawal penalty, which also is designed to bolster the integrity of our process.

[132] As discussed *infra*, however, we retain the flexibility to consider using a simpler payment requirement when circumstances warrant.

[133] For example, an entity that is interested in bidding on several 30 MHz PCS licenses with a goal of providing service to a population of at most 50 million should make an upfront payment of $30 million ($.02 x 30 MHz x 50,000,000). That bidder will not be permitted to bid (at any time) in the auction, or be permitted to win, 30 MHz licenses covering more than 50 million pops.

[134] Using the $0.02 per pop per MHz formula is most appropriate when a Milgrom-Wilson type activity rule is employed. A preset fixed upfront payment would do little to simplify the auction process for bidders in that circumstance because the activity rule requires bidders to know the number of MHz-pops that correspond to their bids.

[135] For example, if we were to hold an auction of all broadband PCS licenses simultaneously, a bidder who wishes to be licensed only over some regional area (but who is indifferent as to which region) may retain flexibility in bidding by filing applications for licenses throughout the country but remitting an upfront payment reflecting only the maximum number of MHz-pops it ultimately wishes to serve.

of the licensed facilities, the cost to construct a system, the value of the licensed spectrum and the potential amounts bidders will bid.

176. Upfront payments will also provide the Commission with a source of available funds in the event a penalty must be assessed for bid withdrawal prior to further payments. As discussed in Section III.F. above, we have concluded that the appropriate basic penalty for bid withdrawal is to require that the withdrawing bidder make up any difference between the withdrawn bid and the amount of the winning bid the next time the license is offered by the Commission. (If the high bid is withdrawn after the auction closes, an additional penalty will be assessed.) For such a penalty to ensure sincere bidding, however, it must be collectable; and the proposed upfront payment is one means to this end.

177. Our preferred formula for calculating the upfront payment is rationally related to the bid withdrawal penalty. In its September 1993 Mid-Session Review of the 1994 Budget, the Office of Management and Budget estimated that spectrum auctions would generate $12.6 billion from 1994 through 1998. A 1992 report by the Congressional Budget Office assumed that $2 billion would be raised from competitive bidding in services other than PCS. Thus, the approximate value of 120 MHz of PCS spectrum is placed at $10.6 billion, or 35 cents per pop per MHz. Our $0.02 per pop per MHz formula would yield a deposit for such a license that would equal just under six percent of the estimated value of a winning bid. It is reasonable to assume that if a high bidder withdraws its bid, another bidder would be willing to pay approximately the second highest bid amount. We expect bid increments to be around five percent, so an upfront payment calculated by this formula should insure the Commission against nonpayment of the bid withdrawal penalty.

178. In future Reports and Orders establishing service-specific auction rules, we may determine that the $0.02 per pop per MHz formula is inappropriate because of product market or license characteristics or auction design choice. In some circumstances, we may decide that it is more appropriate instead to set a fixed upfront payment or to eliminate the upfront payment entirely. For example, where we award licenses using a sequential oral-outcry auction design, we may simply require that bidders bring to the auction an upfront payment in a specified amount for each license that they wish to be awarded. Bidders desiring more than one license would be required to bring a multiple of the specified sum and once a bidder had won the number of licenses that corresponded to its upfront payment, it would be precluded from further bidding. Indeed, where single sealed bids are employed, upfront payments may be unnecessary.[136] We therefore reserve the option of revising or waiving the upfront payment in appropriate circumstances.[137] In such cases, we will adopt an alternative upfront payment in service-specific auction rules or in the Public Notice announcing the auction.

179. As a general rule, we will not cap upfront payments because we need to ensure that those bidding on large numbers of licenses have the financial capability to build out those licenses and are bidding in good faith. While the upfront payments for broadband PCS licenses could add up to millions of dollars, it would not be unreasonable to expect prospective bidders to tender such sums given the expected overall value of some of these licenses and the expected financial requirements to construct the systems. However, we reserve the right to institute caps in specific services if we are satisfied that an absolute dollar amount will provide sufficient deterrence against frivolous bidding and pernicious strategic bidding.[138] Whether or not we adhere to our preset formula or institute a cap, it is critical that we ensure that those bidding on large numbers of valuable broadband PCS licenses are financially capable of constructing those systems quickly, less the potential of these services to stimulate economic growth and provide new services be stymied.

180. As many commenters suggested, we believe that setting a minimum upfront payment may be appropriate when use of our preferred formula would result in a payment that would be too small. For some narrowband licenses in sparsely populated areas, for example, the formula could yield a very small upfront payment. Even in a market with a population of one million, for some narrowband licenses, the upfront payment could be as low as $200. We believe that, in most cases, such a low amount is not sufficient to deter the filing of speculative applications which would slow down the provision of service to the public. A minimum payment may be needed to discourage frivolous bidding. A general minimum upfront payment of $2,500, as suggested in the comments, is reasonable. As noted earlier, however, we will retain the flexibility to modify this minimum upfront payment in service-specific auction rules if we find that a different amount would better deter speculative filings.

181. On the issue of when an upfront payment should be tendered, there was substantial support in the comments for requiring tender of upfront payments prior to the auction and for permitting assurance of the ready availability of deposits by bidders. *See, e.g.*, comments of AT&T at 33, Nextel at 16-17, and Cellular Communications, Inc. at 14-16. A few commenters, however, argue that, for applicants with special circumstances (such as designated entities and applicants that are local governmental entities), the Commission should permit prospective bidders merely to display or exhibit their upfront payments or submit "highly confident" letters from financial institutions in lieu of tender. *See* comments of AWCC at 32, Palmer Communications, Inc. at 8, and Duncan, Weinberg, Miller & Pembroke, P.C. at 3. Others favor pre-auction deposits only

[136] In single round sealed bid auctions, the need for upfront payments may be less because there would appear to be little incentive for bidders to engage in frivolous bidding. If a high bidder fails to tender its down payment within the time period allowed, the Commission could simply offer the award to the next highest bidder and impose the basic bid withdrawal penalty on the withdrawing bidder. On the other hand, a series of withdrawals could slow down the process of assigning licenses, and bid withdrawal penalties may not be an adequate deterrent without an upfront payment to ensure they are collectable.

[137] With respect to certain licenses that the Commission may set aside for designated entities (*see* Section VI, *infra*), we may decide that the upfront payment required of applicants should be capped, reduced or set according to a different formula. Any such decision would be made in a Report and Order adopting competitive bidding rules applicable to the specific service.

[138] As discussed at n.137 above, one instance in which we may limit upfront payment requirements would be if we set aside licenses in certain blocks for bidding by designated entities. *See* Section VI, *infra*.

when the Commission cannot verify the amount of liquid assets available to a prospective bidder. *See* comments of Unique Communications Concepts at 6.

182. We have considered the suggestions by some commenters that designated entities be permitted to use letters of credit for upfront payments. *See, e.g.*, comments of Minority PCS Coalition Oat 9, Palmer Communications at 8, and reply comments of TDS at 16, 17. Similarly, Southwestern Bell and US West suggest that bidders be permitted to submit their upfront payments in the form of Treasury bills with a face amount of the required payment. We believe that these methods of submitting upfront payments would impose too great an administrative burden on the Commission, at least until the Commission has more experience with the conduct of auctions.

183. The use of unconditional letters of credit, for example, would require the Commission to read and evaluate each such letter of credit to ensure that it is in fact unconditional; different banks often use different language in their letters of credit, and the Commission does not have the time or the resources to engage in discussions or negotiations with applicants and their banks to remove or clarify any uncertainties associated with such language. Nor do we think it appropriate to prescribe appropriate language for an unconditional letter of credit; the use of letters of credit was not proposed in the notice of proposed rule making, and we are reluctant to prescribe such language without the benefit of public comment. Moreover, letters of credit commonly have dates of expiry, a complication that we do not face with cashier's checks or wire transfers. With letters of credit, an auction that lasts longer than either the Commission or the applicant expected may cause the applicant to become financially disqualified during the course of the auction.

184. Southwestern Bell's proposal to utilize Treasury bills to satisfy the upfront payment requirement introduces similar complications. Depending on the maturity date of the Treasury bill and the state of the market for such instruments, the actual value of the bill on any given day may be more, less, or the same as the face amount. This amount may even change during the conduct of the auction. We are reluctant to introduce such complications into our auction procedures, at least until we have had further experience with them. We would, however, be willing to consider such an alternative in the future.

185. As set forth in ¶ 171, *supra*, we conclude as a general matter that to protect the integrity of the auction process, all applicants should be required to tender their upfront payments to the Commission prior to bidding.[139] We do not believe that allowing auction participants to tender "highly confident" letters provides the Commission with the degree of assurance necessary to ensure that only serious bidders participate in auctions. The same can be said, at least with respect to our preferred simultaneous multiple round auction design, about allowing auction participants merely to exhibit, but not tender, the upfront payment as a condition of bidding. Such proposals would not provide the Commission with a source of funds to satisfy bid withdrawal penalties, and thus would engender too high a risk that the bidder is financially incapable of fulfilling its payment obligations. Furthermore, to require the Commission to ascertain that bidders have available sufficient liquid assets would impose an excessive administrative burden on the Commission. We will, however, retain the flexibility to alter the timing of the upfront payment for specific auctions when appropriate. We may determine that an exhibit procedure would function well in conjunction with oral outcry auctions, though we do not believe that it can be used effectively with other auction designs.

186. We choose not to create a general exception to our upfront payment requirements for designated entity and local government applicants. But *see* Section VI, *infra*. The danger of insincere bidding, which upfront payments are designed to deter, exists to no less a degree with respect to these groups.

187. Commenters generally argued that the Commission should make prompt refunds of the upfront payments of unsuccessful bidders . *See, e.g.*, comments of JMP Telecom Systems, Inc. at 6. We agree. We will hold all upfront payments until after the auction to which they apply, but as soon as possible we will return the upfront payments of bidders that are not auction winners, are not subject to withdrawal or default penalties, and do not wish to bid for licenses that are to be re-auctioned. In some circumstances, it may be appropriate to retain upfront payments until after the winning bidders have tendered their down payments because further rounds of competitive bidding may be held if down payments are not made.[140] Upfront payments made by a winning bidder will be applied to satisfy its down payment obligations (*see* discussion, *infra*).[141]

188. Given the likely magnitude of some upfront payments and the fact that there will be a significant interval between the date that short-form applications are filed and the auction date, we will not require the filing of upfront payments with short-form applications. To do so would place an unreasonable burden upon applicants by requiring them to dedicate funds for a long period of time, especially if the Commission is unable to pay interest on deposits held.[142] Upfront payments therefore will be

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[139] Upfront payments must be made to the Commission's lock-box bank. Upfront payments may be made by wire transfer or by cashier's check drawn in U.S. dollars from a financial institution whose deposits are insured by the Federal Deposit Insurance Corporation and must be made payable to the Federal Communications Commission.

[140] We will, however, afford unsuccessful bidders who are not subject to bid withdrawal penalties an opportunity to have their upfront payments returned if they wish to withdraw from further bidding.

[141] As explained in subsection C below, a winning bidder will be required to bring its deposits with the Commission up to 20 percent of its winning bids. Thus, a bidder whose upfront payments total 15 percent of the sum of its winning bids will be required to make an additional down payment of only 5 percent of that sum. If, however, a bidder who wins some licenses also defaults on any other license(s), the bid withdrawal penalty discussed below would apply with respect to the defaulted license(s). In such a case, the bidder's upfront payments up to 20 percent of the defaulted high bid(s) will be retained by the Commission, and we will apply to the bidder's down payment obligations on non-defaulted license(s) only such upfront payments that exceed this amount.

[142] In the NPRM, we indicated that the Commission is not currently authorized to establish interest-bearing accounts. NPRM at ¶ 104, n.100. A number of commenters argue that the Commission should take whatever steps are needed to allow it to pay interest on upfront deposits that ultimately will be

required to be made to the Commission by a date certain, which generally will be no later than 14 days before the scheduled auction. This shorter period will allow the Commission sufficient time to process the data concerning the upfront payments and release a Public Notice listing all qualified bidders. The Commission will set forth specific procedures to be followed in the tendering and processing of upfront payments in the Public Notice to be issued announcing procedures for each auction.

C. Payment for Licenses Awarded by Competitive Bidding

189. In the NPRM, we proposed that, to provide further assurance to the Commission that the winning bidder will be able to pay the full amount of its winning bid, the bidder must tender a significant and non-refundable down payment on the license to the Commission over and above its upfront payment before the auction is terminated. NPRM at ¶ 104. We sought comment on when this additional down payment should be due to the Commission and proposed that, if the winning bidder's upfront payments totalled less than 20 percent of the high bid, the bidder would have to pay the difference promptly. Most of the commenters addressing this issue generally support our proposal that winning bidders increase their deposits with the Commission up to an amount equalling 20 percent of their winning bid or bids. *See, e.g.*, comments of BellSouth at 43-44, PageNet at 35-36, and Telocator at 13. Some commenters feel that a 20 percent down payment requirement would be too high. *See* comments of Sprint at 18 (prefers a 10 percent down payment).

190. In determining the appropriate level for the down payment, we are balancing several factors. First, the down payment needs to be sufficiently high to ensure that all licensees have the financial capability to attract capital to rapidly deploy their systems and operate them in an efficient manner. Second, the down payment has to be sufficiently high to discourage default between the auction and licensing and ensure payment of the default penalty if such a default occurs. We believe that the upfront payment is not sufficient to ensure the payment of such a default penalty because the potential penalty is likely to be greater during the period between the close of the auction and licensing than during the auction because there is a greater risk of a drop in license values. It is common practice to require a down payment on the order of 20 percent to protect against default in auctions and other instances where there is the possibility of default.[143] Requiring a significant down payment is especially important in spectrum auctions in light of our goal of promoting economic growth. Default could force re-auctioning of the license and might cause significant delays in service provision, and a significant down payment tends to ensure that winning bidders actually qualify as licensees and can build their systems expeditiously. We are nonetheless aware that holding a down payment keeps funds from being available to the auction winner for other productive endeavors. In addition, setting the down payment too high might hamper access by potential licensees with limited access to capital markets. We conclude that a 20 percent down payment is appropriate to ensure that auction winners have the necessary financial capabilities to complete payment for the license and to pay for the costs of constructing a system and protect against possible default, while at the same time not being so onerous as to hinder growth and diminish access. We therefore will require that winning bidders supplement their upfront payments with a down payment sufficient to bring their total deposits up to 20 percent of their winning bid(s).[144]

191. With regard to the time for tendering the additional deposit, commenters supported everything from immediate tender before the auction closes to a substantial "grace period." *Compare* comments of BellSouth at 44 ("[b]idders should be prepared to meet deposit obligations as soon as they make their bid") and reply comments of PageNet at 11 ("winning bidders should be required to pay the full amount of their bids on auction day") with comments of McCaw at 17-18 (payment schedules should include flexibility that "might include an extended but reasonable period of time"). It was also suggested that the Commission should keep auctions open until full deposits are received, whenever that occurs. *See* comments of AT&T at 35.

192. We have carefully considered the alternative proposals regarding timing of the down payment, and have determined that, to further ensure that bidders are capable of constructing their systems, a down payment of 20 percent of the winning bid generally will be required within five business days after the auction is over.[145] Requiring the down payment prior to closing the auction would facilitate finding a backup bidder if the winning bidder is unwilling or unable to make the down payment. Bidders would be on notice that auction results are not yet final and that bidding on some or all properties could be reopened if some high bidders fail to tender their down payments. We conclude, however, that requiring immediate payment of remaining deposits by auction winners would place an unreasonable burden on the auction process and on bidders, who would not know until the bidding ends exactly what down payment amount will be required of them. We also reject suggestions that we should allow a "flexible" period between auction and payment . Such a procedure could give winning bidders the opportunity to "game" our processes by making an upfront payment, bidding on a license, and then assessing afterwards whether to go for-

returned to unsuccessful bidders. *See, e.g.*, comments of Mercury Communications, L.C. at 2, LuxCel Group, Inc. at 8, Pacific Telecom Cellular, Inc. at 6. We are sympathetic to these views, and we are attempting to obtain the necessary authorization that will permit the payment of interest on upfront payments and deposits.

[143] A 20 percent down payment is required by the U.S. Department of the Interior for bids on offshore oil and gas leases. New Zealand requires a 25 percent deposit be submitted with bids for spectrum licenses. The RTC required only a 10 percent payment within 24 hours of its auction, but required full payment within 7 days of the auction. Lenders frequently require private mortgage insurance when down payments are less than 20 percent.

[144] Thus, if the upfront payment already tendered by a winning bidder, after applying any bid withdrawal penalties, amounts to 20 percent or more of its winning bids, no additional deposit will be required.

[145] As discussed in Section VI.C., *infra*, an auction winner that is a designated entity entitled to make payments through an installment plan will be required to bring its deposits with the Commission up to only 10 percent of its winning bid after the bidding closes. Such an entity will pay an additional 10 percent of its winning bid to the Commission after a license is granted.

ward with the award of the license. Furthermore, a substantial delay between auction and down payment would subvert our objective of reducing speculative bidding because it would provide financially unqualified bidders with an opportunity to "shop" a winning bid in an effort to obtain financing for a down payment. This would undermine the integrity of the auction itself. We therefore will require that a high bidder submit the required down payment by cashier's check or wire transfer to our lock-box bank by a specified date, generally within five (5) business days following the close of bidding.

193. In the NPRM, we tentatively concluded that the Commission should not allow licensees to satisfy their payment obligations to the Commission through the payment of royalties.[146] Nothing in the comments has convinced us to change this conclusion. Royalties, if based on a firm's revenues, would function as a tax and tend to reduce output. Further, a royalty program would require us to adopt complex accounting rules for identifying the share of a firm's revenues that is attributable to a particular license. We continue to believe that this would be extremely intrusive and difficult to implement. Indeed, considering the degree of regulatory oversight that this agency exercises over its licensees, a royalty program that makes government revenues dependent on the success of a regulated service may give rise to potential conflicts. We therefore will not allow licensees to satisfy their auction payment obligations through the payment of royalties.

194. In the NPRM, we proposed to require all auction winners, except those with respect to which we have given special consideration pursuant to Section 309(j)(4), to make full payment of their winning bids by a lump sum. NPRM at ¶ 68. The comments generally supported this proposal. *See, e.g.*, comments of AT&T at 36, Richard L. Vega Group at 4. We continue to believe that, except with respect to those designated entities to which we decide to give special consideration pursuant to Section 309(j)(4) (*see* Section VI, *infra*), full payment of the remainder of the winning bid in a lump sum is the best course of action.[147] This will leave financing to the private sector and eliminate the need for the Commission to conduct detailed credit checks. In addition, it will allow us to confer the benefit of paying by installments to eligible designated entities, in accordance with the wishes of Congress. Accordingly, unless otherwise specified by the Commission, auction winners will be required to make full payment of the balance of their winning bids within five (5) business days following award of the license. Grant of the license will be conditioned on this payment.

D. Default and Disqualification

195. In the Notice, we sought comment on the Commission's authority to retain upfront payments and down payments in the event that an auction winner subsequently is found ineligible or unqualified or does not pay the balance of its bid at the appropriate time. NPRM at ¶ 109. We noted that Section 309(j)(4)(B) specifically directs the Commission to "include performance requirements, such as appropriate deadlines and penalties for performance failures ... to promote investment in and rapid deployment of new technologies and services."[148] We tentatively concluded that some strong incentives must be in place to deter frivolous bids or unqualified bidders that could leave the Commission without an auction winner that is qualified and eligible to receive a license. NPRM at ¶ 109.

