FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 1, 22, 24, 27, and 90

[WT Docket Nos. 02–381, 01–14, and 03–202; FCC 04–166]

Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies To Provide Spectrum-Based Services

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission (''Commission'') modifies certain regulations and policies to facilitate the deployment of wireless services in rural areas. The Commission establishes the definition for ''rural areas'' in the context of specific policies or regulations governing wireless communications services. The Commission also evaluates its policies governing the licensing of spectrum, both with respect to initial geographic area licensing as well as subsequent re-licensing. The Commission also takes steps to facilitate increased access to capital for rural licensees, such as the elimination of the remaining components of the cellular cross-interest rule, as well as the revision of Commission policies governing security interests in wireless licenses. Further, the Commission takes several actions designed to increase licensee flexibility and permit more cost-effective coverage of rural areas; for example, the Commission increases the permissible power levels for certain wireless services that are located in rural areas, permits certain geographic-area licensees to provide substantial service as a means of complying with their construction requirements, and clarifies its policies governing infrastructure sharing arrangements.

DATES: Effective February 14, 2005, except for § 1.919(c) which contains an information collection requirement under the Paperwork Reduction Act that has not been approved by the Office of Management and Budget (OMB). The Commission will publish a document in the **Federal Register** announcing the effective date of § 1.919(c).

FOR FURTHER INFORMATION CONTACT: Allen A. Barna, Wireless Telecommunications Bureau, at (202) 418–0620.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order portion (*Report and Order*) of the Commission's *Report and Order and Further Notice of Proposed Rulemaking,* FCC 04–166, in WT Docket Nos. 02–381, 01–14, and 03–202, adopted July 8, 2004, and released September 27, 2004. Contemporaneous with this document, the Commission publishes a Further Notice of Proposed Rulemaking (*FNPRM*) (summarized elsewhere in this publication). The full text of this document is available for public inspection during regular business hours at the FCC Reference Information Center, 445 12th St., SW., Room CY-A257, Washington, DC 20554. The complete text may be purchased from the Commission's duplicating contractor: Best Copy & Printing, Inc., 445 12th Street, SW, Room CY-B402, Washington, DC 20554, telephone 800–378–3160, facsimile 202–488–5563, or via e-mail at *fcc@bcpiweb.com.*

Paperwork Reduction Act

The *Report and Order* contains modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104–13. They will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the modified information collection requirements contained in this proceeding. Public and agency comments are due on or before February 14, 2005. Comments should address: (a) Whether these modified collections of information are necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology. Below, the Commission continues to assess the additional information collection burden that changes to its regulations and policies might have on small entities including businesses with fewer than 25 employees.

Synopsis of the Report and Order

I. Introduction

1. In this *Report and Order,* the Commission adopts several measures intended to increase the ability of wireless service providers to use licensed spectrum resources flexibly and efficiently to offer a variety of services in a cost-effective manner. By our actions today, we take steps to promote access to spectrum and facilitate capital formation for entities seeking to serve rural areas or improve service in rural areas. This *Report and Order* takes action affecting the provision of commercial and private terrestrial wireless services. While the policies and regulations discussed herein are targeted to promote wireless services in rural areas, we note that certain of our actions will likely have broader application to non-rural areas as well. Accordingly, we expect these decisions will facilitate the deployment of new and advanced wireless services, including broadband services, and thereby foster much-needed economic development. The actions we adopt in our *Report and Order* are derived from those proposed in both the Notice of Inquiry (*Rural NOI*), 68 FR 723 (January 7, 2003), and the *Rural NPRM,* 68 FR 64050 (November 12, 2003).

2. In this *Report and Order,* we modify certain regulations and policies in order to facilitate the deployment of wireless services in rural areas. Specifically, we take the following actions. As an initial matter, we examine the various definitions that are used to describe ''rural areas'' and establish the presumption that, on a going-forward basis, and unless otherwise specified in the context of specific policies or regulations governing wireless communications services, counties with a population density of 100 persons per square mile or less constitute ''rural areas'' for purposes of our wireless spectrum policies.

3. Second, we take a close look at some of our policies affecting access to spectrum and the provision of service in rural areas. In particular, we consider our policies governing the licensing of spectrum, both with respect to initial licensing through the competitive bidding process as well as subsequent re-licensing after an authorization is returned to the Commission. We affirm that we will continue to establish licensing areas on a service-by-service (or band-by-band) basis as appropriate, based upon the flexibility that such an approach provides and our past experience in determining the initial size of service areas. We also reaffirm that when developing rules for licensing individual services, we will consider using smaller service areas in some spectrum blocks in order to encourage deployment in rural areas for the service in question.

4. Third, we take steps to facilitate increased access to capital for rural licensees. We eliminate the remaining components of the cellular cross-interest

rule that currently apply only in rural service areas and transition to case-by-case review for cellular transactions, while closely examining those that present a significant likelihood of substantial competitive harm in a market. We also revise our policies governing security interests in wireless licenses and permit licensees, at their option, to grant such interests to the Department of Agriculture's Rural Utilities Service (RUS), subject to the Commission's prior approval of any transfer of control.

5. Fourth, we take several actions to increase licensee flexibility and permit more cost-effective coverage of rural areas. We amend our regulations to increase permissible power levels for base stations in certain wireless services that are located in rural areas or that provide coverage to otherwise unserved areas. By this action, we anticipate that coverage of such areas will be more economical, as licensees may provide increased coverage of rural areas using fewer base stations and less associated infrastructure. We also amend our regulations to permit certain geographic-area licensees to provide substantial service as a means of complying with their construction requirements, thus countering existing disincentives to build out less densely populated areas. Finally, we clarify our policies governing infrastructure sharing and discuss the various types of infrastructure arrangements that parties generally may enter into without the need for Commission review.