196. There was substantial support in the comments for the notion that the Commission is authorized to and should order forfeiture of upfront and down payments if the auction winner later defaults or is disqualified. *See, e.g.*, comments of CTIA at 29-30, AT&T at 35, n.43, PageNet at 35-36, Cook Inlet at 47, and BellSouth at 42-44. A few commenters suggested, however, that retention of deposits in the event of disqualification would be "draconian." Comments of the Association of Independent Designated Entities at 7, n.7 . *See also* comments of Richard L. Vega Group at 9-10.

197. As we discussed in Section III.F. above, it is critically important to the success of our system of competitive bidding that potential bidders understand that there will be a substantial penalty assessed if they withdraw a high bid, are found not to be qualified to hold licenses or default on a balance due. We therefore are adopting penalties to be assessed in the event of default or disqualification. These penalties will provide strong incentives for potential bidders to make certain of their qualifications and financial capabilities before the auction so as to avoid delays in the deployment of new services to the public that would result from litigation, disqualification and re-auction.[149] We believe, however, that requiring the forfeiture of all funds on deposit with the Commission could, in some cases, be too severe a penalty. In order to carry out spectrum auctions successfully, the penalty for default or disqualification should be rationally related to the harm caused, yet be set high enough to deter unwanted conduct. Accordingly, we will require any auction winner who defaults by failing to remit the required down payment within the prescribed time to reimburse the Commission in the amount of the difference between its high bid and the amount of the winning bid the next time the license is offered by the Commission. In addition, a defaulting auction winner will

[146] The Commission noted that royalties are used by the Department of the Interior for outer continental shelf oil and gas leases. NPRM at ¶ 70.

[147] There was some opposition to lump sum payments. *See* comments of Sprint at 16-17, and Rochester Telephone Corporation at 13-14. These commenters would prefer that the Commission allow all winning bidders to pay for their licenses on an installment schedule, and argue that such a result would allow licensees to focus more of their resources on deploying new services. While we are sensitive to these considerations, we believe that a lump sum payment requirement is necessary to avoid speculative bidding. Furthermore, affording installment payment schedules to all winning bidders would tend to undercut our policies with respect to eligible designated entities. *See* Section VI.C., *infra*.

[148] *See also* H. R. Rep. No. 103-111 at 257 (Commission authorized to impose payments to prevent unjust enrichment from trafficking; House Committee on the Budget anticipates Commission will use this authority to deter participation in licensing process by those who have no intention of offering service to the public).

[149] In connection with the sale of government property, it is customary for the government to provide such incentives by retaining down payment monies rendered. Both the Federal Deposit Insurance Corporation and the Resolution Trust Company retain a bidder's down payment if a bidder is unable to close on a property it ostensibly purchased at auction.

be assessed a penalty of three percent of the subsequent winning bid. If the subsequent winning bid exceeds the defaulting bidder's bid amount, the three percent penalty will be calculated based on the defaulting bidder's bid amount. The three percent additional penalty will encourage bidders, if they are to withdraw their bids, to do so before bidding ceases. This additional penalty will also apply if an auction winner is disqualified or fails to remit the balance of its winning bid after having made the required down payment. We will hold deposits made by defaulting or disqualified auction winners to help ensure that the penalty is paid. (During the period that deposits are held pending ultimate award of the license, any interest that accrues on deposits will be retained by the government.)

198. We believe that these penalties will adequately discourage default and ensure that bidders have adequate financing and that they meet all eligibility and qualification requirements. We further believe that this approach is well within our authority under both Section 309(j)(4)(B) and Section 4(i) of the Communications Act, 47 U.S.C. § 154(i), as it is clearly necessary to carry out the rapid deployment of new technologies through the use of auctions. In addition, if a default or disqualification involves gross misconduct, misrepresentation or bad faith by an applicant, the Commission also may declare the applicant and its principals ineligible to bid in future auctions, and may take any other action that it may deem necessary, including institution of proceedings to revoke any existing licenses held by the applicant.[150]

199. If the high bidder makes the down payment in a timely manner, a long-form application[151] will be required to be filed by a specified date, generally within ten (10) business days after the close of the auction.[152] After the Commission receives the high bidder's down payment and the long-form application, we will review the long-form application to determine if it is acceptable for filing. Upon acceptance for filing of the long-form application, the Commission will release a Public Notice announcing this fact, triggering the filing window for petitions to deny. If, pursuant to Section 309(d), the Commission denies or dismisses all petitions to deny (if any are filed), and is otherwise satisfied that the applicant is qualified, the license(s) will be granted to the auction winner.

200. With regard to petitions to deny, we will adopt expedited procedures consistent with the provisions of section 309(i)(2) to resolve substantial and material issues of fact concerning qualifications.[153] This provision requires us to entertain petitions to deny the application of the auction winner if petitions to deny are otherwise provided for under the Communications Act or our Rules. *See* Section 309(b), (d)(1). We solicited comment on two possible schedules for entertaining petitions to deny in cases where such petitions are required: 1) eliciting petitions with respect to all applications prior to the auction; and 2) placing only the auction winner's application on Public Notice for 30 days following the auction.

201. To the extent that they addressed this issue, commenters generally agreed that only the auction winner's application should be subject to petitions to deny. *See* comments of AT&T at 40-42, Arch Communications at 18-19, Cellular Service, Inc. at 16. This is the procedure that the Commission has used in connection with lotteries among mutually exclusive cellular applications. *See* Sections 1.823 and 22.30 of the Commission's Rules. Interested parties could then file petitions and the auction winner would have an opportunity to reply.

202. We affirm our tentative conclusion that the Commission need not conduct a hearing before denial if it determines that an applicant is not qualified and no substantial issue of fact exists concerning that determination. In the event that the Commission identifies substantial and material issues of fact in need of resolution, Sections 309(j)(5) and (i)(2) of the Communications Act permit in any hearing the submission of all or part of evidence in written form and allows employees other than administrative law judges to preside at the taking of written evidence.[154] We will incorporate these principles into our general procedural rules with respect to licenses subject to competitive bidding.

203. In the event that an auction winner defaults on its final payment or is otherwise disqualified, an issue arises as to whether the Commission should hold a new auction or simply offer the license to the second-highest bidder. Parties commenting on this issue generally favored re-auctioning the license, pointing out that changing market and even technological developments since the initial auction may change the identity of the high bidder and the value of the license, especially if the intervening period is relatively long. *See, e.g.*, comments of BellSouth at 37. They urge that any re-auction be open to new bidders, arguing that such a procedure would reduce the incentive of losing bidders to "gang up" on the auction winner. *See* comments of Utilities Telecommunications Council at 21.

204. We believe that, as a general rule, when an auction winner defaults on its final payment or is otherwise disqualified after having made the required down payment, the best course of action would be to re-auction the license. Although this may cause a brief delay in the initiation of service to the public, the passage of time between the original auction and the disqualification may have seen circumstances change so significantly as to alter the value of the license and the identity of the high bidder. One of our primary concerns is that licenses be awarded to the parties that value them most highly, and in this situation this can best be assured though a re-auction. Nevertheless, if a default occurs within five (5) business days after the end of bidding, the Commission retains the right to offer

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[150] *See, e.g., Character Qualifications Policy Statement*, 102 FCC 2d 1179 (1986).

[151] The application form to be filed will vary depending on the service and would be specified in the rules specifically applicable to that service.

[152] Ordinarily, failure by a high bidder to file the required long-form application in a timely manner will be deemed a default and subject it to default penalties. The Commission may, for good cause, determine that a late-filed long-form application should be accepted.

[153] *See* 47 U.S.C § 309(j)(5).

[154] Among the procedural models on which we solicited comment are those for mutually exclusive cellular applications in the top 30 markets (*see* 47 C.F.R. § 22.916(b)) and those for certain lotteries (*see* 47 C.F.R. § 1.822(b)).

the license to the second highest bidder at its final bid level, or if that bidder declines the offer, to offer the license to other bidders at their final bid levels.

205. If a new auction becomes necessary because of disqualification or a default more than 5 business days after the end of bidding, we will afford new parties an opportunity to file applications. The passage of time and intervening events between an auction and a disqualification may have affected the market for the license to be auctioned and created new interest in the license. In addition, the applicants in the first auction may, for any number of reasons, no longer be interested in obtaining the license. One of our primary goals in conducting auctions is to assure that serious interested bidders are in the pool of qualified bidders at any re-auction. We believe that achievement of this goal outweighs the short delay that we recognize may result from allowing new applications in a re-auction. Indeed, if we were not to allow new applicants in a re-auction, interested parties may be forced into an after-market transaction to obtain the license, which would itself delay service to the public and deny recovery by the government of a reasonable portion of the value of the spectrum.

E. Minimum Bids and Reservation Prices

206. In the NPRM, we briefly discussed whether to set a reservation price below which the license would not be awarded. The reservation price could be disclosed, in which case it would effectively constitute a minimum bid, or it could be undisclosed. In the latter case, if no bidder exceeded the reservation price, the license would not be awarded. We pointed out that the benefits of a reservation price are likely to be greatest when there are few bidders, for when competition for licenses is intense the benefits of setting a reservation price might not be worth the cost, and tentatively concluded that there should be no minimum bid. NPRM at ¶ 67.

207. The comments generally oppose minimum bids. *See, e.g.*, comments of AT&T at 38-42, Telocator at 4-5, and the Alliance for Fair and Viable Opportunity at 10. These commenters argued that the ultimate service provider and not the Commission should establish the value of a license and that minimum bids could artificially limit the participation of potential service providers by imposing arbitrary regulatory requirements. *See also* comments of U.S. Intelco Networks at 12. While we generally agree with these arguments, we have decided that the Commission should retain the flexibility to utilize reservation prices if it decides that they are appropriate in a particular auction. Without knowing how many bidders are likely to bid in a particular auction, the type of license to be auctioned or the type of auction to be used, it is impossible to generalize about the desirability of using reservation prices. If, for example, the Commission had accepted many applications to bid on a particular license that was scheduled to be auctioned in an oral sequential auction, establishing a reservation price likely would be superfluous. If, however, only two or three applicants had applied to bid for a valuable license, the Commission might set a reservation price in order to prevent that license from being sold under circumstances where there would be little competition among bidders and significant incentives to collude.[155] Accordingly, our rules will permit the Commission to adopt a reservation price in such circumstances.

F. Procedures in Other Auction Designs

208. The above described procedures may vary somewhat depending upon the auction methods used. For example, where sealed bidding is used, in addition to the information specified above, the initial Public Notice may specify the date on which sealed bids must be submitted. In single round sealed bid auctions, we may decide to alter the upfront payment schedule or amount or waive the upfront payment requirement.[156] The need for an upfront payment in this auction design setting will be balanced against the administrative cost of processing upfront payments and returning payments to unsuccessful bidders. There may be auctions for licenses wherein the costs of requiring upfront payments outweigh the benefits. We may simply require bidders to submit the required down payment with its bid. In single round sealed bid auctions, we will usually require that bids be received on a date specified in the Public Notice and that bids clearly indicate the bidder's identification number and the auction and license to which it relates. After bids are submitted and evaluated, the Commission would issue a second Public Notice indicating all bidders who have made timely bid submissions. After release of the second Public Notice, the Commission would notify the high bidder. If the high bidder fails to submit a timely down payment, the next highest bidder normally would be notified and offered an opportunity to tender the down payment.

209. Where oral outcry bidding is employed, the general procedures described above will be followed, with one possible exception. As discussed above, we may determine that an exhibit procedure for upfront payments may be suitable for oral outcry auctions. Qualified bidders will be required to bring a cashier's check for the full amount of their upfront payment to the auction site. Bidders will be required to present their upfront payment check as a condition of being issued a bidder identification number and admittance to the bidder section of the auction site. After bidding closes on a particular license, the high bidder will be required to tender its upfront payment and sign a bid confirmation form. If the high bidder declines to tender the upfront payment and/or refuses to sign the bid confirmation form, the license would be immediately re-auctioned.[157]

V. REGULATORY SAFEGUARDS

210. The Budget Act directs the Commission to "require such transfer disclosures and anti-trafficking restrictions and payment schedules as may be necessary to prevent unjust enrichment as a result of the methods employed to issue licenses and permits." 47 U.S.C. § 309(j)(4)(E). In

[155] The employment of a reservation price also might aid in reducing unjust enrichment. Thus, in circumstances where unjust enrichment might be more likely to occur, the Commission may determine that a reservation price is necessary.

[156] *See* ¶ 157, *supra*, for discussion of the bid withdrawal, default and disqualification penalties that would apply in single round sealed bidding.

[157] *See* ¶ 156, *supra*, for discussion of the bid withdrawal, default and disqualification penalties that would apply in oral outcry bidding.

this section of the Second Report and Order, the Commission adopts safeguards designed to ensure that the requirements of Section 309(j)(4)(E) are satisfied. In the Notice, we discussed three types of safeguards for the auction process. Two of them -- measures to prevent "unjust enrichment" and performance requirements -- are expressly addressed by the statute. The third -- rules prohibiting collusion among bidders -- was one that we raised on our own motion. We proposed these safeguards to ensure prompt delivery of services (including to rural areas), rapid deployment of new services and technonlogies, development of competitive markets, and wide access to a variety of services.

A. Unjust Enrichment and Transfer Disclosure Requirements

211. The House Report suggests that, while the Commission should keep track of all transfers of licenses issued via auctions, unjust enrichment is likely to be a problem only in auctions where special accommodations are provided to designated entities.[158] In an open bidding process without special accommodations, the winner is likely to pay the market price for its license. Hence resale would not involve any unjust enrichment. In the Notice, we indicated that prohibitions on license transfers, even if for a limited period of time, were likely to have the unintended effect of delaying service to the public contrary to the purpose of the statute. *See* NPRM at ¶ 84. Therefore, while we sought comment on transfer restrictions, we also requested comment on establishing a system of financial discincentives to prevent sellers from obtaining any windfall profit from premature transfer of a license.[159]

212. The legislative history suggests that in the auction context Congress's directive to take steps to prevent unjust enrichment was similarly intended to prevent auction winners from acquiring licenses for less than true market value at auction[160] and then transferring them for a large profit prior to providing service. Such post-auction changes in ownership have the potential to delay buildout and thereby delay the provision of service to the public. The acquisition of a license through an effectively conducted competitive bidding process is in itself a strong deterrent to unjust enrichment. As we explained in the NPRM at ¶ 83, "in an unlimited bidding process, the winner is likely to pay the market price for its license. Hence resale would not involve any unjust enrichment." *Accord* , comments of Nextel at 8, Time Warner at 20. We noted Congress's observation in the legislative history that unjust enrichment was likely to be a problem only where participation is limited in order to ensure designated entities' opportunity to participate. Thus, we proposed transfer restrictions on licenses won by designated entities that receive special treatment and financial disincentives on the transfer of designated entity licenses as possible ways to ensure against unjust enrichment.

213. The comments were divided on the subject of imposing transfer restrictions to prevent unjust enrichment. *See, e.g.*, comments of BellSouth at 30-32, reply comments of Nextel at 9, reply comments of American Personal Communications at 6, but *cf.* reply comments of American Wireless Communications Corporation at 12. Those supporting transfer restrictions argue that such restrictions are particularly appropriate in the context of licenses which are won by designated entities, *see* comments of AT&T at 27-29, or only appropriate in that context, *see* comments of McCaw at 22 and Palmer Communications at 7-8. Those opposing transfer restrictions argue that the auction process itself or construction requirements or both will deter speculation and obviate the need for further safeguards such as transfer restrictions. *See* comments of Arch Communications at 16-18 and Windsong Communications at 5.

214. As discussed below in Section VI, we have adopted specific rules governing unjust enrichment by designated entities. In addition, given the lack of previous experience with the competitive bidding process, we believe that it is important to monitor transfers of licenses awarded by competitive bidding in order to accumulate the data necessary to evaluate our auction designs and judge whether "licenses [have been] issued for bids that fall short of the true market value of the license," H.R. Rep. No. 103-111 at 257. Therefore, we will impose a transfer disclosure requirement on licenses obtained through the competitive bidding process, whether by a designated entity or not. We will give particular scrutiny to auction winners who have not yet begun commercial service and who seek approval for a transfer of control or assignment of their licenses within three years after the initial license grant, in order to determine if any unforseen problems relating to unjust enrichment have arisen outside the designated entity context.

215. As in the First Report and Order, the applicant will be required to file, together with its application, the associated contracts for sale, option agreements, management agreements, or other documents disclosing the total consideration received in return for the transfer of its license. The information should include not only a monetary purchase price, but also any future, contingent, in-kind, or other consideration (*e.g.*, management or consulting contracts either with or without an option to purchase; below

[158] The House Report notes that "[I]n a system of open competitive bidding, trafficking in licenses should be minimal, since the winning bidder would have paid a market price for the license. Nevertheless, the Committee anticipates that the Commission will monitor trafficking in licenses issued pursuant to the provisions of section 309(j), and will impose any necessary regulations and transfer fees as may be necessary to prevent unjust enrichment. In the event that the Commission limits participation in any given competitive bidding procedure, however, there exists a significant possibility that licenses will be issued for bids that fall short of the true market value of the license. To the extent that the Commission is attempting to achieve a justifiable social policy goal--such as the reservation of appropriate licenses for small business applicants--licensees should not be permitted to frustrate that goal by selling their license in the aftermarket. In these instances, antitrafficking restrictions are necessary and appropriate." H. R. Rep. No. 103-111 at 257.

[159] In response to a Congressional directive, our First Report and Order in this proceeding addressed the subject of unjust enrichment with respect to licenses issued by lottery in the future. We observed that Congress's concerns of unjust enrichment appeared to stem from transactions where the licensee obtains a license at nominal cost in a lottery and then sells it for a large profit prior to providing service to the public. *See* First Report and Order at § 4.

[160] *See* H. R. Rep. No. 103-111 at 257, expressing concerns over the possibility that "licenses will be issued for bids that fall short of the true market value of the license."

market financing).[161] We believe that these requirements will have minimal negative impact on competition. As we noted in the First Report and Order, transfer disclosure requirements should not be a burden on licensees inasmuch as the documents to be submitted to the Commission will be prepared for other purposes in any event. Any competitive concerns raised by the possible disclosure of sensitive information contained in purchase agreements or similar documents can be addressed by the provisions in Sections 0.457 and 0.459 of our Rules providing for the nondisclosure of information. 47 C.F.R. §§ 0.457, 0.459. The reporting requirements will also enable us to monitor more closely than we now can the degree to which we are complying with Congress's directive in Section 309(j)(3)(B) to ensure that "new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants . . . ." *See also* Section 309(j)(12) (1997 Report to Congress).

B. Performance Requirements

216. In the NPRM, we noted that the Budget Act required the Commission to "include performance requirements, such as appropriate deadlines and penalties for performance failures, to ensure prompt delivery of service to rural areas, to prevent stockpiling or warehousing of spectrum by licensees or permittees, and to promote investment in and rapid deployment of new technologies and services."[162] The House Report provided a specific example of the warehousing concern, suggesting that "an incumbent service provider could submit a bid for a license in a service that would compete with an existing business, and engage in behavior that would prevent competition from occurring. This would deny the public both the benefit of having access to the new service, and the benefits of competition.[163] We therefore sought comment on the likely extent of warehousing of spectrum, the circumstances, if any, in which warehousing was likely to occur, and whether the Commission must impose performance requirements for all licenses awarded by auction.

217. We also asked whether there were circumstances in which the likelihood of warehousing was sufficiently low that requirements were unnecessary or whether other methods, such as restricting ownership of licenses to non-incumbents, would ensure performance. Finally, we noted that for many services, our rules already include performance requirements and asked to what extent existing requirements might or might not be sufficient to ensure performance. Finally, we asked whether existing performance requirements might be relaxed for licenses to be auctioned.

218. The comments were widely divided on the question of performance requirements. Some commenters argued against performance requirements generally (although not auction financial qualification requirements). *See* comments of PageNet at 28. Other commenters argued that existing performance benchmarks should be retained. *See* comments of Quentin L. Breen at 5. Still others argued that additional and more stringent performance requirements were required (*see* comments of Cellular Service, Inc. at 13), that the Commission should place restrictions on competing delivery services rather than imposing performance requirements (*see* comments of Comtech Associates, Inc. at 3 and of Suite 12 Group at 13), that performance requirements were only necessary in the case of licenses for which bidding was restricted (*see* comments of McCaw at 12), or that performance requirements should not be applied to rural telephone companies (*see* comments of the Rocky Mountain Telecommunications Association at 23).

219. We believe that it is unnecessary and undesirable to impose additional performance requirements on all auctionable services. As several commenters recognized (*see* comments of BellSouth at 33-34), the service rules for most existing services, including the new broadband and narrowband PCS services, already contain performance requirements, such as the requirement to construct within a specified period of time. *See, e.g.* , 47 C.F.R. § 99.103 and 99.206 (Narrowband and Broadband PCS); 47 C.F.R. § 95.833 (IVDS) and 47 C.F.R. § 90.155 (Private Land Mobile Radio Service). We do not believe that perfomance requirements in addition to those already provided in the service rules are necessary to address Congress's concern regarding "warehousing" of spectrum. We believe that it is more appropriate to address specific warehousing concerns on a service specific basis tailoring the requirements to the circumstances at issue. For example, in certain private radio services, an applicant may not acquire additional frequencies within 40 miles of existing frequencies unless the existing frequencies are fully utilized. *See* 47 C.F.R. §§ 90.623 and 90.627. We believe that existing performance requirements, in conjunction with the requirement that licensees pay for spectrum use, should be adequate to prevent the warehousing of spectrum and ensure fair competition and the prompt delivery of service.[164]

220. With respect to the few services where no performance requirements currently exist, however, we will prescribe such performance rules as are necessary at the same time we promulgate competitive bidding rules for each of those services in subsequent Reports and Orders. This service-specific approach should promote investment and economic growth by tailoring performance requirements to the specific characteristics of individual services.

C. Rules Prohibiting Collusion

221. The Notice requested comment on whether the Commission should adopt special rules prohibiting collusive conduct in the context of competitive bidding. We indicated that such rules would serve the objectives of the Act by preventing parties, especially the largest firms, from agreeing in advance to bidding strategies that divide the market according to their strategic interests and disadvantage other bidders. We also noted that such rules could strengthen confidence in the oral bidding process and help ensure that the government receives a fair market price for the use of the spectrum. However, we also recognized that if anticollusion rules are too strict or are not sufficiently

[161] A requirement of this type was proposed in the comments of the California Public Utilities Commission at 4. We imposed a similar requirement in the First Report and Order in this proceeding with respect to transfers of licenses obtained through lotteries.

[162] *See* Section 309(j)(4)(B) of the Communications Act, as amended.

[163] *Id.* at 256.

[164] *Accord*, comments of Time Warner Telecommunications.

clear, they could prevent the formation of efficiency enhancing bidding consortia that pool capital and expertise and reduce entry barriers for small firms and other entities who might not otherwise be able to compete in the auction process.

222. Many commenters indicated that specific Commission rules prohibiting collusion were unnecessary because existing antitrust laws are sufficient to deter most forms of collusive behavior. *See, e.g.*, comments of PacTel at 30, PacBell at 29, Sprint at 19, and Telocator at 5. These commenters also indicated that collusion was unlikely in the context of spectrum auctions because the large number of bidders and the use of sealed bidding generally would undermine the effectiveness of collusive agreements. *See, e.g.*, comments of PacTel at 29, and AT&T at 39. However, several commenters argued that the Commission should adopt specific rules prohibiting collusion in order to preserve the integrity and competitiveness of the auction process. *See, e.g.*, comments of TDS at 18. These commenters favored adoption of specific rules prohibiting bidders from collaborating or otherwise discussing any information regarding the substance of their bids or bidding strategies prior to the completion of competitive bidding. In addition, some commenters recommended requiring successful bidders to file disclosure statements indicating all parties with whom they have entered into implicit or explicit arrangements relating to the competitive bidding process. *See* comments of UTC at 18, and Richard Myers at 7. Other commenters recommended that all bidders should be required to certify on their short form applications that they have not entered into any agreements or engaged in any conduct in violation of the Commission's rules or any applicable antitrust or criminal laws in preparing their bids and bidding strategies. *See* comments of TDS at 19, PacTel Paging at 29, Arch Communications at 18, and Sprint at 19. 223. Although the statute does not require special rules to prohibit collusion, the Commission is concerned that collusive conduct by bidders prior to or during the auction process could undermine the competitiveness of the bidding process and prevent the formation of a competitive post-auction market structure. While we generally agree that in most cases the number of bidders and the auction design method we select will effectively deter collusion, we believe that additional safeguards may still be necessary to ensure that collusion does not jeopardize the competitiveness of the auction process. At the same time, however, we seek to ensure that these additional safeguards do not inhibit the formation of legitimate efficiency enhancing bidding consortia, which reduce entry barriers for smaller firms, and improve their ability to compete in the auction process and in the provision of service.

224. As an initial matter, we believe that certain safeguards we have adopted in other sections of this Report and Order will reduce the opportunity for collusion. For example, we have attempted to design competitive bidding methodologies that will create an active bidder market by reducing entry barriers and encouraging all qualified bidders to participate in the auction process. As we indicated *supra* at ¶ 158, we have also decided to withhold bidder identities during the competitive bidding process. This safeguard should help to deter anticompetitive conduct by impeding bidders' efforts to uncover the bidding strategies of their competitors. Moreover, where bidders are unable to identify the parties against whom they are bidding, it will be more difficult for those attempting to collude to ensure that their anticompetitive agreements are honored. This is true because the success of most collusive agreements is dependent upon a system of identifying and punishing defectors. Where bidder identities are withheld during the competitive bidding process, the ability of those attempting to collude to enforce prior agreements by punishing defectors will be frustrated. In addition, as discussed *supra* at ¶ 207, the Commission may establish a minimum bid or reservation price where appropriate to ensure that a fair value is received for a particular license or group of licenses or to reduce the likelihood of unjust enrichment. While we anticipate that in most cases setting a minimum bid price will be unnecessary, where bidding is expected to be less intense and thus the opportunity for collusion greater, the Commission may wish to establish a minimum bid price to ensure that the public receives a fair price for the use of the spectrum.

225. While we intend to rely primarily on these safeguards and existing antitrust laws[165] to prevent collusion in the competitive bidding process, we believe that the competitiveness of the auction process and of the post-auction market structure will be enhanced by certain additional safeguards designed to reinforce existing laws and facilitate detection of collusive conduct. Accordingly, bidders will be required to identify on their short-form applications any parties with whom they have entered into any consortium arrangements, joint ventures, partnerships or other agreements or understandings which relate in any way to the competitive bidding process. Bidders will also be required to certify on their short-form applications that they have not entered into any explicit or implicit agreements, arrangements or understandings of any kind with any parties, other than those identified, regarding the amount of their bid, bidding strategies or the particular properties on which they will or will not bid. Winning bidders will be required to attach as an exhibit to the long-form application a detailed explanation of the terms and conditions and parties involved in any bidding consortia, joint venture, partnership or other agreement or arrangement they have entered into relating to the competitive bidding process prior to the close of bidding. All such arrangements must have been entered into prior to the filing of short-form applications. After such applications are filed and prior to the time that the winning bidder has made its required down payment, all bidders will be prohibited from coop-

[165] Agreements between two or more actual or potential competitors to submit collusive, non-competitive or rigged bids are per se violations of the Section One of the Sherman Antitrust Act, 15 U.S.C. § 1 et seq. *See, e.g., United States v. MMR Corporation (LA)*, 907 F.2d 489 (5th Cir.1990); *United States v. W.F. Brinkley & Sons Construction Co.*, 783 F.2d 1157 (4th Cir. 1986); *United States v. Finis P. Renest, Inc.*, 509 F.2d 1256 (7th Cir. 1975), *cert. denied*, 423 U.S. 874. Similarly, agreements between actual or potential competitors to divide or allocate territories horizontally in order to minimize competition are *per se* violations of the Sherman Act (*United States v. Topco*, 405 U.S. 596 (1972); *Affiliated Capital Corporation v. City of Houston*, 700 F. 2d 226, 236), and such agreements are anticompetitive regardless of whether the parties split a market in which they both do business or whether they merely reserve one market for one and another for the other. *See Palmer v. BRG of Georgia, Inc.*, 498 U.S. 46, 49 (1990).

erating, collaborating, discussing or disclosing in any manner the substance of their bids or bidding strategies with other bidders, unless such bidders are members of a bidding consortium or other joint bidding arrangement identified on the bidder's short-form application. We believe that these requirements are not unduly burdensome and are appropriate to deter bidders from engaging in anticompetitive behavior. These measures will also facilitate the identification and investigation of any suspect bidding behavior.

226. Where specific instances of collusion in the competitive bidding process are alleged during the petition to deny process, the Commission may conduct an investigation or refer such complaints to the United States Department of Justice for investigation. Bidders who are found to have violated the antitrust laws or the Commission's rules in connection with participation in the auction process may be subject to forfeiture of their down payment or their full bid amount, revocation of their license(s), and may be prohibited from participating in future auctions.

VI. TREATMENT OF DESIGNATED ENTITIES

A. Introduction

227. Several provisions of the statute concern participation in the competitive bidding process and in the provision of spectrum-based services by small businesses, rural telephone companies, and businesses owned by women and minorities (sometimes referred to collectively as "designated entities"). The principal provision at issue, Section 309(j)(4)(D) of the Act, relates to designated entities' participation in the provision of spectrum-based services and provides that, in prescribing competitive bidding regulations, the Commission shall, *inter alia*,

> ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services, and, for such purposes, consider the use of tax certificates, bidding preferences, and other procedures . . .

47 U.S.C. § 309(j)(4)(D). Another provision, section 309(j)(3)(B), provides that in establishing eligibility criteria and bidding methodologies the Commission shall seek to promote the objectives of "economic opportunity and competition and ensur|e| that new and innovative technologies are readily daccessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women." To promote these objectives, section 309(j)(4)(A) expressly states that the Commission is required "to consider . . . alternative payment schedules and methods of calculation, including lump sums or guaranteed installment payments, with or without royalty payments, or other schedules or methods."[166]

228. In the Notice we requested comment on several mechanisms the Commission might employ to implement these provisions, particularly section 309(j)(4)(D). NPRM at ¶ ¶ 72-81. We asked for specific comment on constitutional issues that may arise when preferential measures are limited to minorities and women and whether different approaches would be appropriate to address the specific concerns applicable to each enumerated entity. We also sought comment on how we should define the eligibility criteria for entities designated by the statute -- small businesses, rural telephone companies, and businesses owned by members of minority groups and women. In addition, commenters were asked to address several specific measures that could apply to designated entities, including installment payments, tax certificates, set-aside spectrum for PCS, financial certification procedures, bidding credits, royalties, and distress sales.[167] Finally, the Notice asked for comment on how the Commission could achieve the objectives of the other provisions related to small businesses, rural telephone companies, and businesses owned by members of minority groups and women.

B. Overview and Objectives

229. As discussed in more detail below, we are adopting general procedures that are designed to ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in both the competitive bidding process and in the provision of spectrum-based services. Specifically, we may allow small businesses (including those owned by women and minorities and rural telephone companies) that are winning bidders for certain blocks of spectrum to pay in installments over the term of their licenses. Rural telephone companies may also be eligible for bidding credits for licenses obtained in their service areas if they make an additional infrastructure build-out commitment beyond any existing performance requirements. Bidding credits may be available to other designated entities on certain frequency blocks. Finally, we may establish set-aside spectrum in certain services, in which eligibility to bid may be limited to some or all designated entities. Based on the eligibility criteria established below, some designated entities may qualify for a combination of these available preferences (*e.g.*, eligible small entities bidding for set-aside spectrum might also be allowed installment payments). We will decide whether and

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[166] *See also* 47 U.S.C. § 309(j)(4)(C)(ii), requiring the Commission, when prescribing area designations and bandwidth assignments, to promote "economic opportunity for a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women; section 309(j)(3)(A), establishing the objective to promote "the development and rapid deployment of new technologies, products, and services for the benefit of the public, including those residing in rural areas, without administrative or judicial delays"; section 309(j)(12)(D)(iv), requiring that the Commission's 1997 report to Congress evaluate, *inter alia*, whether and to what extent "small businesses, rural telephone companies, and businesses owned by members of minority groups and women were able to participate successfully in the competitive bidding process."

[167] *See* NPRM at ¶ ¶ 79-81; *id.* at nn.60-65, seeking comment on proposals in the report: *FCC Small Business Advisory Committee to the Federal Communications Commission Regarding Gen. Docket 90-314*, September 15, 1993 ("SBAC Report").

how to use these preferences, or others, when we develop specific competitive bidding rules in particular services in subsequent Reports and Orders.

230. These measures will implement the congressional mandates that we promote the dissemination of licenses among a wide variety of applicants, 47 U.S.C. § 309(j)(3)(B), and that we ensure that small businesses, rural telephone companies and businesses owned by minorities and women have the opportunity to participate in spectrum-based services, 47 U.S.C. § 309(j)(4)(D). Specifically, the preferences will allow designated entities to overcome barriers that have impeded these groups' participation in the telecommunications arena, including barriers related to access to capital. They will enable the participation of a variety of entrepreneurs in the provision of wireless services and the resulting diversity of service offerings will increase customer choice and promote competition. These procedures will also promote economic opportunity by facilitating the licensing of small businesses, rural telephone companies and businesses owned by members of minority groups and women. Moreover, this program will lead to the development and rapid deployment of new services by entrepreneurs who have traditionally lacked access to the telecommunicaitons marketplace. This enhanced access will benefit the public, including businesses and residents in rural areas, and will promote economic growth. Finally, as explained below, we institute a set of safeguards and eligibility criteria that will prevent abuses of the preference system which could undermine the statutory objectives.

C. Specific Preferences

1. Installment Payments

231. In the Notice we proposed to require full payment in a lump sum for all winning bidders, except designated entities.[168] We noted that allowing installment payments is equivalent to the government's extending credit to the successful bidder. This would reduce the amount of private financing needed by a prospective licensee. We requested comment on which applicants should be eligible for installment payment plans, the interest rate, if any, that should be charged, and what standards the Commission or an outside contractor might use to evaluate an applicant's creditworthiness. We also requested comment on how the Commission should treat licensees who default on payments owed the government. We asked whether, for example, licenses should be conditioned on timely payments so that a default would result in immediate license cancellation and whether there should be any grace periods or an opportunity for restructuring the payment plan. We indicated that, if we allow a grace period or restructuring of the payment plan, we would follow our procedures (including the payment of penalties and interest) under the Commission's existing debt collection rules and procedures.[169]

232. Most commenters agree that installment payments are an effective means of addressing the inability of designated entities to obtain financing and will enable them to compete more effectively for auctioned spectrum.[170] They claim that installment payments will minimize the effect of lack of access to capital by small businesses and female and minority owned businesses. Some commenters suggest that for all bidders who have minorities and women as equity participants, the Commission should allow proportionate installment payments equal to that amount of women or minority ownership (*i.e.*, 25 percent minority owned business could pay 25 percent of the bid amount in installments).[171] Other commenters argue that only small businesses should be allowed to defer payments. They assert that giving deferred payment terms to those entities that are large businesses would be unfair to other designated entities.[172] Some commenters also argue for reduced upfront payments and/or deposit payments in conjunction with the installment preference.[173] If interest is charged, a few commenters suggest that designated entities should not be charged interest at a rate higher than the government's cost of money.[174] Other commenters argue that interest should be below the prime rate since large entities are able to borrow at short-term rates below the prime rate using debt instruments such as commercial paper.[175] Finally, some commenters suggest that a designated entity that defaults on installment payments should be granted a three to six month grace period before the license is cancelled to allow an opportunity to cure the default without causing an interruption in service.[176]

233. We conclude that for some auctions, as discussed below, small businesses will be eligible for installment payments. As we mentioned in the Notice, by allowing installments, the government will be extending credit to an eligible winning bidder, thus reducing the amount of private financing needed in advance of the auction by a prospective licensee. This will assist small entities who are likely to have difficulty obtaining adequate private financing. Moreover, because of the problems associated with using a FCC license as collateral for a loan,[177] small, start-up companies' access to capital markets in order to obtain a license and construct their facilities may be even

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[168] NPRM at ¶ 68.

[169] *Id.*

[170] *See, e.g.*, comments of SBA at 20-23, Palmer Communications at 3, Rural Cellular Assoc. at 10, Call-Her at 11, Valley Management at 4, NTIA at 27, Windsong at 4.

[171] *See, e.g.*, comments of Venus at 4, System Engineering at 4.

[172] *See* comments of Unique at 4.

[173] *See, e.g.*, comments of American Wireless at 31, NAMTEC at 20-21, BellSouth at 26, Alliance for Fairness at 13, NABOB at 11, Point at 4, Telephone Assoc. of Michigan at 12, Telepoint at 3, Tri-State at 15-17, Wireless at 3-4.

[174] *See, e.g.*, comments of Cook Inlet at 33-34.

[175] *See* comments of Calcell at 19, Cook Inlet at 33, NAMTEC at 15, SBA at 20-23.

[176] *See, e.g.*, comments of American Wireless at 22, NAMTEC at 16, Corporate Technology Partners at 5, Venus at 4, Point at 4.

[177] *See Radio KDAN, Inc.*, 11 FCC 2d 934 (1968), *recon. denied*, 13 RR 2d 100 (1968), *aff'd on other grounds sub nom Hansen v. FCC* , 413 F.2d 374 (D.C. Cir. 1969); *Kirk v. Merkley*, 94 FCC 2d 829 (1983); *but see also Notice of Proposed Rulemaking and Notice of Inquiry*, MM Docket No. 92-51, 7 FCC Rcd 2654 (1992). In this regard, we do not at this time adopt the suggestions of the Small Business PCS Association and Telepoint that financing organizations be allowed a security interest in a PCS license. *See* comments of Small Business PCS Assoc. at 6-7, Telepoint at 3. The general issue of whether such security interests are permitted under the Communications Act is at issue in MM Docket No. 92-51 and will be addressed in that proceeding.

more difficult. As a result, installment payments will be an effective way to efficiently promote the participation of small businesses in the provision of spectrum-based telecommunications service and an effective tool for efficiently distributing licenses and services among geographic areas.[178]

234. We agree with those commenters that argue that only small businesses, including small businesses owned by minorities and women, should be allowed to defer payments. As discussed below, this approach to allowing installment payments best comports with the intent of Congress in enacting section 309(j)(4)(A), to avoid a competitive bidding program that has the effect of favoring incumbents, with established revenue streams, over new companies or start-ups.[179]

235. In describing the provisions concerning designated entities contained in the House bill, the House Report states generally that the Commission's regulations "must promote economic opportunity and competition," and "[t]he Commission will realize these goals by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses and businesses owned by members of minority groups and women." H.R. Rep. 103-111 at 254. The Report states that the House Committee was concerned that, "unless the Commission is sensitive to the need to maintain opportunities for small businesses, competitive bidding could result in a significant increase in concentration in the telecommunications industries." *Id.* More specifically, the House Committee was concerned that adoption of competitive bidding should not have the effect of "excluding" small businesses from the Commission's licensing procedures, and anticipated that the Commission would adopt regulations that would ensure that small businesses would "continue to have opportunities to become licensees." *Id.* at 255.