II. Background

6. One of the Commission's primary statutory obligations, as well as one of its principal public policy objectives, is to facilitate the widespread deployment of facilities-based communications services to all Americans, including those doing business in, residing in, or visiting rural areas. In December 2002, the Commission released a *Rural NOI* that sought comment on the effectiveness of its existing regulatory tools in promoting service to rural areas and asked how we could modify our policies to further encourage the provision of wireless services in rural areas. In a follow-up *Rural NPRM*, released in October 2003, the Commission sought to build upon the record developed in response to the *Rural NOI* and sought comment regarding a variety of proposals to eliminate unnecessary regulatory barriers and encourage the deployment of spectrum-based services in rural areas. The *Rural NPRM* focused on measures that would increase flexibility, reduce regulatory costs of providing service to rural areas, and promote access to both spectrum and capital resources for entities seeking to provide wireless services in rural areas. Among other issues, the *Rural NPRM* sought comment on the following policies and proposals: (1) Determining an appropriate definition for ''rural area'' for purposes of implementing Commission policies; (2) promoting access to ''unused'' spectrum; (3) extending a ''substantial service'' construction option to all geographic-area licensees; (4) determining whether geographic-area licensees should satisfy additional construction requirements after their initial license term; (5) increasing power limits in rural areas for licensed services; (6) evaluating the appropriate initial size of licensing areas for geographic-area licenses; (7) fostering our partnership with RUS and determining whether additional measures should be taken to complement the RUS loan programs; (8) considering whether to modify long-held restrictive policies on security interests in licenses by permitting licensees to offer RUS security interests in their licenses; (9) considering modification or elimination of the cellular cross-interest rule in Rural Service Areas (RSAs); (10) clarifying our policies with respect to infrastructure sharing; and (11) updating and amending our rules governing the Rural Radiotelephone Service (RRS) and Basic Exchange Telephone Radio Systems (BETRS).

7. As discussed below, the Commission's market-oriented policies largely have been successful in promoting facilities-based competition in the rural marketplace, especially with respect to CMRS. These market-oriented policies, acting in concert with more historical licensing policies, such as the cellular unserved area process, have resulted in the widespread provision of wireless services, including in rural areas. As the Commission noted in a recent report, 95 percent of the total U.S. population live in counties with access to three or more different mobile telephony providers. See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Eighth Report*, 18 FCC Rcd 14783, 14793–94 paragraph 18 (2003) (*Eighth Competition Report*). Moreover, we are optimistic that recent Commission initiatives will encourage the further deployment of new and advanced wireless services in rural areas, including broadband services. These initiatives complement existing programs and regulations that, in our estimation, already are working to promote wireless service in rural areas. These existing measures include small business bidding credits and partitioning and disaggregation. As the Commission noted in the *Rural NPRM*, available data indicates that wireless service providers have taken advantage of these existing regulatory mechanisms. We also note that there are explicit funding programs available to support the provision of wireless services in rural areas, including Universal Service Fund support for service in high cost areas and RUS funds for the deployment of broadband services.

8. In light of the record developed in response to the *Rural NPRM*, we conclude that our market-oriented policies, in tandem with substantial capital investment by licensees, generally have led to the growth of valuable, productivity-enhancing wireless services to a vast majority of Americans, including many who reside, work, or travel in rural areas. Nevertheless, we also conclude that there are additional steps that we can take in order to promote greater deployment of wireless services in rural areas, such as eliminating disincentives to serve or invest in rural areas, and helping to reduce the costs of market entry, network deployment and continuing operations.

III. Report and Order

A. Definition of ''Rural''

9. *Background.* In the *Rural NPRM*, the Commission requested comment on an appropriate definition of a ''rural area'' for use in conjunction with each of the policies addressed in this proceeding. The Commission sought comment on whether a uniform definition of a ''rural area'' would be appropriate, or whether the definition of a ''rural area'' should differ depending upon the particular regulatory initiative at issue. The Commission discussed various definitions that are currently used by the Commission or by other federal agencies as proxies for ''rural,'' and sought comment on whether one or more of these definitions would be appropriate. Specifically, the Commission sought comment on the following potential definitions: (1) Counties with a population density of 100 persons or fewer per square mile; (2) RSAs; (3) non-nodal counties within an Economic Area (EA) as defined by the Department of Commerce's Bureau of Economic Analysis ; (4) the definition for ''rural'' used by RUS for its broadband loan program; (5) the

definition for ''rural area'' used by the Commission in connection with universal service support for schools, libraries, and rural health care providers; (6) the definition of ''rural'' based on census tracts as outlined by the Economic Research Service of the USDA; (7) the Census Bureau definition of ''rural'' counties; and (8) any census tract that is not within 10 miles of any incorporated or census-designated place containing more than 2,500 people, and is not within a county or county equivalent that has an overall population density of more than 500 persons per square mile of land. To the extent that commenters believed that none of the eight definitions provided in the *Rural NPRM* are appropriate, the Commission asked commenters to identify specific, quantifiable factors that the Commission should consider when determining whether an area is a ''rural area.''

10. *Discussion.* We conclude that it is appropriate to establish a baseline definition of ''rural area'' for purposes of our regulatory policies. Rather than discussing ''rural areas'' in abstract terms, we believe that a baseline definition will provide clarity in situations where the Commission does not otherwise specifically designate an alternative definition. As noted in the *Rural NPRM,* we believe that some clarification of the term is necessary in order to ensure that our policies are appropriately tailored to promote service to consumers in rural areas and ensure uniform understanding of how our regulatory proposals will be implemented and evaluated. In addition, by adopting a baseline definition of ''rural area,'' we can facilitate the evaluation of our rural-oriented policies. By providing continuity with respect to the meaning of a ''rural area,'' we can form a basis for comparison of the effects of our ''rural area'' policies over time.

11. We establish a baseline definition of ''rural area'' as those counties (or equivalent) with a population density of 100 persons per square mile or less, based upon the most recently available Census data. The Commission first used this definition as a proxy definition in its annual CMRS Competition Report for purposes of analyzing the average number of mobile telephony competitors in rural versus non-rural counties. Our decision to adopt this specific definition over other possible definitions is based on several factors. In order to apply a specific definition to Commission policies, it is important that we not make the definition difficult to administer, or so narrowly tailored to only include what many refer to as the most rural areas. We believe this definition achieves an appropriate balance. As noted in the *Rural NPRM,* definitions based on county boundaries are easy to administer and understand, population data based on county boundaries are widely available to the public, and county boundaries rarely change. Moreover, the total population of the counties that fall within this definition of ''rural area'' closely tracks the Census Bureau's overall population for non-urban areas; accordingly, although we do not adopt the same definition for ''rural area'' as the Census Bureau, we believe that we are targeting the same general population. This definition encompasses 2,331 U.S. counties with a total population of approximately 60 million people. These figures, based on the 2000 Census, correspond to approximately 72 percent of all U.S. counties and 21 percent of the total U.S. population.

12. We recognize, however, that the application of a single, comprehensive definition for ''rural area'' may not be appropriate for all purposes. Indeed, the Commission stated in the *Rural NPRM* that there may be potential drawbacks of adopting a definition based solely on county boundaries, and others expressed concern that a single definition will not suit all situations. As noted in the *Rural NPRM*, there are several well-established definitions for ''rural'' utilized by federal agencies, and the Commission itself has employed different proxy definitions of ''rural'' in various proceedings. We realize that definitions of a ''rural area'' previously adopted were tailored to specific policies, and that the 100 persons per square mile or less definition may not be a suitable alternative in all cases. We believe, therefore, that applying a comprehensive definition of ''rural'' to all policies is not warranted and may instead have unintended results. Rather than establish the 100 persons per square mile or less designation as a uniform definition to be applied in all cases, we instead believe that it is more appropriate to treat this definition as a presumption that will apply for current or future Commission wireless radio service rules, policies and analyses for which the term ''rural area'' has not been expressly defined. By doing so, we maintain continuity with respect to existing definitions of ''rural'' that have been tailored to apply to specific policies, while also providing a practical guideline.

B. Facilitating Access to Spectrum

13. Entities seeking to serve rural areas can be prevented from doing so by lack of access to spectrum that has not yet been made available by the Commission or that is held by others in such areas. We do not believe spectrum is overly congested in rural areas, as demand for spectrum in rural areas will in many cases be less than demand in suburban or urban areas. However, we regularly hear from rural carriers that they are unable to gain access to spectrum in rural markets, notwithstanding their interest and the presence of unused spectrum in the market. We therefore review our policies that affect access to spectrum—including initial licensing determinations, subsequent regulatory oversight of the secondary market, and our re-licensing policies—to ensure that our policies facilitate access to spectrum in rural areas.

14. In the following paragraphs, we focus on facilitating opportunities for entities seeking to serve rural areas to acquire spectrum both through initial licensing and through secondary market transactions. We believe that the approach we take in this proceeding will promote service in rural areas, consistent with market-based policies that have encouraged wireless carriers to increase capital spending on equipment and other infrastructure. One of our key objectives is to ensure that carriers that seek to serve rural areas are not prevented from doing so either because they lack of access to adequate spectrum or because those that already have such spectrum lack adequate economic or regulatory incentives to share it. Moreover, we want to do what we can to ensure that spectrum rights flow to those who are willing and able to put the spectrum to use in rural markets. We recognize that this approach is not a panacea. Even where spectrum access is not a barrier to entry, there will be certain rural areas that are very difficult to serve because of high equipment costs, low population density, or other economic factors. Instead of attempting at this time to dramatically manipulate market-based spectrum policies that have yielded tremendous benefits in prices and services for the overwhelming majority of American consumers, we believe the better approach is to gain more experience with secondary markets and to seek additional comment in our *FNPRM* on measures to promote the provision of service in these high-cost and underserved areas by either existing carriers or new entrants.

15. In the sections that follow, we explain how our initial definitions of spectrum licenses, along with our commitment to make substantial amounts of spectrum and licenses available, should facilitate access to

spectrum in rural areas. To facilitate such access, we will determine the size of geographic service areas on a service-by-service basis and create opportunities for small service areas as appropriate. In addition, we will continue our commitment to flexible secondary market policies that facilitate post-auction access to spectrum. We also seek comment in our *FNPRM* on additional steps that we might take to promote spectrum access. Our goal is to ensure that the highest valued use of spectrum is not affected significantly by regulatory methodologies that may artificially constrain the choice of the technology used and services provided.