236. Consistent with Congress's concern that auctions not operate to exclude small businesses, the provisions relating to installment payments for minorities and women also were intended to assist only minorities and women who are small businesses. The House Report states that these related provisions were drafted to "ensure that *all small businesses* will be covered by the Commission's regulations, *including those owned by members of minority groups and women.*" *Id.* (emphasis added). It also states that the provisions in section 309(j)(4)(A) relating to installment payments were intended to promote economic opportunity by ensuring that competitive bidding does not inadvertently favor incumbents with "deep pockets" "over new companies or start-ups." *Id.* Because the Congressional objective here was to assist "new companies or start-ups," we therefore believe the Commission should consider installment payments only for entities with lesser economic status. As indicated by the legislative history, large entities with established revenue streams were not intended to be beneficiaries of this particular means of financial assistance. In short, the statutory language, when read in conjunction with the legislative history, does not indicate that Congress's purpose was to accord special financial assistance measures under section 309(j)(4)(A) to entities other than those with small economic status. We thus reject the proposals by some commenters to allow installment payments for designated entities irrespective of their size, or to permit proportionate installment payments based simply on the degree of non-controlling investment by designated entities in a bidder.

237. In addition, and consistent with our decision to limit installment payments to small businesses, we believe that installment payments should not be available for all spectrum auctions. Rather, in order to match the preference with eligible recipients of the preference, installment payments will only be available for certain licenses that do not involve the largest spectrum blocks and service areas. (For example, in the context of narrowband PCS, we could adopt installment payments for small businesses in the auctions for smaller spectrum blocks.) We will limit the auctions in which this preference can be used in order to avoid the abuses that will likely result if installment payments are available for every auctioned license. Where the license being auctioned is for a large, valuable block of spectrum, for example, we do not want to create incentives for entities to create small business "fronts" enabling large businesses to become eligible for low-cost government financing. Nor do we desire to delay service to the public by encouraging under-capitalized firms to receive licenses for facilities which they clearly lack the resources adequately to finance. *See* 47 U.S.C. § 309(j)(3)(A). Accordingly, as a general matter, we will only allow installment payments for licenses in those smaller spectrum blocks that are most likely to match the business objectives of *bona fide* small businesses. We stress that this limitation in no way prohibits eligible small businesses from bidding on and acquiring other licenses; it simply limits the licenses that the government will help finance. We shall make determinations regarding the use of installment payments when we adopt competitive bidding rules for specific services.

238. We agree with commenters that a reduced, post-auction down payment for designated entities eligible for installment payments is in order. As suggested by some commenters, the down payment for such entities, which is due five business days after the close of the auction, will be 10 percent of the winning bid, instead of 20 percent. This will provide eligible designated entities with necessary funds for additional application, legal and engineering costs that will be incurred immediately following the auction. Once the license is granted we will require that the remaining 10 percent of the down payment be made within five days of grant, thereby commencing the eligible entity's installment payment plan, which will extend over the period of the license.

239. Finally, we also agree with those commenters that suggest that interest on installments should be charged at a rate no higher than the government's cost of money. We recognize that, in addition to providing a source of financing that might not otherwise be available to small entities, we should impose interest in a manner that is designed to provide significant financial assistance to small businesses. Accordingly, in order to ensure that this government financing results in significant capital cost savings to small businesses, we will impose interest on installment payments equal to the rate for U.S. Treasury obligations of maturity equal to the license term.[180] This rate is generally lower

[178] *See* 47 U.S.C. § 309(j)(3)(A).L

[179] *See* H.R. Rep. No. 103-111 at 255.

[180] We note, for example, that PCS licenses are issued for a ten-year term. *See* 47 C.F.R. § 99.15. In other services with

than the prime lending rate established by private banks. The applicable interest rate will be determined and fixed at the time of licensing. We agree with the commenters that suggest that, to promote the rapid deployment of service by designated entities eligible for installment payments, payment of principal should not begin until after the start-up phase of the business. Therefore, the schedule of installment payments will begin with interest-only payments for the first two years. After that, principal and interest will be amortized over the remaining term of the license, during which the licensees can be expected to be generating income from operations. Further details of the Commission's installment payment program for designated entities will be established in further Orders involving those auctionable services for which installment payments will be available.

240. An eligible designated entity that elects installment payments will have its license conditioned upon the full and timely performance of its payment obligations under the installment plan granted to the licensee. If an eligible entity making installment payments is more than ninety (90) days delinquent in any payment, it shall be in default. Any default in this regard could result in the cancellation of the license for failing to meet this condition. However, as recommended by commenters, upon request by a designated entity that has defaulted or that anticipates default under an installment payment program, we will consider providing for a three to six month grace period before a delinquent payor's license cancels. During this grace period, a defaulting licensee could maintain its construction efforts and/or operations while seeking funds to continue payments or seek from the Commission a restructured payment plan. We will evaluate requests for a grace period on a case-by-case basis. In deciding whether to grant such requests or to pursue other measures we may consider, for example, the licensee's payment history, including whether it has defaulted before and how far into the license term the default occurs, the reasons for default, whether the licensee has met construction build-out requirements, the licensee's financial condition, and whether the licensee is seeking a buyer under a distress sale policy.[181] Following a grace period without successful resumption of payment or upon denial of a grace period request, we will declare the license cancelled and take appropriate measures under the Commission's debt collection rules and procedures. *See* 47 C.F.R. Part 1, Subpart O.

2. Bidding Credits

241. Among the variety of measures discussed in the Notice, we also asked for comment on the use of bidding credits or bidding preferences for designated entities.[182] Bidding preferences would allow eligible applicants to receive a payment discount (or credit) for their winning bid. Under this approach, if the eligible entity submits the winning bid, it would be required to pay only a certain percentage of its actual bid. Since the bidding credit is actually a payment discount determined at the end of the auction, it will not be difficult to compare bids among eligible and non-eligible bidders during the auction. Many commenters support bidding preferences instead of, or in addition to, set-asides. They claim that bidding credits address the inability of designated entities to obtain capital and would encourage non-designated entities to enter into joint ventures with designated entities.[183] Some commenters advocate linking the amount of the bidding preference with the degree of designated entity participation.[184]

242. We believe that it may be necessary to provide bidding credits to designated entities to achieve the objectives of Section 309(j)(4)(D). Bidding credits may be necessary to ensure that eligible designated entities have the opportunity to participate successfully in auctions for certain services. Therefore, competitive bidding rules applicable to individual services will specify the designated entities eligible for bidding credits, the licenses for which bidding credits are available, the amounts of bidding credits and other procedures. For example, in service-specific rules, we may determine that a bidding credit of up to 25 percent would provide the opportunity to bid successfully for a license.[185] This determination may rest in whole or in part on our assessment of the available opportunities in, and characteristics of, a specific spectrum-based service. As described above, such bidding credits would operate as payment discounts for entities that receive the credits. We also reserve the option to determine, on a service-specific basis, whether certain auctionable services should allow other bidding credits to a consortium of companies organized to bid for auctionable services. To qualify for a bidding credit in this circumstance, the consortium would be required to demonstrate that it has significant equity participation by one or more designated entities and that designated entities will have significant operational roles in the provision of service to the public.

243. We will institute a system of bidding credits for rural telephone companies that is designed to further promote the investment in and rapid deployment of new technologies and services in rural areas. *See* 47 U.S.C. § 309(j)(3)(A). At the outset, we generally conclude that any preferential measures for rural telephone companies, such as bidding credits, should be limited to bidding for licenses in their rural service areas.[186] As several commenters point out, such an approach satisfies Congress's objectives without unduly favoring rural telephone companies in markets where there is no compelling reason to do so. Specifically, these commenters note that Congress was concerned with assuring rural consumers the benefits of new technologies

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shorter license terms, we may base the interest rate applicable to installment payments on government instruments of similar duration.

[181] *See* ¶ 257, *infra*.

[182] *See* NPRM at ¶ 80.

[183] *See, e.g.*, comments of Palmer at 4-5, NABOB at 10-11.

[184] *See, e.g.*, comments of Cook Inlet at 32, NAMTEC at 15, Sprint at 10, AWCC at 20, George E. Murray at 12-13.

[185] *See, e.g.*, comments of SBA Associate Administrator for Procurement Assistance at 1, *citing* the Department of Defense program granting a 10 percent credit to contract bidders under Section 1207 of Pub. L. No. 99-166.

[186] Some commenters have suggested the partitioning of PCS licenses so as to permit rural telephone companies to hold licenses to provide service only in their service areas. *See, e.g.*, comments of GVNW at 2-4, and NTCA at 13. Partitioning may indeed be a means to achieve Congress's goal of ensuring that advanced services are provided in rural areas, but this issue is a subject of our reconsideration of the broadband PCS allocation rules. *See generally Second Report and Order* in GN Docket No. 90-314, 8 FCC Rcd 7700 (1993) (petitions for reconsideration and clarification pending). This issue will be addressed in the context of the PCS allocation rules.

and providing opportunities for participation by rural telephone companies in the provision of wireless services that supplement or replace their landline facilities.[187] We agree. Rural telephone companies, as defined below, will be eligible for bidding credits for specified licenses only in their service areas. This approach is consistent with Congress' intent to ensure that rural consumers receive the benefits of new technologies and to provide opportunities for participation by rural telephone companies in the provision of wireless services. Rural telephone companies would still be allowed, where eligible, to bid on other licenses outside their service areas.

244. The amount of the bidding credit for rural telephone companies will be tied to their commitments to achieve certain telecommunications infrastructure build-out milestones in their rural service areas. These milestones will be greater than those set forth in the particular service rules. The amount of the bidding credit will be proportionately linked to the amount by which the rural telephone company agrees to expand its build-out commitment. Failure to meet a build-out commitment will result in liability for a penalty in the amount of the bidding credit, plus interest at the rate applicable to installment payments. Grant of licenses to rural telephone companies utilizing bidding credits will be conditioned upon payment of this penalty, if and when it becomes applicable. We believe that this added requirement best fulfills the congressional objective of developing and rapidly deploying new services to those residing in rural areas.

3. Spectrum Set-asides

245. In the Notice we specifically asked for comments on setting aside blocks of spectrum for designated entities. NPRM at ¶ 4. Thus, we indicated that specified spectrum blocks could be open to bidding only by applicants that fall under one of the definitions for the eligible entities. *Id.* at ¶ 73. We also noted that measures such as set-asides may be better suited for some services than for others.[188]

246. Many parties commented on spectrum set-asides as they relate to specific services, such as broadband PCS. We shall address in subsequent orders those comments that relate primarily to set-asides in those services. Many parties support set-asides as a general matter and some argue that only by using set-asides can the Commission carry out the injunction in section 309(j)(4)(D) "to ensure" that designated entities are given the "opportunity to participate in the provision of spectrum based services."[189] Others, such as BellSouth and Sprint contend that to set aside spectrum blocks for bidding by women- or minority-owned applicants would be unconstitutional and inconsistent with legislative intent and the public interest.[190]

247. After consideration of the comments, we believe that, to "ensure" the opportunity for designated entities' participation in spectrum-based services under section 309(j)(4)(D), some spectrum may need to be set aside specifically for bidding by such entities. In this regard, we disagree with commenters who contend that Congress's rejection of the use of a set-aside for rural telephone companies demonstrates that set-asides were not the intended method for effectuating statutory objectives for any of the designated groups. Rather, we agree with Iowa Network that, although Congress decided not to require the Commission to reserve certain spectrum blocks for rural telephone companies, Congress did not prohibit the use of such measures for other classes of designated entities. Indeed, set-asides may be necessary to accomplish the statutory objectives of section 309(j)(4)(D). In subsection F below, we address the constitutionality of set-asides and other preferences for minorities and women.

248. We have also decided that, for any auctions of set-aside spectrum, a reduction in the upfront payment amount may also be appropriate. This lower payment would serve to encourage participation by all eligible designated entities in the auction. We anticipate that we will establish lower upfront payments in any particular auctions for set-aside spectrum and that such payments will be based on the characteristics of the service and the nature of the expected pool of bidders.

4. Tax Certificates

249. In the Notice we tentatively concurred with the SBAC Report that different approaches may be appropriate to address the specific concerns applicable to each enumerated entity. We indicated that we could allow deferred payment terms for small businesses and tax certificates for businesses owned by women and minorities.[191] The SBAC Report recommended several ways that the Commission could issue tax certificates. For instance, the Commission could enable owners and investors of minority owned and controlled licenses obtained through competitive bidding to obtain tax certificates upon sale of their stock interests, provided that the entities remain minority owned and controlled. *See* NPRM at ¶ 80, n.64. Another example would enable licensees that assign or transfer control of their license to designated entities to obtain tax certificates.

250. Most commenters who discuss this option advocate the use of tax certificates when an auction winner sells a license to a designated entity and when a designated entity sells a minority interest to a non-controlling investor.[192] Some commenters believe that tax certificates should be available to minority and female owned businesses that are not also small businesses. Also, if an entity qualifies for both installments and tax certificates, commenters suggest that the licensee be required to specify which preference it wished to use.[193] One commenter opposed the use of tax certificates generally because it believes that tax certificates would not sufficiently assist designated entities.[194] Others argue that tax certificates should be used to assist designated entities in acquiring, not disposing of, licenses.[195]

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[187] *See, e.g.*, comments of SBA at 15, BellSouth at 28-29, AT&T at 26 n.31, Citizens at 5-6, Telocator at 11.

[188] *Id.* at ¶ 75.

[189] *See, e.g.*, comments of AWRT at 8, NRTA at 8, Iowa Network at 8-11, Iowa Network (Reply) at 4-5, Minority PCS Coalition at 5.

[190] *See* comments of BellSouth at 18-23, Sprint at 10-11.

[191] *See* NPRM at ¶ ¶ 79-80.

[192] *See, e.g.*, comments of NAMTEC at 16-17, Palmer Communications at 4, NTIA at 27-28, MCI at 14, Calcell at 26-27, ARAT at 5.

[193] *See* comments of Unique at 2-4, LuxCel Group, Inc. at 3.

[194] *See* comments of Brown and Schwaninger at 4.

[195] *See, e.g.*, comments of Quentin L. Breen at 4.

251. We generally agree with those commenters who argue that, for purposes of attracting investment in designated entities, tax certificates may not be sufficient as a principal mechanism to assist designated entities. As described above, we have decided to rely primarily on other measures to eliminate barriers to entry into the telecommunications field by designated entities. Therefore, we will not at this time adopt a general tax certificate program for services subject to competitive bidding. We believe that the other available measures, such as bidding credits, will generally provide sufficient incentive to attract investors in designated entity enterprises. We agree at this time, however, that tax certificates could be useful as a means of creating incentives both for designated entities to attract capital from non-controlling investors and to encourage licensees to assign licenses to designated entities in post-auction transactions. We will examine the feasibility of utilizing tax certificates in subsequent competitive bidding rules for particular services, especially where the record demonstrates a need to further stimulate designated entity participation in spectrum auctions and in the after-market for auctioned services.

5. Royalty payments

252. In the Notice we indicated that another measure that could be made available to designated entities would be a combination of an initial payment and royalties. We noted that this system is used by the Department of the Interior for outer continental shelf oil and gas leases. Firms bid on the amount of the initial payment and pay royalties at a fixed rate set by the government. If the FCC is licensing a highly risky service and the government (taxpayers) is better able to bear risk than the firm (shareholders), there may be an advantage to have some part of the payment in the form of a royalty.[196] The SBA endorses royalty payments for designated entities because payment is tied to receipt of income as opposed to lump sum and installment payments. For these entities, payment prior to receipt of income may divert scarce capital from construction requirements.[197] Other commenters claim that royalties are not necessarily more burdensome to collect if the Commission establishes clear guidelines based on an applicant's own cash flow analysis.[198]

253. We do not adopt royalties as an alternative payment method for designated entities. As we stated in the Notice, this approach must be weighed against several difficulties. First, if the royalties are based on the output or revenues of the winning firm they will act as a tax and tend to reduce output.[199] Second, royalties on FCC licenses may be very costly to administer. Unlike oil and gas royalties there is no easily identifiable output associated with the license. To collect royalties on Commission licenses the agency must establish accounting rules for identifying the share of revenues or profits attributable to such licenses. This is likely to prove extremely intrusive and difficult to implement in practice, especially when a license is used by a firm as part of a highly integrated communications service. Finally, the Commission may have difficulty determining an appropriate royalty rate to apply in all circumstances. Accordingly, we adopt our tentative conclusion in the notice not to develop a royalties payment program for designated entities. However, as noted above, we agree with SBA that it would be fair to schedule payment to the government after the start-up phase of the business when licensees typically begin receiving income from operations, as we are doing in the case of installment payments.

6. Innovator's preference

254. In the Notice we requested comment on the SBAC's proposal to provide an "innovator's bidding preference," which would be designed to encourage participation by designated entities, and by strategic small business alliances, by awarding credits equal to 10 percent of an applicant's bid.[200] Under the proposal, alternative bidding calculations would allow technical and non-technical innovators to discount, or amortize, the bid the applicant would otherwise pay based on a qualitative assessment of the applicant's business development proposal. To qualify for the credit, the SBAC Report states that the bidder would have to qualify as (a) a member of a designated entity, or (b) a consortium owned and controlled by firms owned by members of the designated entities. We asked for comment on the extent to which members of the preferred groups can be deemed to be "technical innovators," and the extent to which it is feasible to reach such determinations prior to conducting individual auctions.

255. In ET Docket No. 93-266, we are currently reviewing our pioneer's preference rules in light of the Commission's new competitive bidding authority. *See* Notice of Proposed Rule Making in ET Docket No. 93-266, 8 FCC Rcd 7692 (1993). The pioneer's preference rules currently award innovation by providing a means by which an applicant that demonstrates having developed a new communications service or technology may obtain a license without being subject to mutually exclusive applications. *See* 47 C.F.R. § 1.402. In the pioneer's preference review proceeding, we requested comment on alternatives to a dispositive preference in a competitive bidding environment, including a bid discount for designated innovators. 8 FCC Rcd at 7694. We asked for specific comments in that proceeding regarding the innovator's preference proposals for designated entities set forth in the Notice in this proceeding. *Id.* at 7694, n.13.

256. Since the innovator's preference proposal for competitive bidding is inextricably related to our general review of the pioneer's preference rules, this issue will be resolved in ET Docket No. 93-266.[201]

7. Distress Sales to Designated Entities

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[196] Under a royalty program, the Commission could, for example, allow the winning bidder to pay for its license from a percentage of the revenues it generates from the operation of its licensed facilities. To minimize the risk to the Commission, it could establish a fixed, minimum royalty payment plus a percentage of gross revenues.

[197] *See* comments of SBA at 24; *see also* comments of Calcell at 19-21.

[198] *See* comments of JMP Telecom Systems at 3.

[199] *See* comments of BellSouth at 26.

[200] *See* NPRM at ¶ ¶ 50 and 80, n.61.