1. Size of Geographic Service Areas

16. *Background.* For many wireless services, the Commission has adopted geographic-area licensing. In contrast to site-based licensing, geographic-area licensing provides licensees with flexibility to respond to demand within a geographic market without the need for additional licensing or authorization by the Commission. When determining the size of geographic service areas, the Commission, after seeking comment, considers a number of factors including the nature of the service or services to be provided and the likely users. The Commission has designated various sizes of geographic service areas in order to encourage participation in spectrum auctions and to facilitate deployment of wireless services.

17. The Act directs the Commission to design competitive bidding systems to promote ''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 minority groups and women.'' Thus, the determination of geographic area sizes becomes an integral part of a system designed to disseminate licenses for a broad array of uses.

18. In the *Rural NPRM*, the Commission requested comments on the appropriate size of geographic markets in rural areas. The Commission recognized that the initial size of geographic service areas plays an important role in providing the requisite access to spectrum that would stimulate competition and result in greater wireless services in rural areas. The Commission stated that it intends to continue establishing geographic areas on a service-by-service basis, and sought comments on this approach. The Commission also emphasized the importance of selecting appropriate sized geographic service areas for reducing transaction costs that providers may incur if it becomes necessary to aggregate or disaggregate spectrum, or negotiate in secondary markets, in order to meet spectrum needs.

19. *Discussion.* Based on our experience in past proceedings and the record established in this one, we conclude that maintaining the flexibility to establish geographic areas on a service-by-service basis and promoting the use of a variety of service areas, including small areas such as MSAs/RSAs, are in the public interest. By adopting this framework, we seek to promote service in rural areas, encourage the efficient utilization of spectrum, and to make spectrum and licenses available to a wide array of licensees, including rural providers. Furthermore, we believe that this approach provides flexibility, while providing an opportunity for spectrum to be made available over small areas such as MSAs/RSAs depending on the record and other considerations relevant to the specific spectrum, thereby increasing the likelihood of service to rural markets.

20. The approach we adopt today will afford us with the flexibility necessary to tailor the size of licensed areas to balance the needs of the different prospective users of the spectrum together with other factors, including the unique characteristics of that spectrum. We believe that this approach will provide incentives for the provision of advanced applications and service offerings in rural areas.

21. *Service-by-Service Determination in Future Proceedings.* Consistent with our tentative finding in the *Rural NPRM*, we intend to continue a service-by-service approach in defining the initial scope of licenses in the future. We find that this approach is the best method to provide carriers adequate access to spectrum, including spectrum in rural areas, and is consistent with the methodologies used in prior proceedings.

22. A service-by-service approach is consistent with our statutory mandate as well. For services subject to auction, the Commission is required to promote various objectives in designing a system of competitive bidding, including the development and rapid deployment of new technologies, products, and services for the benefit of the public, ''including those residing in rural areas,'' and ''the efficient and intensive use of spectrum.'' The flexibility afforded by a service-by-service approach permits us to balance our various obligations. For example, promoting efficient and intensive use of the spectrum may require the use of large spectrum blocks or service areas to achieve economies of scale, which in turn may conflict with promoting opportunities for small businesses and rural service providers that may require smaller spectrum blocks. Moreover, parties within the same geographic areas may have competing interests. In this regard, the flexibility afforded by a service-by-service approach allows the Commission to consider the extent to which multiple licenses and different sizes of geographic areas should be made available to promote competition within the market. This approach also permits the Commission to consider the use of large service areas if necessary to provide for quicker build-out of facilities and deployment of new and innovative wireless services. In some instances, the adoption of larger areas may be more effective than the use of smaller areas where spectrum use is to be transitioned to new services. In these circumstances, the availability of licenses based on larger service areas may result in a quicker and more successful transition throughout the nation and thus enable the development and deployment of such new services.

23. Another important element of a service-specific methodology is that it takes into account any technical considerations associated with particular spectrum. For example, questions of whether and when new technologies would use the spectrum, and how much spectrum would be required for any such new technologies may be considered in determining the appropriate geographic areas for a particular service. In addition, a service-by-service approach would allow the Commission to determine whether propagation characteristics in a particular band would make it more or less conducive to business models that are built on serving customers over a particular size of service area. This approach would help us to promote investment in and the rapid development of new technologies and services.

24. We also find that a service-specific approach allows us to consider the appropriate size of each future service area in the context of geographic partitioning and spectrum disaggregation rules. Geographic partitioning and spectrum disaggregation are available to promote efficient spectrum use and economic opportunity by a wide range of applicants, including rural telephone companies. A service-by-service approach permits the Commission to

structure service areas in light of potential costs relating to aggregation, partitioning and disaggregation for the particular spectrum. The Commission can consider whether potentially high transaction costs can be avoided by allowing the initial service areas to be sized in order to meet the needs of the service providers that want to use that spectrum.

25. The continued use of service-specific determinations of appropriate geographic area sizes corresponds with the opportunity for parties to take advantage of our secondary markets leasing rules. Even if the market size or sizes that we adopt in a particular proceeding are not necessarily the optimal size to meet the objectives of all potential users, small carriers are still afforded the opportunity to access appropriately sized market areas through spectrum leasing. In the *Secondary Markets Report and Order*, the Commission stated that facilitating the development of secondary markets enhances and complements several of the Commission's major policy initiatives and public interest objectives, including enabling the development of additional and innovative services in rural areas. *See* Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00–230, *Report and Order and Further Notice of Proposed Rulemaking*, 68 FR 66252 (November 25, 2003) (*Secondary Markets Report and Order*).

26. Based on the record, we find that the continuing development of the benefits associated with the secondary markets policies and rules complements a service-specific approach to determining the appropriate size or sizes of geographic service areas. We also note that a service-specific approach permits the Wireless Telecommunications Bureau (Bureau) to consider whether any particular auction methodology should be employed in light of the decisions that are made regarding the scope of licenses for that spectrum. For example, certain comments address the potential for use of package bidding. In order to maintain maximum flexibility with respect to removing barriers to spectrum, however, no particular form of auction design will be endorsed at this time, including the use of package bidding. Rather, consistent with our statutory obligations and with our actions in the past, the Bureau will seek comment on auction-related procedural issues, including auction design, prior to the start of the auctions for the individual spectrum. This will provide an opportunity to weigh the benefits and disadvantages of any particular bidding design prior to the start of the auction, and will permit the auction procedures to be structured, if necessary, to center on matters that may be of particular concern to the likely participants in the auction and to the spectrum use, including the number of licenses to be auctioned, the number of spectrum blocks, and the size of the geographic service areas.

27. In conclusion, we decline to adopt any particular size of geographic service area for future licensing at this time. Rather, as we state above, we believe that the existence of such a wide range of comments and views make it all the more appropriate for us to consider issues relating to spectrum access and the scope of licenses for particular spectrum in the context of proceedings to establish rules for the use of that spectrum. We believe that this methodology offers the opportunity for parties that would actually want to be involved with the use of that spectrum to target specific issues relating to adoption of the band plan that will help to remove barriers to entry and increase access to the spectrum.

28. *Multiple Licensing; Opportunities for Providers in Small and Rural Areas.* In our service-by-service evaluations, in certain circumstances we have determined that it is appropriate to license different market sizes. For example, for AWS in the 1.7 GHz and 2.1 GHz bands, the Commission licensed the bands using a range of geographic licensing areas in order to maintain maximum flexibility. That band plan spreads licenses over various blocks of spectrum and uses EAs, REAGs, and a block with 734 licenses based on RSAs/MSAs. The Commission noted the competing needs of parties that sought large and small areas, as well as a combination of large and small geographic licensing areas, and found that there was sufficient spectrum to meet the competing need for both large and small areas. The Commission determined that using a varied selection of areas will foster service to rural areas and promote the policy goal of disseminating licenses among a wide variety of applicants. The Commission stated further that these smaller service areas ''provide entry opportunities for smaller carriers, new entrants, and rural telephone companies.'' Assignment of a variety of licenses will also provide flexibility in service offerings, for example, where the use of MSAs and RSAs in conjunction with other sized license areas may allow licensees to focus on consumers that require localized use without the need for roaming service. In future proceedings, where we determine the size of service areas on a service-by-service basis, we will consider licensing the spectrum over a range of various sized geographic areas, including smaller service areas such as MSAs/RSAs, where consistent with the record in that proceeding and with other factors that may be relevant to the spectrum.

2. Re-Licensing vs. Market-Based Mechanisms

29. *Background.* In an effort to increase access to assigned spectrum, the Commission sought comment on when, and under what circumstances, it should apply re-licensing provisions to prospective spectrum designations. The Commission did not propose to change the licensing provisions for current wireless services, but rather chose to evaluate whether it should use re-licensing as a means to increase access to spectrum, and thus service, especially in rural areas and whether, in the event of such re-licensing, there are particular construction standards, such as ''complete forfeiture'' or ''keep what you use'' that are most effective in promoting access and service in rural areas.

30. The Commission explained that one reason it adopted its *Secondary Markets Report and Order* was to enhance economic opportunities and access for the provision of communications services in rural areas. In that proceeding, the Commission took important first steps to facilitate significantly broader access to valuable spectrum resources. These flexible policies extended the Commission's reliance on the marketplace to expand the scope of available wireless services and devices, with the intent of promoting efficient and dynamic use of spectrum resource for the benefit of consumers throughout the country, including those in rural areas. The Commission also sought further comment on various ways in which it could enhance opportunities for spectrum access, efficiency, and innovation by removing unnecessary regulatory barriers and implementing more market-oriented policies that would facilitate moving spectrum to its highest valued uses.

31. Following the policies adopted in the secondary markets proceeding, the Commission sought comment in the *Rural NPRM* on different mechanisms that could potentially be used to reclaim spectrum and increase access by others, including the cellular ''keep what you use'' approach and the PCS ''complete forfeiture'' approach. Currently, the process for reclaiming unused licensed spectrum differs across services. Under the cellular ''keep what you use''

approach, initial licensees must construct facilities five years from license grant and begin providing service within a predefined geographic service area, after which licensees relinquish their spectrum usage rights to all ''unserved areas.'' For the majority of other geographically licensed services, including PCS, licensees are afforded exclusive rights and a renewal expectancy for the entire authorized area once performance requirements are met, regardless of whether service is provided over the entire authorized area. Failure to meet applicable benchmarks results in forfeiture of the entire license, including the rights to operate any facilities already constructed under the authorization.

32. The Commission explained that once spectrum has been reclaimed there are different approaches to re-licensing that spectrum for use by others. Under the cellular ''keep what you use'' approach, the unconstructed portions of a market become available for site-based licensing to other parties via the cellular ''unserved area'' licensing process. In the alternative, the Commission explained that it could create expanded ''overlay'' rights to unused spectrum, whereby usage rights are auctioned to new licensees. Comment was also sought on alternative mechanisms such as government defined easements to promote access to spectrum in rural areas.