[201] Several commenters suggest that we provide waivers or exceptions to our PCS rules concerning spectrum aggregation or cellular cross-ownership where an applicant enters into partnerships or other joint ventures with designated entities. *See, e.g.*, comments of Bell Atlantic at 15, AWCC at 33-34, Cook Inlet at

257. In the Notice we requested comment on the SBAC's distress sale proposal. We indicated that the proposal would encourage transfers to designated entities where winning bidders are unable to pay, ineligible, or unqualified.[202] Only a few commenters addressed this proposal.[203] For example, one commenter suggested that distress sales be utilized in the event a designated entity defaults on its installment payments.[204] Since distress sales, if adopted, would be a post-auction measure designed to provide additional opportunities to designated entities to participate in the provision of spectrum-based services, we have decided not to resolve this issue at this time. Rather, we will evaluate the success of our other measures adopted herein and in our service-specific rules and determine whether distress sales should be authorized.

D. Preventing Unjust Enrichment

258. Section 309(j)(3)(B) requires that the Commission craft our competitive bidding rules so as to "promot[e] economic opportunity and competition and ensur[e] that new and innovative services are readily available to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including [designated entities]." To ensure that our preference measures are effective, however, we must also adopt rules that will prevent abuse of our preference measures. *See* Section 309(j)(4)(E). In particular, we must adopt rules to ensure that the preferences foster the creation of new telecommunications businesses owned by designated entities which will continue to provide telecommunications services. Our rules are intended to prevent designated entities from profiting by the rapid sale of licenses acquired through the benefit of our preference policies. This goal is wholly consistent with Congressional intent: "to the extent that the Commission is attempting to achieve a justifiable social policy goal . . . licensees should not be permitted to frustrate that goal by selling their license in the aftermarket." H.R. Rep. No. 103-111 at 257.

259. We wish to ensure against unjust enrichment in those situations where Congress recognized that the likelihood of unjust enrichment was highest, or specifically when licenses were obtained under circumstances where the government undertook special efforts to limit competition for licenses to ensure opportunities for certain classes of applicants, *i.e.*, the designated entities. We therefore are adopting unjust enrichment rules applicable specifically to designated entities to deter speculation and participation in the licensing process by those who do not intend to offer service to the public, or who intend to use our preferences to obtain a license at a lower cost than they otherwise would have to pay and later to sell it at the market price. We have decided that we may rely on three principal preferences for designated entities -- installment payments, set-asides and bidding credits -- and each leads to a different method to prevent abuse and unjust enrichment. These methods are discussed below. We may also employ other methods, such as random audits, to ensure that entities purporting to be designated entities have retained that status after being awarded licenses. Of course, as discussed below, in circumstances in which penalties are applicable, licensees that wish to take actions relating to ownership or control that would result in loss of designated entity status must also report those proposed actions to the Commission.

260. *Designated Entity Set-asides.* If licenses are set aside for application exclusively by designated entities, the concern expressed by Congress over unjust enrichment is great. If a tclass of licenses is exclusively assigned for use by designated entity applicants, it is reasonable to assume that these licenses will be auctioned at a lower price than they would bring if they were not set-aside. It would be unjust and inconsistent with the will of Congress for such preferred licensees to obtain a license with the government's help, transfer that license after a short period of time to an entity that was not entitled to special treatment at the auction, and appropriate for themselves the difference between the full market value of the license and the discounted price which they paid the government for that license. Therefore, if we employ set-asides to benefit some or all of the designated entities, we will impose a recapture provision, applicable in the event of sale to a non-designated entity, that would be designed to recoup for the government a portion of the value of the benefit received by the designated entity in the bidding.

261. Such a recapture provision would require that licensees seeking to transfer their licenses for profit (or to take other actions relating to ownership or control that cause them to lose their status as designated entities) must, within a specified time remit to the government a penalty equal to a portion of the total value of the benefit conferred by the government.[205] If similar licenses that are not set-aside are auctioned at the same time as set-aside licenses, the penalty would be set based on the price at which non-set-aside licenses were awarded. In other cases, the Commission will calculate the value of the difference between the set-aside price and the price that would have been obtained at auction without a set-aside. The Commission will make this initial calculation and the burden will be on the applicant to disprove this amount.

262. In order to encourage efficiency and reward entities that have provided valuable services, we will generally reduce the penalty as time passes or construction benchmarks are met. However, because license terms and construction requirements vary by service, we will set forth any specific recapture provisions in competitive bidding rules applicable to any services in which we decide to set aside licenses. In no event will recapture provisions apply to the transfer or assignment of a license that has been held for more than five years. If the transfer is to be made to another eligible designated entity, there would be no pen-

28-29, NAMTEC at 22, and Murray at 12. With regard to broadband PCS, these and other issues have been raised in petitions for reconsideration of those rules. It therefore would be better addressed in the context of that proceeding. *See generally Second Report and Order* in GN Docket No. 90-314, 8 FCC Rcd 7700 (1993) (petitions for reconsideration and clarification pending). In other proceedings, such a determination will be made in orders addressing each auctionable service.

[202] NPRM at ¶ 71, *citing* SBAC Report at 16.

[203] *See, e.g.*, comments of Chickasaw Telephone Company at 6.

[204] *See* comments of Corporate Technology Partners at 5.

[205] We might, in appropriate circumstances, waive recapture if the licensee had incurred substantial start-up costs or made significant capital investments with the intention of starting service, but due to circumstances beyond its control, was unable to provide service.

alty. In the event that a penalty is assessed, the penalty will not prevent the transferring designated entity from recovering the depreciated value of its capital investment. Similar approaches found support in the comments of Calcell Wireless and Wisconsin Wireless Communications.

263. *Designated Entity Installment Payments and Bidding Credits.* Where other preferential measures are employed (*i.e.,* installment financing or bidding credits), the Commission will impose appropriate unjust enrichment measures. For example, if a small business making installment payments sells its license to an entity that does not qualify under the standards we have set for small businesses, we will require payment of the full amount of the remaining principal balance as a condition of the license transfer. We recognize that this remedy may still allow some gains to accrue to a small business licensee who makes installment payments at a relatively low interest rate and then transfers the license, but we expect the number of such instances to be small and believe that the magnitude of such gains would not warrant the cost of calculating and imposing penalties to address this concern.

264. Where bidding credits are used, the Commission will require a designated entity seeking approval for a transfer of control or an assignment of license to a non-designated entity, or who proposes to take any other action relating to ownership or control that will result in loss of status as an eligible designated entity, to reimburse the government for the amount of the bidding credit, plus interest at the rate imposed for installment financing at the time the license was awarded, before transfer of the license will be permitted. This approach was supported in the comments as well. *See, e.g.,* comments of BellSouth at 32-33. The penalty will be equal to the current value of the bidding credits. If the bidding credit was related to a designated entity's commitment to expanded construction requirements, and the construction requirements extend over the term of the license, the penalty will not be reduced over time.

265. These modest requirements address Congressional concerns over unjust enrichment but should not inhibit investment or economic growth. Because of our concerns on the possible impact of transfer restrictions on willingness to invest in the industries we regulate, we are not adopting our proposal to establish a minimum time during which transfer of licenses obtained through competitive bidding would be prohibited. As we recognized in ¶ 84 of the NPRM, such restrictions "may block or delay efficient market transactions needed to attract capital, reduce costs, or otherwise put in place owners capable of bringing service to the public expeditiously."

E. Definitions

266. In the Notice we requested comment on definitions to apply to the designated entities enumerated by Congress. These definitions are important both to establish eligibility criteria and to deter the use of sham companies to take advantage of the benefits meant for groups truly in need of the measures outlined above. *See* NPRM at ¶ ¶ 77-78.

1. Small Business

267. With regard to small businesses, we asked parties to discuss whether we should rely on the definition devised by the Small Business Administration (SBA). NPRM at ¶ 77. We noted that the SBA definition permits an applicant to qualify for financial assistance based on a net worth not in excess of $6 million with average net income after Federal income taxes for the two preceding years not in excess of $2 million. Alternatively, an applicant for SBA assistance can qualify by showing that together with affiliates, and excluding affiliates, it meets the size standard for the industry in which it is primarily engaged as set forth in 13 C.F.R. 121.601. NPRM at ¶ 77, n.51. This size standard translates into a business with less than 1500 employees for the telecommunications industry. 13 C.F.R. 121.601.

268. Many commenters, including the Chief Counsel for Advocacy of the SBA, argue that the SBA net worth/revenue definition is too restrictive and will exclude businesses of sufficient size to survive, much less succeed, in the competitive wireless communications marketplace. The SBA's Chief Counsel and Suite 12 Group advocate adoption of a revenue test, arguing that a net worth test could be misleading as some very large companies have low net worth. The SBA's Chief Counsel recommends that the revenue standard be raised to include firms that (together with affiliates) have less than $40 million in revenue. Similarly, Suite 12 suggests a $75 million in annual sales threshold.[206] As another option, the SBA's Chief Counsel suggests that the Commission consider a higher revenue ceiling or adopt different size standards for different telecommunications markets.[207]

269. Other parties worry that the definition used by the Commission might impede the ability of small businesses to raise capital in anticipation of auctions. They note that many small firms are soliciting investors to enable these firms to compete better in auctions, and argue that their designated entity status should not be jeopardized as a result. Thus, these commenters suggest, if the FCC adopts the SBA's net worth standard, the net worth valuation should relate back to the date of the PCS Final Report and Order (September 23, 1993).

270. In contrast, several commenters argue that the small business definition must be made more restrictive in order to prevent large firms from spinning off companies to compete as designated entities. In this regard, some parties recommend limiting preferences to those small businesses that were in existence for the previous two years.

271. We believe that in most circumstances the existing SBA net worth/income size standard is the appropriate threshold for small businesses to qualify as designated entities. At this juncture, we are unable to conclude that the

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[206] Many other commenters set forth their recommendations on the appropriate small business definition. *See, e.g.,* comments of Tri-State ($5 million average annual operating cash flow), Luxcel (net worth not exceeding $20 million), and Iowa Network (less than $40 million in annual revenues and 50,000 or fewer access lines).

[207] Some parties recommend using the SBA's 1500 employee standard. *See, e.g.,* comments of SBA Associate Administrator for Procurement Assistance at 2, CFW Communications at 2, and Iowa Network at 17. A number of other commenters argue, however, that adoption of this alternative SBA definition would open up a huge loophole in the designated entity eligibility criteria. Specifically, they contend that telecommunications is a capital, rather than labor, intensive industry, and that an entity with 1,500 employees is likely to be extremely well capitalized and have no need for the special treatment outlined by Congress in the Budget Act. *See, e.g.,* comments of LuxCel Group, Inc. at 4, Suite 12 Group at 10-11.

other proposals suggested by commenters are superior to this established standard. In this regard, we also note that the legislative history indicates that the SBA's Chief Counsel and other commenters are correct that in certain telecommunications industry sectors this standard may not be high enough to encompass those entities that require the benefits, but also have the financial wherewithal to construct and operate the systems. Nevertheless, the threshold can be adjusted upward on a service-by-service basis to accommodate such situations. Thus, in order to qualify as a small business eligible to receive designated entity benefits, the applicant must show that, together with its affiliates, the entity has no more than a $6 million net worth and after federal income taxes (excluding any carry over losses), does not have in excess of $2 million in annual profits for the previous two years. This small business definition may be modified, however, if the SBA changes its definition or the Commission deems that an alternative definition is more appropriate for capital intensive services, for example.

272. The inclusion of all "affiliates" of the entity for purposes of the net revenue/net worth calculation should alleviate the concerns of some commenters who fear competing with the "designated entity" affiliates of large, well-financed corporations. Moreover, we intend to scrutinize relationships between parties very carefully to determine if they rise to the level of affiliation. As provided in the SBA regulations, for example, we will consider entities to be affiliates of each other when, either directly or indirectly, one entity controls or has the power to control the other, or a third party or parties controls or has the power to control both. *Compare* 13 C.F.R. § 121.401(a)(2). Thus, stock options, convertible debentures, and agreements to merge will be treated as if the rights thereunder already had been exercised.[208] Likewise, financing agreements may result in a finding of affiliation if the debt relationship essentially gives the creditor the power to control the enterprise -- for example, if the size of the debt is particularly large, the terms of the loan are not commercially reasonable, and the definition of default is unconventional. Affiliation may also arise when entities have common officers, directors, or key employees, or when they enter into joint ventures. *See* 13 C.F.R. 121.410. Given this close scrutiny of business relationships, we do not think it is necessary to require small businesses to have been in existence for two years to qualify as designated entities. Such a rule would unduly restrict the entry of *bona fide*, newly-formed bidders.

273. Finally, as recommended by a number of parties, we reject the SBA's alternative 1,500 employee standard as a means to qualify as a designated entity. We agree with those commenters that argue that such a definition is too inclusive and would allow many large telecommunications firms to take advantage of preferences not intended for them.

2. Minority- and Female-Owned Businesses

274. In the Notice, we proposed to rely on existing Commission definitions of minority and female owned businesses. We asked for comment, however, on whether we should require women and minority backed applicants to be 50.1 percent owned by members of these groups or whether simple control, regardless of equity ownership, would be sufficient.

275. Most commenters favor strict eligibility criteria in this area in order to prevent abuse. They argue that minorities and women should be required to have both 50.1 percent voting control and a significant equity interest (at least 20 percent) in the applicant to qualify for designated entity status. Numerous commenters contend that preferences should be granted only to applicants that are more than 50 percent female or minority owned. They assert that such a requirement is necessary to fulfill the legislative intent of Section 309(j), which explicitly requires the Commission to foster opportunities for "businesses *owned* by members of minority groups and women." In addition, a number of parties recommend that minorities and women should be required to have control of day-to-day management and operations of the entity.

276. Other parties recommend, however, that eligibility extend to businesses over which women or minorities have actual operating control, even if they do not have a majority share of the equity. They argue that such a standard would enhance the ability of female and minority entrepreneurs to obtain financing.

277. We are persuaded by the commenters that, to establish "ownership" by minorities and women, we should adopt a strict eligibility standard that requires minorities or women to have at least a 50.1 percent equity ownership and a 50.1 percent controlling interest in the designated entity. In the context of limited partnerships, the general partner must be a minority and/or a woman (or an entity 100 percent owned and controlled by minorities and/or women) that owns at least 50.1 percent of the partnership equity. The interests of minorities and women in designated entities will generally be calculated on a fully-diluted basis. Thus, agreements such as stock options and convertible debentures will generally be considered to have a present effect on the power to control the entity and will be treated as if the rights thereunder already have been fully exercised. We will depart from the requirement that the equity of the minority and female principals must be calculated on a fully-diluted basis only upon a demonstration, in individual cases, that options or conversion rights held by non-controlling principals will not deprive the minority and female principals of a substantial financial stake in the venture or impair their rights to control the designated entity.

278. We seek to encourage designated entities to raise capital by selling less than controlling interests in their companies. We recognize that there may be situations in which a designated entity may be able to best attract equity by offering investors such inducements as preferential dividends, liquidation preferences and other incentives typically offered to noncontrolling principals. We do not intend to restrict the use of such financing mechanisms, provided that the minority and female principals continue to maintain 50.1 percent of the equity on a fully-diluted basis and that their equity interest entitles them to a substantial stake in the profits and liquidation value of the

[208] An affiliate cannot use such options, debentures and agreements, however, to appear to have relinquished control over another entity before it actually does so. *Compare* 13 C.F.R. § 121.401(f).

venture relative to the non-controlling principals. While different standards may be appropriate in other contexts, our objective here is to deter the establishment of sham companies in a manner that permits easy resolution of eligibility issues without the delay of administrative hearings, and thereby to achieve one of the primary purposes underlying the auction statute.[209] Of course, applicants must ensure and be prepared to demonstrate that *de facto* control truly resides with the minority or female principals. While control over daily operation remains one of several factors in determining *de facto* control,[210] we will not require that the minority and female principals devote their full time and attention to the day-to-day management and operations to qualify for available preferences, provided that the designated entity can demonstrate that the minority and female principals are in control of the enterprise.

3. Rural Telephone Companies

279. We also tentatively decided to base our definition of rural telephone companies on existing Commission rules and policies and, thus, proposed that they qualify for designated entity status if they are eligible for exemption from the cable television-telephone company cross-ownership prohibition contained in Section 63.58 of our Rules (*i.e.*, they serve no community with more than 2,500 inhabitants). In addition, we sought comment on whether we should impose geographic restrictions on the rural telephone company preference or if such companies should be able to obtain a preference in any market licensed by the Commission.

280. Most commenters argue that the 2,500 hundred resident standard contained in Section 63.58 is too restrictive and is not related to Congress's concerns.[211] For example, Iowa Network and Telephone Electronics assert that the 2,500 population limit in the rule was not meant to define rural telephone companies, but rather to carve out a narrow exception to the telephone-cable cross-ownership restriction.[212] Likewise, NTCA argues that it is neither necessary nor appropriate to use the same criteria top define rural telephone companies in rules pertaining to a different service, technology, and industry.[213]

281. As an alternative, many commenters support OPASTCO's proposal to limit rural telephone eligibility to carriers serving communities with no more than 10,000 inhabitants, asserting that such a standard better comports with common notions about which telephone companies are "rural."[214] A number of other commenters also suggest that the definition of rural telephone company should include a limitation on the size of the company. OPASTCO, for example, asserts that such a limitation would comport with the statutory mandate to ensure opportunity for rural telephone companies because "the problem such companies face in the competitive bidding arena" is as much a function of their size as of the rural character of their service areas."[215] NTCA similarly contends that small companies have shown the interest and commitment needed to fulfill the explicit statutory goal of "rapid deployment of new . . . services for . . . those residing in rural areas," citing as support a report on the deployment of digital switching by small LECs.[216] The commenters differ on the what the proper measure of a company's size should be. McCaw and TDS, for instance, recommend that the total number of access lines served by a rural telephone company must not exceed 150,000, while the SBA advocates a 50,000-line cap. Other parties suggest that the Commission adopt a definition similar to the one that appeared in the unenacted antecedent of the Budget Act, S.1134: a rural telephone company either (a) "provides telephone exchange service by wire in a rural area" (*i.e.*, a non-urbanized area containing no incorporated place with more than 10,000 inhabitants), (b) "provides telephone exchange service by wire to less than 10,000 subscribers," or (c) "is a telephone utility whose income accrues to a State or political subdivision thereof."

282. As discussed previously, rural telephone companies may be eligible for bidding credits. We agree with many of the commenters that the standard contained in Section 63.58 of our Rules is unnecessarily restrictive for purposes of this proceeding. Thus, as recommended by OPASTCO, in order to be eligible for a bidding preference on a particular license, rural telephone companies must not serve communities with more than 10,000 inhabitants in the licensed area. On the other hand, we believe that a limitation on the size of eligible rural telephone companies is appropriate, because we do not believe Congress intended for us to give preferences to large LECs that happen to serve small rural communities. Thus, as suggested by SBA, in order to be eligible for a preference, a rural telephone company must not have more than 50,000 access lines, including all affiliates.[217]

4. Designated Entities and Consortia

283. In the Notice we asked interested parties to comment on how to apply the designated entity eligibility criteria to consortia. Specifically, we sought comment on whether such consortia must be wholly or predominantly comprised of eligible designated entities to qualify for special treatment. NPRM at ¶ 78.

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[209] We see no reason to depart from the Commission's current definition of the term minority, which includes "those of Black, Hispanic Surnamed, American Eskimo, Aleut, American Indian and Asiatic American extraction." *See* Statement of Policy on Minority Ownership of Broadcasting Facilities, 68 FCC 2d 979, 980 n.8 (1978); Commission Policy Regarding the Advancement of Minority Ownership in Broadcasting, 92 FCC 2d 849, 489 n.1 (1982). We do agree with the comments of some parties, who suggested restricting minority preferences to citizens of the United States. Thus, minority and female owned businesses will be eligible for preferences only if voting control and at least 50.1 percent of the equity resides with minorities and women who are United States citizens.