33. To assess how these potential re-licensing mechanisms would work in the context of the Commission's market-oriented policies based on flexible use of spectrum and substantial service performance requirements, the Commission inquired generally as to what constitutes use of spectrum by a licensee. In this context, it sought comment on whether and how to provide a clear definition of ''use'' for all parties to support policies for access to ''unused'' spectrum. If a definition of ''use'' was to be adopted, the Commission explained that licensees that construct facilities or lease their spectrum must understand how use is construed in terms of construction requirements, re-licensing, and other policies that may affect them so that they will know what rights they will retain in the event they do not use their spectrum.

34. *Discussion.* We decline to adopt specific re-licensing rules for future spectrum allocations at this time. We believe our recently-adopted secondary market-based mechanisms should be afforded a greater opportunity to provide access to spectrum in a more efficient manner. After considering the record established in this proceeding, we agree generally with those who support additional time for the development of secondary market mechanisms to move ''unused'' spectrum from licensees to other entities that place a higher value on use of the spectrum. Because our secondary markets policies are relatively new and the benefits from their implementation have yet to be fully realized, we decline to adopt re-licensing rules for future spectrum allocations at this time.

35. This approach will allow us to examine alternative approaches while we assess the efficacy of our secondary markets initiatives and underlying policies in rural areas. We believe that the flexibility that results from a simplified set of licensing rules gives licensees freedom to determine the choice of technologies and services the market demands and ultimately leads to more efficient spectrum use. Over the last decade, a large percentage of spectrum has been allocated under policies that emphasize flexible use. As in the past, numerous commenters in this proceeding cite the benefits of applying such policies to spectrum allocations where licensing rules rely on market-based mechanisms. These flexible allocation policies underlie our goal of creating an efficient secondary market that can move spectrum to its highest valued end use. Our steps to facilitate spectrum leasing in the secondary market, along with many other measures to encourage more efficient use of spectrum, should facilitate greater access to spectrum by better ensuring that licensees face significant opportunity costs when deciding either to use spectrum for themselves or to lease it to others.

36. In addition, we will continue to examine various alternatives for creating incentives to increase the number and/or level of wireless providers and services in rural areas. In particular, we recognize that, after the initial license term, it may be appropriate in some instances to revert to re-licensing along the lines of some of the proposals received so that another carrier has an opportunity to provide wireless services to such areas. In addition, we are exploring approaches that may be more transparent and better aligned with market-based mechanisms than proposals whose implementation might constrain the flexible use policies underlying our secondary market-based initiatives. We will continue to consider the potential use of re-licensing standards (*e.g.*, ''keep what you use'') in our *FNPRM*, as well as in the context of future service-specific rulemakings.

37. In the *Rural NPRM*, as part of the Commission's consideration of re-licensing versus market-based mechanisms for increasing licensed access to ''exclusive use'' spectrum, the Commission also sought comment on whether it should consider at this time a more general application of alternative mechanisms for new licensed services, such as government-defined spectrum easements. Given our current efforts to facilitate the development of secondary markets in spectrum usage rights in such spectrum, we believe that we should continue to take steps to facilitate spectrum leasing in secondary markets, and that we should evaluate other access mechanisms in the context of specific service rulemakings. Less than a year has elapsed since our spectrum leasing rules went into effect—a short period of time for an efficient secondary market to develop and for its impact to be seen. As such, any broad evaluation and comparison of secondary markets with the other access mechanisms described in the *Rural NPRM* for new licenses is premature. We note that commenting parties opposed the general imposition of mandatory spectrum easements, many contending that secondary markets have not yet had time to develop. We will, however, continue to evaluate the possible future use of easements in the *FNPRM*.

38. Because we are not adopting any re-licensing policies at this time, we need not define ''use'' of spectrum. As a result, it follows that we also are not establishing any specific usage baselines for individual services above which licensees must reach in order to minimally comply with our substantial service policies. As we explain below, however, we are amending our rules to permit certain geographic-area licensees to provide substantial service as a means of complying with their existing construction requirements, along with appropriate rural ''safe harbors'' to increase certainty and alleviate concerns that the substantial service requirement is overly vague. Accordingly, we disagree with those who support strict reporting guidelines and we will continue to rely on current rules that in many cases permit licensees to determine the showings necessary to report their construction. To the extent that our rules defining protected service areas vary by service, we intend to consider harmonizing these regulations across services in a future rulemaking.

39. As explained above, we generally believe that by maintaining our flexible, relatively undefined use policy for geographic-area licensees as applicable, we can increase efficient access to and use of spectrum under our secondary markets initiatives that will permit

spectrum (and access) to flow to those particular uses that consumers most demand. We note, however, that the definition of ''use'' will be revisited, should we conclude that re-licensing policies should be adopted as a result of our *FNPRM.* We make clear, however, that spectrum in rural areas that is leased by a licensee, and for which the lessee meets the performance requirements that are applicable to the licensee, will be construed as ''used'' for the purposes of performance criteria and construction requirements.

40. This is consistent with the Commission's decision in its *Secondary Markets Report and Order*. We note that merely leasing spectrum, where the lessee does not fully meet the licensee's performance requirements, would not be considered ''use'' under this decision. We find the record to be insufficient to declare a policy of regulatory flexibility for system construction extension requests arising from the failure of an unrelated lessee to live up to its contractual obligation. Further, as we note in our discussion regarding infrastructure sharing arrangements that, to the extent that licensees are sharing spectrum usage rights with third parties under spectrum leasing arrangements, such arrangements will be subject to the policies, rules, and procedures set forth in the *Secondary Markets* proceeding. Thus, to the extent that parties enter into spectrum leasing arrangements pursuant to the *Secondary Markets Report and Order*, the applicable policies, rules, and procedures relating to performance, build-out, and discontinuance of service will apply. Finally, we also find it premature to establish a data base of available ''white space'' in rural areas or increase the use of spectrum ''audits.''