[210] *See, e.g., Intermountain Microwave*, 24 Rad. Reg. 983, 984 (1963); *Cellular Control Notice*, 1 FCC Rcd 3 (1986).

[211] *See, e.g.*, comments of NRTA, NTCA, Rochester Telephone Corp., Iowa Network, TAM, SBA, PMN and Small Telephone Companies of Louisiana.

[212] *See* Comments of Iowa Network at 13 and Telephone Electronics at 11.

[213] *See* comments of NTCA at 4.

[214] *See, e.g.*, comments of Iowa Network, Saco River and Telephone Electronics.

[215] Comments of OPASTCO at 5.

[216] Comments of NTCA at 7-8.

[217] If a rural telephone company qualifies as a designated entity on some other basis (*e.g.*, as a small business), it will be eligible for installment payments in other markets on that ground.

284. Commenters present a range of proposals concerning the treatment of consortia in this regard. Some commenters believe that the consortium seeking a preference must itself meet the criteria for designated entity eligibility.[218] Others suggest that, to qualify as a designated entity, at least half of the aggregate equity interest should be held by designated entities.[219] Still others propose that such consortia should only be controlled by designated entities, even if designated entities have less than a 50 percent combined equity stake.[220] Finally, some believe a qualifying consortium must be controlled by designated entities *and* designated entities must hold a majority of the equity in the venture.[221]

285. Other commenters state that a consortium should be deemed eligible for designated entity benefits if all of its members qualify as designated entities individually, even if the consortium as a whole does not qualify because, for example the rural telephone companies in the consortium together serve communities with more than 10,000 inhabitants.[222]

286. The issue here is whether we should provide an exception to the above eligibility criteria for applicants that are a consortium of various individual entities, most or all of which qualify as designated entities individually. We do not believe that such combinations, if they deviate from our standard definitions of designated entities, should be eligible for preferences expressly designed for designated entities. Accordingly, we reject proposals to accord preferences to consortia of otherwise eligible designated entities that, when combined, result in a new entity that does not meet our definitions.

287. Our policy objective, as noted above, is to provide economic opportunity to those entities designated in the statute and to ensure such entities the opportunity to provide spectrum-based services. Establishing exceptions to our definitions for consortia (even those wholly composed of otherwise qualified designated entities) would undermine this objective. If applicants made up of a number of entities were allowed special treatment, the economic opportunity for individual qualified designated entities would be diluted. Moreover, we believe that allowing applicants to be formed from a combination of eligible and ineligible entities would invite attempts to abuse the designated entity preferences by those not entitled to them. Accordingly, every applicant seeking special treatment as a designated entity (whether such applicant is an individual person or a separate entity, a joint venture or consortium, an unincorporated association of entities, or a standard partnership or corporation), must certify, and be prepared to show, that it meets the definitions established for designated entities in our rules. As noted above, we may determine on a service-specific basis to allow a consortium to receive other benefits based on equity and operational participation in the consortium by one or more designated entities, but such a consortium would not be entitled to qualify for preferences designed specifically for entities meeting the definitions set forth above.

288. The above discussion should not be construed as preventing applicants and licensees for individual licenses for different spectrum blocks or different markets from entering into arms-length agreements concerning the cooperation or coordination of separate facilities, so long as each applicant or licensee retains control over the license and so long as such arrangements are consistent with our affiliation rules and other restrictions against collusion and agreements in restraint of trade. Since designated entities would still retain control of their licensed facilities under such arrangements, cross-license, arms-length arrangements between or among designated entities, and between designated entities and non-designated entities are consistent with our policies discussed above. Moreover, such arrangements could result in more efficient aggregation of ubiquitous, interoperable service offerings that could not be obtained through the auction process.

F. Constitutional Issues

289. If we determine that race or gender-based preferences are necessary to satisfy the statutory command of section 309(j)(4)(D), we must also address the constitutionality of such measures. In the Notice, we stated that the proper standard of scrutiny to be employed in this context is the "intermediate scrutiny" standard used in *Metro Broadcasting, Inc. v. FCC*, 497 U.S. 547 (1990). Virtually all of the commenters agree that *Metro* 's intermediate scrutiny standard should be applied in these circumstances, and we also note that recent case law fully supports that conclusion. *See S.J. Groves & Sons Co. v. Fulton County*, 920 F.2d 752, 767 (11th Cir. 1991); *Adarand Constructors, Inc. v. Skinner*, 790 F. Supp. 240 (D. Colo. 1992); *see also Lamprecht v. FCC*, 958 F.2d 382 (D.C. Cir. 1992). Further, as the *Metro* case did not involve federal action vis-a-vis the states, it is also clear that the intermediate scrutiny standard may be applied in circumstances that go beyond those in which Congress exercises its powers under section 5 of the Fourteenth Amendment.[223] Thus, intermediate scrutiny is to be applied even if the measures are deemed to relate solely to the Federal government's activities.

290. Applying the *Metro* standard itself, *Metro* instructs that benign race-conscious measures approved by Congress do not violate the equal protection clause if they serve important governmental objectives within the power of Congress and are substantially related to achievement of those objectives. 110 S. Ct. at 3008-09. We agree with the vast majority of commenters who contend that preferential measures afforded under section 309(j)(4)(D) serve important governmental objectives sufficient to satisfy *Metro*. The commenters agree with the assertion in the Notice that, from the language and history of the section, it is evident

[218] *See, e.g.*, comments at McCaw at 21, Meyers at 6, Pacific Bell at 21 (regarding preferences for female or minority ownership specifically).

[219] *See* comments of Sprint at 10, and PMN, Inc. at 9.

[220] *See, e.g.*, comments of SBA at 15-17, Southwestern Bell at 41, and Chickasaw Telephone Company at 6-8.

[221] *See* comments of AT&T at 25-26, United Native American Telecommunications, Inc. at 16, TDS at 17, and Telephone Association of Michigan at 7.

[222] *See, e.g.*, comments of Telephone Electronics at 16, Iowa Network at 17-18, SBA at 11-12 (regarding small business consortia).

[223] In the context of gender preferences, we observe that the intermediate scrutiny standard applies whether or not the measure is used by Congress or the States. *See, e.g., Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*, 6 F.3d 990, 1009 (3rd Cir. 1993).

that Congress enacted the provision in the interest of promoting economic opportunity for minorities and women, who are underrepresented in the communications industry. The commenters maintain that this is an important and legitimate congressional objective, and we agree.

291. Cook Inlet also observes that the congressional espousal of that stated objective in the auction statute is implicitly predicated on Congress' well-founded belief that minorities and women are underrepresented among business owners in the communications industry.[224] Similarly, UCC asserts that the provisions regarding female and minority preferences were enacted on the implicit understanding that women and minorities have been hindered from participation in the communications industry as a result of invidious discrimination. UCC notes that there are ample grounds for a legislative finding to that effect, citing the statement in *Metro* that Congress has consistently recognized the barriers encountered by minorities in entering the broadcast industry.[225] Murray and others also cite the SBAC Report as a compilation of evidence of the existence of current and historical barriers to minority participation in the telecommunications industry.[226] Cook Inlet, in addition, cites a 1982 House conference report and statements in the Congressional Record as grounds for such a finding and refers to an appendix listing reports and studies concerning minority underrepresentation in business and barriers to entry.[227] The Minority Business Enterprise Legal Defense and Education Fund, Inc. has submitted a copy of a massive report on racial discrimination in contracting in the telecommunications industry that it had previously presented to Congress.[228] Finally, Calcell Wireless, Inc. refers to information concerning systematic bias against African and Hispanic Americans by mortgage lenders.[229]

292. Similar arguments and information have been submitted in this record concerning women. AWRT points out that in *Califano v. Webster*, 430 U.S. 313, 317 (1977), the Supreme Court made clear that reduction in the disparity in economic condition between men and women caused by the long history of discrimination against women is an important governmental objective.[230] AWRT, Call-Her and Palmer Communications, Inc. refer to findings that women are statistically underrepresented among business owners in the SBAC Report, the 1992 Annual Report of the National Women's Business Council, and recent publications of the U.S. Department of Commerce.[231] Call-Her also notes that Congress made conclusive findings in the Women's Business Ownership Act of 1988, 15 U.S.C. § 631(h), that women are hindered in pursuit of entrepreneurial endeavors by sexual discrimination affecting their ability to raise capital and acquire managerial skills.[232]

293. These commenters, we believe, have offered persuasive arguments and evidence that any measures we may adopt to implement section 309(j)(4)(D) satisfy the "important governmental interest" aspect of the *Metro* intermediate scrutiny test. In this regard, many commenters point out that in *Metro* the Supreme Court concluded that a full appreciation of the legislative process counseled against a court limiting its analysis to the legislative history of the particular act under review.[233] Examined against this complete legislative backdrop, the record compiled herein indicates that Congress had a full understanding of the barriers to entry that have led to underrepresentation of minorities and women in the communications industry. Further, the commenters in this proceeding have submitted much additional evidence relating to this underrepresentation and the factors causing it.

294. In this regard, we note that, even under a standard of "strict scrutiny," it is not necessary to demonstrate government sponsored discrimination. Even where the government is only a passive participant in the discrimination to be remedied, the government may permissibly use race-based measures to redress discrimination committed by private parties within the government's jurisdiction. *See Associated General Contractors of California v. Coalition for Economic Equity*, 950 F.2d 1401, 1413 (9th Cir. 1991), *citing Richmond v. Croson*, 488 U.S. 467, 491-92; *O Donnell Construction Co. v. District of Columbia*, 963 F.2d 420, 429 (D.C. Cir. 1992) (Ginsburg, J. concurring). Similarly, under the intermediate scrutiny standard as it has been applied to sex-based preferences, evidence of governmental discrimination against women is not required to establish the necessary important government interest. *Coral Construction Co. v. King County*, 941 F.2d 910, 916 (9th Cir. 1991). Thus, to justify racial or gender preferences in the context of the auction law, it is unnecessary to demonstrate that the Federal government or the FCC has engaged in discriminatory practices in the allocation of licenses.

295. No commenter has alleged such governmental discrimination. Instead, the sorts of barriers to entry cited by commenters include discrimination in commercial lending practices that thwart entry by minorities and women into capital intensive industries such as communications and discriminatory contracting practices by communications companies against minority firms providing equipment and services in the telecommunications industry. The study submitted by the Minority Business Enterprise Legal Defense Fund indicates, moreover, that minority firms are willing and qualified to provide these services, but that discriminatory practices have hindered their opportunities for meaningful participation in the communications industry.

296. The *Metro* intermediate scrutiny standard also requires a determination that the remedial scheme is "substantially related" to the important governmental objective. For this purpose, the Commission must ensure that minority and gender-based preferences are not over-inclusive and are narrowly tailored to fulfill the statutory objec-

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[224] Comments of Cook Inlet at 15.
[225] Reply comments of UCC at 8.
[226] *See* comments of George E. Murray at 7.
[227] Comments of Cook Inlet at 11-15, *citing* H.R. Conf. Rep. No. 765, 97th Cong., 2d Sess. 43 (1982), 128 Cong. Rec. H8954 (daily ed. December 6, 1982), 131 Cong. Rec. H4981-83 (daily ed. June 28, 1985); *see also* comments of American Wireless at 13-15.
[228] Comments of MBELDEF at 2, 60 and Appendix (Minority Business Legal Defense and Education Fund Report to the U.S. Congress, Discrimination Practices in the Telecommunications Industry (1993)).
[229] Comments of CalCell at 23 n.36.
[230] *See* comments of AWRT at 7.
[231] *See id.* at 5-7, comments of Call-Her at 4-8, and Palmer at 5 (Reply).
[232] Comments of Call-Her at 4-5.
[233] *See* comments of Cook Inlet at 13, *citing Metro*, 497 U.S. at 572.

tive of ensuring economic opportunity for women and minorities. Several commenters maintain that the Commission can satisfy this standard by adopting eligibility rules that would ensure that only legitimate minority-owned firms could obtain the preferences and by adopting a waiver rule by which any set-aside spectrum blocks are released to general bidding if no qualified minorities apply to bid for them.[234] In the alternative, Cook Inlet recommends that if the Commission has constitutional concerns, it should limit preferences to firms that are socially or economically disadvantaged, according to definitional standards set forth in rules for the SBA's "section 8(a)" program.[235] Some commenters, such as Iowa Network, contend that set-asides for minority or female-owned businesses would be overinclusive if they were available to all such businesses regardless of their capital resources. Iowa Network argues in this regard that it would not serve the justifying purpose of promoting economic opportunity for the disadvantaged to confer preferential treatment on those who are already successful.[236] Similarly, BellSouth argues there is no evidence publicly-held companies controlled by females and minorities have suffered lack of economic opportunity and they should not be eligible for preferences.[237]

297. As discussed above in Section VI.E., we have adopted strict eligibility rules to ensure that only legitimate minority-owned and women-owned firms are eligible for preferences, and that such preferences are not over-inclusive and are narrowly tailored. For example, as suggested by some commenters, minority and women-owned entities must be owned and controlled by United States citizens since the record contains no evidence of discriminatory entry barriers for aliens. If, in the future, we decide that race or gender-based preferences are necessary, we shall determine then whether additional tailoring mechanisms should be adopted, such as those proposed by commenters.

VII. CONCLUSION, PROCEDURAL MATTERS AND ORDERING CLAUSES

298. As we stated in the Notice, the Commission is entering new and uncharted territory in this proceeding. The Commission is poised to unleash great potential to stimulate economic growth and create thousands of jobs for Americans by awarding thousands of new licenses. We believe that the decisions we have made in this Second Report and Order will significantly improve the efficiency of our licensing processes. We believe that these decisions promote the public policy objectives set forth by Congress, and that they will serve the Commission's goals of promoting economic growth and enhancing access to telecommunications service offerings for consumers, producers, and new entrants. Our competitive bidding system is designed to award licenses expeditiously and in a way that will encourage efficient spectrum use and promote competition for service provision. Finally, we believe that the menu of preferences we have adopted for designated entities will satisfy Congress's objective of ensuring diversity in the ownership and management of telecommunications facilities.

A. Final Regulatory Flexibility Analysis

299. Pursuant to the Regulatory Flexibility Act of 1980, an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the Notice of Proposed Rule Making in PP Docket No. 93-253. Written comments on the IRFA were requested. The Commission's final analysis is as follows:

300. *Need for and purpose of the action.* This rulemaking proceeding was initiated to implement Section 309(j) of the Communications Act, as amended. The rules adopted herein will carry out Congress's intent to establish a system of competitive bidding for choosing from among mutually exclusive applications for initial licenses to use the electromagnetic spectrum principally for the transmission or reception of communications signals to or from subscribers for compensation. The rules adopted herein also will carry out Congress's intent to ensure that small businesses, rural telephone companies, and businesses owned by women and minorities are afforded an opportunity to participate in the provision of spectrum-based services.

301. *Issues raised in response to the IRFA.* The IRFA noted that the proposals under consideration in the NPRM included the possibility of new reporting and recordkeeping requirements for a number of small business entities. No commenters responded specifically to the issues raised in the IRFA. We have made some modifications to the proposed requirements as appropriate.

302. *Significant alternatives considered and rejected.* All significant alternatives have been addressed in the Second Report and Order.

B. Ordering Clauses

303. Accordingly, IT IS ORDERED that Part 1 of the Commission's Rules is amended as set forth in the attached Appendix B.

304. IT IS FURTHER ORDERED that the rules adopted herein WILL BECOME EFFECTIVE 30 days after publication in the Federal Register.[238] This action is taken pursuant to Sections 4(i), 303(r) and 309(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r) and 309(j).

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

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[234] *See, e.g.*, comments of Cook Inlet at 18-19, American Wireless at 18, and NAMTEC at 13.

[235] Comments of Cook Inlet at 39-40.

[236] *See* reply comments of Iowa Network at 8.

[237] *See* comments of BellSouth at 29, n.47.

[238] The Commission may conclude in subsequent Reports and Orders in this docket that specified procedural rules applicable to particular services should become effective upon publication in the Federal Register.

APPENDIX A

COMMENTS AND REPLY COMMENTS FILED IN PP DOCKET NO. 93-253

Comments

Advanced Mobilcomm Technologies, Inc., and Digital Spread Spectrum Technologies, Inc.

James Aidala

Oye Ajayi-Obe

Alcatel Network Systems, Inc. (Alcatel)

AllCity Paging, Inc. (AllCity)

Alliance for Fairness and Viable Opportunity (Alliance for Fairness)

Alliance of Rural Area Telephone & Cellular Service Providers (ARAT)

Alliance Telecom, Inc.

Alpine Electronics and Communication (Alpine)

American Automobile Association (AAA)

American Mobile Satellite Corp. (AMSC)

American Mobile Telecommunications Association (AMTA)

American Personal Communications (APC)

The American Petroleum Institute (API)

American Wireless Communication Corporation (AWCC or American Wireless)

American Women in Radio and Television, Inc. (AWRT)

Ameritech

AMSC Subsidiary Corporation

Anchorage Telephone Utility (Anchorage)

Charles N. Andreae/Andreae & Associates, Inc.

John G. Andrikopoulos, et al.

Arch Communications Group, Inc. (Arch Communications)

Association for Maximum Service Telecasters & National Association of Broadcasters (MSTV/NAB)

Association of American Railroads (AAR)

Association of America's Public Television Stations (APTS)

Association of Independent Designated Entities (AIDE)

Association of Public-Safety Communications Officials International, Inc. (APCO)

AT&T

Baraff, Koerner, Olender & Hochberg, P.C.

Bechtel & Cole

Bell Atlantic Personal Communications, Inc. (Bell Atlantic)

BellSouth Corp., BellSouth Telecommunications, Inc., BellSouth Cellular Corp., and Mobile Communications Corporation of America (BellSouth)

Jeffrey T. Bergner

Art Boroughs

Van R. Boyette

D.B. Branch

Quentin L. Breen

Dennis C. Brown and Robert H. Schwaninger (Brown and Schwaninger)

Cablevision Industries, Comcast Corp., Cox Cable Communications, and Jones Intercable, Inc.

Calcell Wireless, Inc. (Calcell)

California Microwave, Inc. (California Microwave)

California Public Utilities Commission (CPUC)

Call-Her, L.L.C. (Call-Her)

Capitol Hill Management

Catapult Communications (Catapult)

Cellular Communications, Inc. (CCI)

Cellular Service, Inc. (CSI)

Cellular Settlement Groups

Cellular Telecommunications Industry Association (CTIA)

Cencall Communications Corp. (Cencall)

Century Communications Corp. (Century)

CFW Communications Corp., Denver and Ephrata Tel. and Tel. Co., and Lexington Tel. Co.

Chase Communications Corp. (Chase)

The Chase McNulty Group, Inc. (Chase McNulty)

Chickasaw Telephone Company (Chickasaw)

Citizens Utility Company (Citizens)

Coalition for Equity in Licensing

Cole, Raywid & Braverman

Wendy C. Coleman d/b/a WCC Cellular (WCC Cellular)

Comcast Corporation (Comcast)

Comsat Corporation (Comsat)

ComTech Associates, Inc. (Comtech)

Converging Industries

Cook Inlet Region, Inc. (Cook Inlet)

Corporate Technology Partners (CTP)

Council of 100

Cox Enterprises, Inc. (Cox)

Thomas Crema

Data Link Communications (Data Link)

Devsha Corporation

Dial Page, Inc.

Steven L. Dickerson

Abby Dilley

Diversified Cellular Communications (Diversified)

Domestic Automation Company (Domestic Automation)

Laura G. Dooley

John Dudinsky

Mark H. Duesenberg

John R. Duesenberg

Duncan, Weinberg, Miller & Pembroke, P.C.