C. Facilitating Access to Capital

41. In order to construct facilities and provide Americans living or traveling in rural areas with important, innovative and advanced services—including such services as broadband, E911, and medical telemetry—wireless licensees must have adequate access to capital resources. We recognize that capital formation issues may be particularly relevant for would-be rural service providers, who may have fewer consumers among whom to spread the costs of providing service. Although we have existing measures to provide funding for deployment in rural areas, such as the Universal Service Fund, we recognize that there are additional steps that we can take to facilitate access to capital. In the following sections, we discuss funding resources available through RUS and outline the ways in which we are working together with RUS to promote rural deployment. We also examine and modify our policies governing security interests in FCC licenses. As discussed below, we believe that relaxing our policies to permit licensees to grant RUS a security interest in FCC licenses, conditioned upon the prior approval of any assignment or transfer of control of the license, will permit licensees to take full advantage of the collateral value of their spectrum rights and reduce the risks of lending. We also examine our cellular cross-interest rule and transition to case-by-case review of cellular cross-interests in RSAs. We believe that these actions will facilitate investment and financing opportunities for licensees seeking to provide service in rural areas.

1. Rural Utilities Service (RUS) Loan Programs

42. RUS, through its Telecommunications Program, assists the private sector in developing, planning, and financing the construction of telecommunications infrastructure in rural America. Programs administered by RUS include: (1) Infrastructure loans; (2) broadband loans and grants; (3) distance learning and telemedicine loans and grants; (4) weather radio grants; (5) local TV loan guarantees; and (6) digital translator grants. For fiscal year 2004, no less than $2.211 billion in loans is available for the Rural Broadband Access Loan and Loan Guarantee Program, with $2.051 billion for direct cost-of-money loans, $80 million for direct 4 percent loans, and $80 million for loan guarantees.

43. In order to encourage greater access and deployment of wireless services throughout rural America, the Commission's WTB has partnered with RUS to sponsor the ''Federal Rural Wireless Outreach Initiative'' (FCC/RUS Outreach Partnership). The FCC/RUS Outreach Partnership was announced on July 2, 2003. The four key goals of the FCC/RUS Outreach Partnership are to: (1) Exchange information about products and services each agency offers to promote the expansion of wireless telecommunications services in rural America; (2) harmonize rules, regulations and processes whenever possible to maximize the benefits for rural America; (3) educate partners and other agencies about Commission, WTB and USDA/RUS offerings; and (4) expand the FCC/WTB and USDA/RUS partnership, to the extent that it is mutually beneficial, to other agencies and partners.

44. The *Rural NPRM* sought comment on what, if any, further regulatory or policy changes should be made to complement RUS's Telecommunications Program, and any other method of securing financing for rural build out and operations. The Commission requested comment on methods to help facilitate access to capital in rural areas in order to increase the ability of wireless telecommunications providers to offer service in rural areas. The Commission noted that an important part of accomplishing this goal is through the promotion of federal government financing programs. The *Rural NPRM* requested comment on how the Commission can assist in making the RUS loan programs more effective. The Commission sought comment on whether there are any Commission regulations or policies that should be reexamined or modified to facilitate participation in the RUS programs by wireless licensees and service providers.

45. *Discussion.* We believe that the FCC/RUS Outreach Partnership continues to be a useful means of encouraging greater access and deployment of wireless services throughout rural America. With respect to RUS loan program rules, we note that certain RUS policies are statutorily mandated. To the extent that we can adopt rules or policies that will facilitate the use of RUS loan programs, however, we will do so. For example, as we set out below, we are modifying our policy with respect to the grant of security interests in FCC licenses, which we believe will enable more prospective borrowers to qualify for RUS loans. We will continue to work with RUS and other federal agencies to research and identify rural community wireless telecommunications needs and strive to create program efficiencies that might assist with exploring options to meet those needs. Further, we will continue to work with RUS to develop rural outreach programs, materials and workshops, which provide technical and economic information on telecommunication technologies and funding options.

2. Conditional Security Interests to RUS

46. *Background.* As we noted in the *Rural NPRM,* the Commission's policies with respect to commercial transactions involving FCC licenses have evolved over time. As the Commission has gained experience in regulating wireless licensees and as the wireless marketplace has developed, the Commission's policies with respect to control and capital formation issues have matured. Particularly in the last decade, the Commission has modified its policies to address evolving licensee

and consumer needs, while concurrently taking appropriate measures to safeguard its regulatory authority vis-à-vis private licensees and to ensure compliance with its statutory responsibilities. Central to the evolution of these market-oriented policies is the Commission's understanding that, in order for wireless licensees to construct facilities and deploy innovative services to all Americans, wireless licensees must have sufficient access to capital.