Economics and Technology, Inc.

FiberSouth, Inc. (FiberSouth)

First Cellular of Maryland

Firstcom, Inc.

Fisher, Wayland, Cooper and Leader (Fisher Wayland)

David F. Gencarelli, Esq.

Janet B. Gencarelli

General Communications, Inc. (GCI or General Communications)

GEOTEK Industries, Inc. (GEOTEK)

Debra Gervasini

Martin Charles Gleyier

GTE Services Corp. (GTE)

GVNW, Inc./Management (GVNW)

John G. Heard

Hughes Communications Galaxy, Inc. & DirecTv, Inc. (DirecTv)

Hughes Transportation Management Systems (Hughes)

Independent Cellular Consultants

Independent Cellular Network, Inc.

Industrial Telecommunications Association, Inc.

Intelligent Vehicle-Highway Society of America

Interdigital Communications Corporation (Interdigital)

Iowa Network Services, Inc. (Iowa Network)

IVHS America

JAJ Cellular

Thomas J. Jasien

JBS & Associates/Shrader Real Estate

JMP Telecom Systems, Inc.

Andrea J. Johnson

Edward M. Johnson

E.F. Johnson Company

Jeff Johnston

Clair Joyce

Abraham Kye, et al.

Ward Leber & Eroca Daniel

Michael Lewis

Liberty Cellular, Inc. d/b/a Kansas Cellular (Liberty Cellular)

Lightcom International, Inc. (Lightcom)

Daniel R. Lindemann

Loral Qualcomm Satellite Services, Inc. (Loral)

Robert Lutz, et al.

Walter Lowman

LuxCel Group, Inc. (LuxCel)

John J. Mandler

McCaw Cellular Communications, Inc. (McCaw)

MCI Telecommunications Corporation (MCI)

MEBTEL, Inc.

Mercury Communications, L.C. (Mercury)

Millin Publications, Inc. (Millin)

Minnesota Equal Access Network Services, Inc. (Minnesota Equal Access)

Minority Business Enterprise Legal Defense and Education Fund, Inc. (MBELDEF)

Minority PCS Coalition (Transworld Telecommunications Inc., Progressive Communications, Inc., Carl and Gail Davis and John Washington)

Motorola, Inc. (Motorola)

Motorola Satellite Communications, Inc. (Motorola Satcom)

George E. Murray

MW TV, Inc.

Law Offices of Richard S. Myers (Richard S. Myers)

National Association of Black-Owned Broadcasters, Inc. (NABOB)

National Association of Business and Educational Radio, Inc. (NABER)

National Association of Minority Telecommunications Executives and Companies (NAMTEC)

National Rural Telecom Association (NRTA)

National Telecommunications and Information Administration of the U.S. Department of Commerce (NTIA)

National Telephone Cooperative Association (NTCA)

Nextel Communications, Inc. (Nextel)

NYNEX Corporation (NYNEX)

M. Kathleen O Conner

Organization for the Protection and Advancement of Small

Telephone Companies (OPASTCO)

Pacific Bell and Nevada Bell (PacBell)

Pacific Telecom Cellular, Inc. (Pacific Telecom Cellular)

PacTel Corporation (PacTel)

PacTel Paging and MidContinent Media (Joint Comments) (PacTel Paging)

PageMart, Inc. (PageMart)

Paging Network, Inc. (PageNet)

Palmer Communications, Inc. (Palmer)

Michael Pernecke

Raegene Pernecke

Personal Communications Network Services of New York

Jeffrey Peterson

Phase One Communications, Inc. (Phase One)

David Pines

PMN, Inc. (PMN)

PNC Cellular, Inc.

Point Communications Company (Point)

Primosphere Limited Partnership (Primosphere)

Quick Call Group (Quick Call)

Radio Telecom and Technology, Inc. (RTT)

RAM Mobile Data USA Limited Partnership (RAM)

RAY Communications, Inc.

Michael R. Rickman

Roamer One, Inc. (Roamer One)

Rochester Telephone Corp.

Rocky Mountain Telecommunications Association and Western Rural Telephone Association

Rural Cellular Association

Rural Cellular Corp.

Rural Electrification Administration, U.S. Department of Agriculture (REA)

Rural Telephone Company

Thomas Salmon

Santarelli, Smith & Carroccio

Michael Sauls

Securicor PMR Systems, Ltd. (Securicor)

Stephan C. Sloan

Small Business PCS Association

Small RSA Operators

Small Telephone Companies of Louisiana

Laquita Smallwood

Southwestern Bell Corporation (Southwestern Bell)

Sprint Corporation (Sprint)

Henry J. Staudinger

James F. Stern

Arlene F. Strege

Suite 12 Group

Systems Engineering, Inc.

Taxpayers Assets Project

Telephone and Data Systems, Inc. (TDS)

Telephone Association of Michigan (TAM)

Telephone Electronics Corp. (Telephone Electronics)

Telepoint Personal Communications, Inc (Telepoint).

The Telmarc Group and Telmarc Telecommunications, Inc. (Telmarc)

Telocator -- The Personal Communications Industry Association (Telocator)

Thumb Cellular Limited Partnership (Thumb)

Time Warner Telecommunications (Time Warner)

Tri-State Radio Company (Tri-State)

TRW, Inc. (TRW)

Unique Communications Concepts (Unique)

United Native American Telecommunications, Inc.

U.S. Intelco Networks, Inc.

U.S. Small Business Administration -- Chief Counsel for Advocacy (SBA)

U.S. Small Business Administration -- Associate Administrator for Procurement Assistance

U.S. Telephone Association (USTA)

Utilities Telecommunications Council (UTC)

Valley Management, Inc.

L. Brennan Van Dyke

Vanguard Cellular Systems, Inc. (Vanguard)

Richard L. Vega Group (Vega)

Venus Wireless, Inc. (Venus)

Leslie R. Walls

Western Wireless, Inc.

Windsong Communications, Inc. (Windsong)

Wireless Cable Association International, Inc.

Wireless Services Corporation (Wireless)

Wisconsin Wireless Communications Corporation (Wisconsin Wireless)

Ann Bradshaw Woods

William E. Zimsky

Reply Comments

Marlene Abe

Robert B. Adams (Commissioner, Office of General Services, State of New York)

Alcatel Network Systems, Inc.

AllCity Paging, Inc.

American Paging, Inc.

American Personal Communications

American Wireless Communication Corporation, Inc.

American 52 East

AMTECH Corporation (AMTECH)

John G. Andrikopoulos, Bent Elbow Corporation, et al.

Apex Welding, Inc. (Apex)

Arch Communications, Inc.

The Association of American Railroads

Association of Independent Designated Entities

AT&T

Bob Atkison

Bell Atlantic Personal Communications, Inc.

BellSouth Corporation

John L. Bergin

Kenneth B. Blair, Robert B. Blow, et al.

Town of Bridgewater, MA

Hayo Broeis

Cable & Wireless, Inc.
R. Jeffrey Cale
Robert R. Cale
Call-Her, L.L.C.
Capp Systems (IVDS) Inc.
Cellular Service, Inc.
Cellular Settlement Groups (Joint Comments)
Cellular Telecommunications Industry Association
CFW Communications Co., Denver and Ephrata Tel. and Tel. Co., and Lexington Tel. Co.
The Chillicothe Telephone Company
Citizens Utility Company
Edward Cline
Coalition for Equity in Licensing
Columbia Cellular Corporation
Comcast Corporation
Community Service Telephone Company
Cook Inlet Region, Inc.
DeKalb Telephone Cooperative, Inc.
Dell Telephone Cooperative, Inc.
Vernon L. Dennis
Dial Page, Inc.
Diversified Cellular Communications, Inc.
Michael J. Dowling
Ellipsat Corporation (Ellipsat)
Enakee Partnership
Marie S. Essex
Clemente S. Estrera, Jr.
Euro-Tech Enterprises, Inc.
Federal IVD
Fisher, Wayland, Cooper and Leader
Four Color Imports, Ltd. (Four Color)
Orren W. Fricke
Marguerite Geckler
General Communications, Inc. (GCI)
Genesis Investments
George Gower
GTE Service Corp.
Gulf Telephone Company
Mark D. Hafermann
Timothy Hartley
Dr. Renee Harwick
John G. Herd
Nathan D. Hodges
Troy Hodges
Home Box Office (HBO)
Adrian Hubbell
Hughes Communications Galaxy, Inc. and DirecTv, Inc.
Hughes Transportation Management Systems
Icon Communications Services
Independent Cellular Consultants (ICC)
Industrial Containers, Inc.
Industrial Telecommunications Association, Inc.
The Institute for Public Representation, Georgetown University Law Center, and Office of Communication of the United Church of Christ (Joint Comments) (UCC)
The Interagency Group
Interior Telephone Co.
International Small Satellite Organization
Iowa Network Services, Inc.
Cecil W. King
Kingswood Associates
Bernd K. L. Klopfer
J. Koyasako
Kuruvilla M. Kurien
Mani A. Kurien
Sosa Kurien
J. Bruce Llwellyn
Local Area Telecommunications, Inc.
Long Lines, Ltd.
Loral Qualcomm Satellite Services, Inc.
Manti Telephone Company
McCaw Cellular Communications, Inc.
McElroy Electronics Corporation
MCI Telecommunications Corporation
Metricom, Inc.
Marshall L. Morgan
William G. Morgan
Motorola, Inc.
Motorola Satellite Communications, Inc.
Mountain Home Publishing
Mukluk Telephone Co.
George E. Murray
National Association of Business and Educational Radio, Inc.
National Cable Television Association, Inc.
National Public Radio
National Rural Telephone Association
National Telephone Cooperative Association
Nextel Communications, Inc.
North American Interactive Partners I-IV
NYNEX Corporation
J.W. Oakes
Omnipoint Communications, Inc. (Omnipoint)

Organization for the Protection and Advancement of Small Telephone Companies (OPASTCO)
Joseph A. Orlando
P & P Investments
Pacific Bell and Nevada Bell
Pacific Traders Group
PacTel Corporation
PacTel Paging and Midcontinent Media
PageMart, Inc.
Paging Network, Inc.
Palmer Communications, Inc.
PAN, Inc.
William W. Perry
Personal Network Services Corporation
Sidney E. Pinkston
Emma M. Pinkston
Pinpoint Communications, Inc.
PN Cellular, Inc. and its affiliates
PNM, Inc.
Price Communications Cellular
Denis A. Radefeld
Radiofone, Inc.
RAM Mobile Data USA Limited Partnership
Recourse Spectrum
Roamer One, Inc.
Roberts County Telephone Cooperative Association
Rochester Telephone Corporation
Rural Cellular Association
Ryberg Properties
Saco River Telegraph and Telephone Company
James J. Schneider
H.M. Schwartz
John Sheppard
Crystal Smith
Southwestern Bell
Spacedrive, Inc.
Sprint Corporation
David G. Stanley
Harry Stevens, Jr.
Sonia Stuart
Suite 12 Group
David F. Swain & Co.
Telephone and Data Systems, Inc.
Telephone Electronics Corporation
Telocator -- The Personal Communications Industry Association
William W. Thorton
Randy A. Toyoshima
TRW, Inc. (TRW)
Unique Communications Concepts
U.S. Intelco Networks, Inc.
United States Telephone Association
US West
The University of Texas System
Utilities Telecommunications Council
WCC Cellular
Bob Weber
Greg Winters
Wunschel Law Firm

APPENDIX B

FINAL RULES

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

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

AUTHORITY: Secs. 1, 4(i), 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. §§ 151, 154, and 303, unless otherwise noted.

2. Part 1 is amended by adding a new subpart (Q) to read as follows:

Subpart Q - Competitive Bidding Proceedings

AUTHORITY: 47 U.S.C. 309(j).

GENERAL PROCEDURES

§ 1.2101 Purpose

The provisions of this subpart implement Section 309(j) of the Communications Act of 1934, as added by the Omnibus Budget Reconciliation Act of 1993 (P.L. 103-66), authorizing the Commission to employ competitive bidding procedures to choose from among two or more mutually exclusive applications for certain initial licenses.

§ 1.2102 Eligibility of Applications for Competitive Bidding

(a) Mutually exclusive initial applications in the following services or classes of services are subject to competitive bidding:

(1) Interactive Video Data Service (*see* 47 C.F.R. Part 95, Subpart F);

(2) Marine Public Coast Stations (*see* 47 C.F.R. Part 80, Subpart J);

(3) Multipoint Distribution Service and Multichannel Multipoint Distribution Service (*see* 47 C.F.R. Part 21, Subpart K). This subsection does not apply to applications in these services that were filed prior to July 26, 1993;

(4) Exclusive Private Carrier Paging above 900 MHz (*see* 47 C.F.R. Part 90, Subpart P and the Private Carrier Paging Exclusivity Report and Order, 8 FCC Rcd 8318 (1993));

(5) Public Mobile Services (*see* 47 C.F.R. Part 22), except in the 800 MHz Air-Ground Radiotelephone Service, and in the Rural Radio Service. This subsection does not apply to certain applications in the cellular radio service that were filed prior to July 26, 1993;

(6) Specialized Mobile Radio Service (SMR) (*see* 47 C.F.R. Part 90, Subpart S) including finder's preference requests for frequencies allocated to the SMR service (*see* 47 C.F.R. Section 90.173); and

(7) Personal Communications Services (PCS) (*see* 47 C.F.R. Part 24).

NOTE: To determine the rules that apply to competitive bidding in the foregoing services, specific service rules should also be consulted.

(b) The following types of license applications are not subject to competitive bidding procedures:

(1) Applications for renewal of licenses;

(2) Applications for modification of license; provided, however, that the Commission may determine in particular instances that applications for modification that are mutually exclusive with other applications should be subject to competitive bidding;

(3) Applications for subsidiary communications services. A "subsidiary communications service" is a class of service where the signal for that service is indivisible from that of the main channel signal and that main channel signal is exempt from competitive bidding under other provisions of these rules. *See, e.g.*, § 1.2102(c) (exempting broadcast services). Examples of such subsidiary communications services are those transmitted on subcarriers within the FM baseband signal (*see* 47 C.F.R. § 73.295), and signals transmitted within the Vertical Blanking Interval of a broadcast television signal; and

(4) Applications for frequencies used as an intermediate link or links in the provision of a continuous, end-to-end service where no service is provided directly to subscribers over the frequencies. Examples of such intermediate links are (i) point-to-point microwave facilities used to connect a cellular radio telephone base station with a cellular radio telephone mobile telephone switching office and (ii) point-to-point microwave facilities used as part of the service offering in the provision of telephone exchange or interexchange service.

(c) Applications in the following services or classes of services are not subject to competitive bidding:

(1) Alaska-Private Fixed Stations (*see* 47 C.F.R. Part 80, Subpart O);

(2) Broadcast radio (AM and FM) and broadcast television (VHF, UHF, LPTV) under 47 C.F.R. Part 73;

(3) Broadcast Auxiliary and Cable Television Relay Services (*see* 47 C.F.R. Part 74, Subparts D, E, F, G, H and L and Part 78, Subpart B);

(4) Instructional Television Fixed Service (*see* 47 C.F.R. Part 74, Subpart I);

(5) Maritime Support Stations (*see* 47 C.F.R. Part 80, Subpart N);

(6) Marine Operational Fixed Stations (*see* 47 C.F.R. Part 80, Subpart L);

(7) Marine Radiodetermination Stations (*see* 47 C.F.R. Part 80, Subpart M);

(8) Personal Radio Services (*see* 47 C.F.R. Part 95), except applications filed after July 26, 1993, in the Interactive Video Data Service (*see* 47 C.F.R. Part 95, Subpart F);

(9) Public Safety, Industrial/Land Transportation, General and Business Radio categories above 800 MHz, including finder's preference requests for frequencies not allocated to the SMR service (*see* 47 C.F.R. Section 90.173), and including, until further notice of the Commission, the Automated Vehicle Monitoring Service (*see* 47 C.F.R. § 90.239);

(10) Private Land Mobile Radio Services between 470-512 MHz (*see* 47 C.F.R. Part 90, Subparts B-F) including finder's preference requests, *see* 47 C.F.R. Section 90.173;

(11) Private Land Mobile Radio Services below 470 MHz (*see* 47 C.F.R. Part 90, Subparts B-F) except in the 220 MHz band (*see* 47 C.F.R. Part 90, Subpart T), including finder's preference requests (*see* 47 C.F.R. Section 90.173); and

(12) Private Operational Fixed Services (*see* 47 C.F.R. Part 94).

§ 1.2103 Competitive Bidding Design Options

(a) The Commission will select the competitive bidding design(s) to be used in auctioning particular licenses or classes of licenses on a service-specific basis. The Commission will choose from one or more of the following types of auction designs for services or classes of services subject to competitive bidding:

(1) Single round sealed bid auctions (either sequential or simultaneous)

(2) Sequential oral auctions

(3) Simultaneous multiple round auctions

(b) The Commission may use combinatorial bidding, which would allow bidders to submit all or nothing bids on combinations of licenses, in addition to bids on individual licenses. The Commission may require that to be declared the high bid, a combinatorial bid must exceed the sum of the individual bids by a specified amount. Combinatorial bidding may be used with any type of auction.

(c) The Commission may use single combined auctions, which combine bidding for two or more substitutable licenses and award licenses to the highest bidders until the available licenses are exhausted. This technique may be used in conjunction with any type of auction.

§ 1.2104 Competitive Bidding Mechanisms

(a) *Sequencing.* The Commission will establish the sequence in which multiple licenses will be auctioned.

(b) *Grouping.* In the event the Commission uses either a simultaneous multiple round competitive bidding design or combinatorial bidding, the Commission will determine which licenses will be auctioned simultaneously or in combination.

(c) *Reservation Price.* The Commission may establish a reservation price, either disclosed or undisclosed, below which a license subject to auction will not be awarded.

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

(e) *Stopping Rules.* The Commission may establish stopping rules before or during multiple round auctions in order to terminate the auctions within a reasonable time.

(f) *Activity Rules.* The Commission may establish activity rules which require a minimum amount of bidding activity.

(g) *Withdrawal, Default and Disqualification Penalties.* As specified below, when the Commission conducts a simultaneous multiple round auction pursuant to § 1.2103, the Commission will impose penalties on bidders who withdraw high bids during the course of an auction, or who default on payments due after an auction closes or who are disqualified.

(1) Bid withdrawal prior to close of auction. A bidder who withdraws a high bid during the course of an auction will be subject to a penalty equal to the difference between the amount bid and the amount of the winning bid the next time the license is offered by the Commission. No withdrawal penalty would be assessed if the subsequent winning bid exceeds the withdrawn bid. This penalty amount will be deducted from any upfront payments or down payments that the withdrawing bidder has deposited with the Commission.

(2) Default or disqualification after close of auction. If a high bidder defaults or is disqualified after the close of such an auction, the defaulting bidder will be subject to the penalty in subsection (1) plus an additional penalty equal to three (3) percent of the subsequent winning bid. If the subsequent winning bid exceeds the defaulting bidder's bid amount, the 3 percent penalty will be calculated based on the defaulting bidder's bid amount. These amounts will be deducted from any upfront payments or down payments that the defaulting or disqualified bidder has deposited with the Commission.

When the Commission conducts single round sealed bid auctions or sequential oral auctions, the Commission may modify the penalties to be paid in the event of bid withdrawal, default or disqualification; provided, however, that such penalties shall not exceed the penalties specified above.

(h) *Bidder identification during auctions.* During any auction, the Commission may identify bidders and the bids only by bid numbers.

(i) The Commission may delay, suspend, or cancel an auction in the event of a natural disaster, technical obstacle, evidence of security breach, unlawful bidding activity, administrative necessity, or for any other reason that affects the fair and efficient conduct of the competitive bidding. The Commission also has the authority, at its sole discretion, to resume the competitive bidding starting from the beginning of the current or some previous round or cancel the competitive bidding in its entirety.

§ 1.2105 Bidding Application and Certification Procedures; "Prohibition of Collusion

(a) *Submission of Short Form Application (FCC Form 175).* In order to be eligible to bid, an applicant must timely submit a short-form application (FCC Form 175), together with any appropriate filing fee set forth by Public Notice. Unless otherwise provided by Public Notice, the Form 175 need not be accompanied by an upfront payment (*see* Section 1.2106 of this (part).

(1) All Form 175s will be due:

(i) on the date(s) specified by Public Notice; or

(ii) in the case of application filing dates which occur automatically by operation of law (*see, e.g.,* 47 C.F.R. Section 22.902), on a date specified by Public Notice after the Commission has reviewed the applications that have been filed on those dates and determined that mutual exclusivity exists.

(2) The Form 175 must contain the following information:

(i) Identification of each license on which the applicant wishes to bid;

(ii) The applicant's name, if the applicant is an individual. If the applicant is a corporation, then the short-form application will require the name and address of the corporate office and the name and title of an officer or director. If the applicant is a partnership, then the application will require the name, citizenship and address of all partners, and, if a partner is not a natural person, then the name and title of a responsible person should be included as well. If the applicant is a trust, then the name and address of the trustee will be required. If the applicant is none of the above, then it must identify and describe itself and its principals or other responsible persons;

(iii) The identity of the person(s) authorized to make or withdraw a bid;

(iv) If the applicant applies as a designated entity pursuant to § 1.2110 of these rules, a statement to that effect and a declaration, under penalty of perjury, that the applicant is qualified as a designated entity under § 1.2110 of the Commission's Rules;

(v) Certification that the applicant is legally, technically, financially and otherwise qualified pursuant to Section 308(b) of the Communications Act of 1934, as amended;

(vi) Certification that the applicant is in compliance with the foreign ownership provisions of Section 310 of the Communications Act of 1934, as amended;

(vii) Certification that the applicant is and will, during the pendency of its application(s), remain in compliance with any service-specific qualifications applicable to the licenses on which the applicant intends to bid including, but not limited to, financial qualifications. The Commission may require certification in certain services that the applicant will, following grant of a license, come into compliance with certain service-specific rules, including, but not limited to, ownership eligibility limitations;

(viii) An exhibit, certified as truthful under penalty of perjury, identifying all parties with whom the applicant has entered into partnerships, joint ventures, consortia or other agreements, arrangements or understandings of any kind relating to the licenses being auctioned, including any such agreements relating to the post-auction market structure. All such arrangements must have been entered into prior to the filing of Form 175 and no such arrangements may be entered into after the filing of Form 175 until after the winning bidder has made the required down payment;

(ix) Certification under penalty of perjury that it has not entered and will not enter into any explicit or implicit agreements, arrangements or understandings of any kind with any parties other than those identified pursuant to subsection (viii) regarding the amount of their bids, bidding strategies or the particular licenses on which they will or will not bid;

NOTE: The Commission may also request applicants to submit additional information for informational purposes to aid in its preparation of required reports to Congress.

(b) *Modification and Dismissal of Form 175.*

(1) Any Form 175 that is not signed or otherwise does not contain all of the certifications required pursuant to this section is unacceptable for filing and cannot be corrected subsequent to any applicable filing deadline. The application will be dismissed with prejudice and the upfront payment, if paid, will be returned.

(2) The Commission will provide bidders a limited opportunity to cure defects specified herein (except for failure to sign the application and to make certifications) and to resubmit a corrected application. Form 175 may be amended or modified to make minor changes or correct minor errors in the application (such as typographical errors). The Commission will classify all amendments as major or minor, pursuant to rules applicable to specific services. An application will be considered to be a newly filed application if it is amended by a major amendment and may not be resubmitted after applicable filing deadlines.

(3) Applicants who fail to correct defects in their applications in a timely manner as specified by Public Notice will have their applications dismissed with no opportunity for resubmission.

(c) *Prohibition of Collusion.* After the filing of short-form applications, all bidders are prohibited from cooperating, collaborating, discussing or disclosing in any manner the substance of their bids or bidding strategies with other bidders until after the high bidder makes the required down payment, unless such bidders are members of a bidding consortium or other joint bidding arrangement identified on the bidder's short-form application.

§ 1.2106 Submission of Upfront Payments

(a) The Commission may require applicants for licenses subject to competitive bidding to submit an upfront payment. In that event, the amount of the upfront payment and the procedures for submitting it will be set forth in a Public Notice. No interest will be paid on upfront payments. In auctions for licenses set aside pursuant to § 1.2110(c), the Commission may establish lower upfront payments for eligible designated entities.

(b) Upfront payments must be made either by wire transfer or by cashier's check drawn in U.S. dollars from a financial institution whose deposits are insured by the Federal Deposit Insurance Corporation and must be made payable to the Federal Communications Commission.

(c) If an upfront payment is not in compliance with the Commission's Rules, or if insufficient funds are tendered to consititute a valid upfront payment, the applicant shall have a limited opportunity to correct its submission to bring it up to the minimum valid upfront payment prior to the auction. If the applicant does not submit at least the minimum upfront payment, it will be ineligible to bid, its application will be dismissed and any upfront payment it has made will be returned.

(d) The upfront payment(s) of a bidder will be credited toward any down payment required for licenses on which the bidder is the high bidder.

(e) Notwithstanding the provisions of subsection (d), in the event a penalty is aessed pursuant to § 1.2104 for bid withdrawal or default, upfront payments or down payments on deposit with the Commission will be used to satisfy the bid withdrawal or default penalty before being applied toward any additional payment obligations that the high bidder may have.

§ 1.2107 Submission of Down Payment and Filing of Long-Form Applications

(a) After bidding has ended, the Commission will identify and notify the high bidder and declare the bidding closed.

(b) Within five (5) business days after being notified that it is a high bidder on a particular license(s), a high bidder must submit to the Commission's lockbox bank such additional funds (the "down payment") as are necessary to bring its total deposits (not including upfront payments applied to satisfy penalties) up to twenty (20) percent of its high bid(s). (In single round sealed bid auctions conducted under § 1.2103, however, bidders may be required to submit their down payments with their bids.) This down payment must be made by wire transfer or cashier's check drawn in U.S. dollars from a financial institution whose deposits are insured by the Federal Deposit Insurance Corporation and must be made payable to the Federal Communications Commission. Winning bidders who are qualified designated entities eligible for installment payments under § 1.2110(d) are only required to bring their total deposits up to ten (10) percent of their winning bid(s). Such designated entities must pay the remainder of the twenty (20) percent down payment within five (5) business days of grant of their application. *See* § 1.2110(e)(1) and (2) of this subpart. Down payments will be held by the Commission until the high bidder has been awarded the license and has paid the remaining balance due on the license, in which case it will not be returned, or until the winning bidder is found unqualified to be a licensee or has defaulted, in which case it will be returned, less applicable penalties. No interest will be paid on any down payment.

(c) A high bidder that meets its down payment obligations in a timely manner must, within ten (10) business days after being notified that it is a high bidder, submit an additional application (the "long-form application") pursuant to the rules governing the service in which the applicant is the high bidder (unless it has already submitted such an application, as contemplated by § 1.2105(a)(1)(b). For example, if the applicant is a high bidder for a license in the Interactive Video Data Service (*see* 47 C.F.R. Part 95, Subpart F), the long form application will be submitted on FCC Form 574 in accordance with Section 95.815 of the Rules. Notwithstanding any other provision in Title 47 of the Code of Federal Regulations to the contrary, high bidders need not submit an additional application filing fee with their long-form applications. Notwithstanding any other provision in Title 47 of the Code of Federal Regulations to the contrary, the high bidder's long-form application must be mailed or otherwise delivered to:

Office of the Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554
Attention: Auction Application Processing Section

An applicant that fails to submit the required long-form application as required under this subsection, and fails to establish good cause for any late-filed submission, shall be deemed to have defaulted and will be subject to the penalties set forth in § 1.2104 of the Commission's Rules.

(d) As an exhibit to its long-form application, the applicant must provide a detailed explanation of the terms and conditions and parties involved in any bidding consortia, joint venture, partnership or other agreement or arrangment it had entered into relating to the competitive bidding process prior to the time bidding was completed. Such agreements must have been entered into prior to the filing of short-form applications pursuant to § 1.2105.

§ 1.2108 Procedures for Filing Petitions To Deny Against Long-Form Applications

(a) Where petitions to deny are otherwise provided for under the Act or the Commission's Rules, and unless other service-specific procedures for the filing of such petitions are provided for elsewhere in the Commission's Rules, the procedures in this section shall apply to the filing of petitions to deny the long-form applications of winning bidders.

(b) Within thirty (30) days after the Commission gives public notice that a long-form application has been accepted for filing, petitions to deny that application may be filed. Any such petitions must contain allegations of fact supported by affidavit of a person or persons with personal knowledge thereof.

(c) An applicant may file an opposition to any petition to deny, and the petitioner a reply to such opposition. Allegations of fact or denials thereof must be supported by affidavit of a person or persons with personal knowledge thereof. The times for filing such opposition and replies will be those provided in § 1.45 of these Rules.

(d) If the Commission determines that:

(1) an applicant is qualified and there is no substantial and material issue of fact concerning that determination, it will grant the application.

(2) an applicant is not qualified and that there is no substantial issue of fact concerning that determination, the Commission need not hold an evidentiary hearing and will deny the application.

(3) substantial and material issues of fact require a hearing, it will conduct a hearing. The Commission may permit all or part of the evidence to be submitted in written form and may permit employees other than administrative law judges to preside at the taking of written evidence. Such hearing will be conducted on an expedited basis.

§ 1.2109 License Grant, Denial, Default, and Disqualification

(a) Unless otherwise specified in these rules, auction winners are required to pay the balance of their winning bids in a lump sum within five (5) business days following award of the license. Grant of the license will be conditioned on full and timely payment of the winning bid.

(b) If a winning bidder withdraws its bid after the Commission has declared competitive bidding closed or fails to remit the required down payment within five (5) business

days after the Commission has declared competitive bidding closed, the bidder will be deemed to have defaulted, its application will be dismissed, and it will be liable for the default penalty specified in § 1.2104(g)(2). In such event, the Commission may either re-auction the license to existing or new applicants or offer it to the other highest bidders (in descending order) at their final bids. The down payment obligations set forth in § 1.2107(b) will apply.

(c) A winning bidder who is found unqualified to be a licensee, fails to remit the balance of its winning bid in a timely manner, or defaults or is disqualified for any reason after having made the required down payment, will be deemed to have defaulted and will be liable for the penalty set forth in § 1.2104(g)(2). In such event, the Commission will conduct another auction for the license, affording new parties an opportunity to file applications for the license.

(d) Bidders who are found to have violated the antitrust laws or the Commission's rules in connection with their participation in the competitive bidding process may be subject, in addition to any other applicable sanctions, to forfeiture of their upfront payment, down payment or full bid amount, and may be prohibited from participating in future auctions.

§ 1.2110 Designated Entities

(a) Designated entities are small businesses, businesses owned by members of minority groups and/or women, and rural telephone companies.

(b) Definitions.

(1) Small businesses. Unless otherwise provided in rules governing specific services, a small business is an entity that, together with its affiliates, has no more than a $6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than $2 million in annual profits each year for the previous two years.

(2) Businesses owned by members of minority groups and/or women. A business owned by members of minority groups and/or women is one in which minorities and/or women who are U.S. citizens have at least 50.1 percent equity ownership and 50.1 percent controlling interest in the applicant. For applicants that are limited partnerships, the general partner must be a minority and/or woman who is a U.S. citizen (or an entity 100 percent owned by minorities and/or women who are U.S. citizens) that owns at least 50.1 percent of the partnership equity. The interests of minorities and women are to be calculated on a fully-diluted basis; agreements such as stock options and convertible debentures shall be considered to have a present effect on the power to control an entity and shall be treated as if the rights thereunder already have been fully exercised. However, upon a demonstration that options or conversion rights held by non-controlling principals will not deprive the minority and female principals of a substantial financial stake in the venture or impair their rights to control the designated entity, a designated entity may seek a waiver of the requirement that the equity of the minority and female principals must be calculated on a fully-diluted basis. The term minority includes individuals of African American, Hispanic-surnamed, American Eskimo, Aleut, American Indian and Asian American extraction.

(3) Rural telephone companies. A rural telephone company is an independently owned and operated local exchange carrier with 50,000 access lines or fewer, and serving communities with 10,000 or fewer inhabitants.

(c) The Commission may set aside specific licenses for which only eligible designated entities, as specified by the Commission, may bid.

(d) The Commission may permit small businesses, including small businesses owned by women and minorities and rural telephone companies that qualify as small businesses, that are high bidders for licenses specified by the Commission, to pay the full amount of their high bids in installments over the term of their licenses pursuant to the following:

(1) Unless otherwise specified, each eligible applicant paying for its license(s) on an installment basis must deposit by wire transfer or cashier's check in the manner specified in § 1.2107(b) sufficient additional funds as are necessary to bring its total deposits to ten (10) percent of its winning bid(s) within five (5) business days after the Commission has declared it the winning bidder and closed the bidding. Failure to remit the required payment will make the bidder liable to pay penalties pursuant to § 1.2104(g)(2).

(2) Within five (5) business days of the grant of the license application of a winning bidder eligible for installment payments, the licensee shall pay another ten (10) percent of the high bid, thereby commencing the eligible licensee's installment payment plan. Failure to remit the required payment will make the bidder liable to pay penalties pursuant to § 1.2104(g)(2).

(3) Upon grant of the license, the Commission will notify each eligible licensee of the terms of its installment payment plan. Such plans will:

(i) impose interest based on the rate of U.S. Treasury obligations (with maturities closest to the duration of the license term) at the time of licensing;

(ii) allow installment payments for the full license term;

(iii) begin with interest-only payments for the first two years; and

(iv) amortize principal and interest over the remaining term of the license.

(4) A license granted to an eligible entity that elects installment payments shall be conditioned upon the full and timely performance of the licensee's payment obligations under the installment plan.

(i) If an eligible entity making installment payments is more than ninety (90) days delinquent in any payment, it shall be in default.

(ii) Upon default or in anticipation of default of one or more installment payments, a licensee may request that the

Commission permit a three to six month grace period, during which no installment payments need be made. In considering whether to grant a request for a grace period, the Commission may consider, among other things, the licensee's payment history, including whether the licensee has defaulted before, how far into the license term the default occurs, the reasons for default, whether the licensee has met construction build-out requirements, the licensee's financial condition, and whether the licensee is seeking a buyer under an authorized distress sale policy. If the Commission grants a request for a grace period, or otherwise approves a restructured payment schedule, interest will continue to accrue and will be amortized over the remaining term of the license.

(iii) Following expiration of any grace period without successful resumption of payment or upon denial of a grace period request, or upon default with no such request submitted, the license will automatically cancel and the Commission will initiate debt collection procedures pursuant to Part 1, Subpart O of the Commission's Rules.

(e) The Commission may award bidding credits (*i.e.*, payment discounts) to eligible designated entities.

(1) Competitive bidding rules applicable to individual services will specify the designated entities eligible for bidding credits, the licenses for which bidding credits are available, the amounts of bidding credits and other procedures.

(2) Any bidding credit for rural telephone companies will be available only for licenses in rural telephone company service areas and only if eligible rural telephone companies make an infrastructure build-out commitment beyond any standard performance requirement. The amount of the bidding credit for rural telephone companies will be based on the amount by which eligible applicants agree to expand or accelerate the build-out commitment. If a rural telephone company fails to meet an accelerated or expanded build-out commitment, it must make payment to the Commission within ninety (90) days of a penalty equal to the amount of the bidding credit. Grant of the license will be conditioned upon payment of this penalty if and when it becomes applicable.

(f) The Commission may offer designated entities a combination of the available preferences or additional preferences.

§ 1.2111 Assignment or transfer of control: unjust enrichment

(a) *Reporting requirement.* An applicant seeking approval for a transfer of control or assignment (otherwise permitted under the Commission's Rules) of a license within three years of receiving a new license through a competitive bidding procedure must, together with its application for transfer of control or assignment, file with the Commission a statement indicating that its license was obtained through competitive bidding. Such applicant must also file with the Commission the associated contracts for sale, option agreements, management agreements, or other documents disclosing the total consideration that the applicant would receive in return for the transfer or assignment of its license. This information should include not only a monetary purchase price, but also any future, contingent, in-kind, or other consideration (*e.g.*, management or consulting contracts either with or without an option to purchase; below market financing).

(b) *Unjust enrichment payment: set-asides.* As specified in this subsection, an applicant seeking approval for a transfer of control or assignment (otherwise permitted under the Commission's Rules) of a license acquired by the transferor or assignor pursuant to a set-aside for eligible designated entities under § 1.2110(c) of the Commission's Rules, or who proposes to take any other action relating to ownership or control that will result in loss of status as an eligible designated entity, must seek Commission approval and may be required to make an unjust enrichment payment (Payment) to the Commission by cashier's check or wire transfer before consent will be granted. The Payment will be based upon a schedule that will take account of the term of the license, any applicable construction benchmarks, and the estimated value of the set-aside benefit, which will be calculated as the difference between the amount paid by the designated entity for the license and the value of a comparable non-set-aside license in the free market at the time of the auction. The Commission will establish the amount of the Payment and the burden will be on the applicants to disprove this amount. No Payment will be required if:

(1) the license is transferred or assigned more than five years after its initial issuance; or

(2) the proposed transferee or assignee is an eligible designated entity under § 1.2110(c) of the Commission's Rules, and so certifies.

(c) *Unjust enrichment payment: installment financing.* An applicant seeking approval for a transfer of control or assignment (otherwise permitted under the Commission's Rules) of a license acquired by the transferor or assignor through a competitive bidding procedure utilizing installment financing available to designated entities under § 1.2110(d) of the Rules will be required to pay the full amount of the remaining principal balance as a condition of the license transfer. No payment will be required if the proposed transferee or assignee assumes the installment payment obligations of the transferor or assignor, and if the proposed transferee or assignee is itself qualified to obtain installment financing under § 1.2110(d) of the Rules, and so certifies.

(d) *Unjust enrichment payment: bidding credits.* An applicant seeking approval for a transfer of control or assignment (otherwise permitted under the Commission's Rules) of a license acquired by the transferor or assignor through a competitive bidding procedure utilitizing bidding credits available to eligible designated entities under § 1.2110(e) of the Rules, or who proposes to take any other action relating to ownership or control that will result in loss of status as an eligible designated entity, must seek Commission approval and will be required to make an unjust enrich-

ment payment (Payment) to the government by wire transfer or cashier's check before consent will be granted. The Payment will be the sum of the amount of the bidding credit plus interest at the rate applicable for installment financing in effect at the time the license was awarded. *See* § 1.2110(e). No payment will be required if:

(1) the proposed transferee or assignee is an eligible designated entity under § 1.2110(e) of the Commission's Rules, and so certifies; or

(2) the proposed transferor or assignor is a rural telephone company as defined in § 1.2110(b)(3) of the Rules, and the proposed transferee or assignee is also a rural telephone company and agrees to meet the same construction requirements as the transferor or assignor.