47. Although the Commission has increasingly embraced market-based transactions, recognizing the marketplace enables licensees to put spectrum to its highest and best uses, this has not always been the case. As a historical matter, the Commission initially was restrictive in its policies towards market-oriented transactions. For example, the Commission prohibited the sale of bare licenses, basing its position on its interpretation of Sections 301 and 304 of the Communications Act. The Commission stated that ''Section 301 and 304 provide, *inter alia,* that licenses issued by the Commission convey no property interest,'' and that ''[t]o allow a permit to be transferred in a situation in which the station seller obtains a profit, prior to the time that programs tests have commenced, would appear to violate this prohibition.'' The Commission subsequently changed its interpretation of these statutory provisions, however, and has approved the for-profit sale of unbuilt licenses and construction permits for terrestrial wireless, broadcasting and satellite services. In the context of the sale of an authorization of an unbuilt cellular telephone facility, the Commission held that ''the plain language of sections 301 and 304 of the Act does not address the sale of authorizations for stations, whether built or unbuilt, for-profit or not for-profit,'' but ''[r]ather * * * congressional concerns that the Federal Government retain ultimate control over radio frequencies, as against any rights, especially property rights, that might be asserted by licensees who are permitted to use the frequencies.'' The Commission went on to conclude that the for-profit sale of ''whatever rights a permittee has in its license'' to a private party, subject to prior Commission approval, would be permissible under these statutory provisions. In 1991, the Commission received a Petition for Declaratory Ruling regarding the grant of security interests in the broadcasting context, and in 1992, the Commission initiated a proceeding in the broadcast context, seeking comment on whether we could improve access to capital by allowing licensees to grant security interests to creditors. In 1994, the Commission found that a ''security interest in the proceeds of the sale of a license does not violate Commission policy.''

48. Over time, the Commission's policies for all spectrum-based services have evolved to expressly permit licensees to grant security interests in the stock of the licensee, in the physical assets used in connection with its licensed spectrum, and in the proceeds from operations associated with the licensed spectrum. Notably, the Commission itself has taken an exclusive security interest in licenses subject to the auction installment payment program and a senior security interest in the proceeds of a sale of an auctioned license. In such circumstances, and subject to the requirements and protections of the security agreements that bind the participants in the installment payment program, the Commission has allowed licensees to provide their lenders a subordinated security interest in the proceeds of a license sale. Furthermore, the Commission continues to develop and evaluate its policies regarding security interests and control of spectrum, in order to ensure that these policies afford licensees sufficient flexibility consistent with the Communications Act to develop and deploy innovative technology and keep pace with ever-changing consumer needs. In a 2000 policy statement, the Commission considered ways in which licensees may be able to maximize their efficient use of spectrum by leveraging ''the value of their retained spectrum usage rights to increase access to capital,'' and indicated its intent to examine Commission policies prohibiting security and reversionary interests in licenses.

49. The Commission noted that it had not yet taken a position on whether its policy towards prohibiting a licensee to give a security interest in the license itself ''is statutorily mandated or solely dictated by regulatory policy.'' In the *Secondary Markets Report and Order,* the Commission found that licensees could enter into certain types of leasing transactions that are not deemed transfers of *de facto* control under section 310(d) of the Act without prior Commission approval, provided licensees continued to exercise effective working control over the spectrum they lease. The Commission indicated that it was updating its policy for interpreting *de facto* control in the context of spectrum leasing, in order ''to reflect more recent evolutionary developments in the Commission's spectrum policies, technological advances, and marketplace trends.''

50. In the *Rural NPRM,* the Commission continued its examination of its security interest policies as a means of facilitating access to capital, consistent with its authority under the Communications Act. Specifically, the Commission sought comment on whether permitting licensees to grant security interests in their licenses to RUS would result in lower costs of and greater access to capital. The Commission noted that it would review and require prior Commission approval of an assignment to RUS, in accordance with the Commission's transfer and assignment policies, *before* RUS could assume control of a license. The Commission also sought comment on whether modifying our policy to permit RUS to take a security interest in FCC licenses is a natural outgrowth of Commission and judicial developments, which recognize the value and ability of a lender obtaining a security interest in the licensee's stock, proceeds and other assets without infringing upon the Commission's statutory obligations. The Commission asked whether a licensee could grant RUS a security interest in an FCC license without compromising the Commission's obligation to maintain control of spectrum in the public interest and completely fulfill its applicable mandates under the Communications Act of 1934, as amended. The Commission sought comment on what the consequences of such a policy shift might be, including what, if any, difference from the perspective of RUS, a third-party lender, or the licensee, there would be on a relaxation of the current security interest policies in the circumstances described above. Finally, the Commission sought comment on a concern that had been raised in the broadcasting context, regarding the independence of broadcast stations and about the ability of creditors to have substantial influence over a borrower station. The Commission asked whether such dangers exist in the connection with RUS's attainment of security interests in non-broadcasting wireless licenses, especially as it relates to preserving and protecting facilities-based competition and innovation by and among wireless service providers.

51. *Discussion.* After careful review of the record, as well as the judicial and regulatory developments of the past decade, we believe that it is appropriate to adjust our policy with respect to the grant of security interests in FCC licenses. We agree with RUS that allowing it to obtain a security interest in an FCC license will greatly improve

loan security and will facilitate our roles in fulfilling the President's goal for the universal deployment of broadband service. We therefore modify our policy and permit commercial and private wireless, terrestrial-based licensees to grant security interests in their FCC licenses to RUS, conditioned upon the Commission's prior approval of any assignment or transfer of *de jure* or *de facto* control. A licensee therefore may grant RUS a security interest in its FCC license, provided that the Commission approves the transaction, pursuant to its authority under section 310(d) of the Communications Act, *before* the secured party can exercise its right to foreclose on the license. We limit this policy change to wireless, terrestrial-based licensees that are within the scope of this proceeding. Further, any security interest granted to RUS must be expressly conditioned, in writing as part of all applicable financing documents, on the Commission's prior approval of any assignment of the license or any transfer of *de jure* or *de facto* control of the license to the secured party or other person or entity. We also note that, in the case of a licensee operating under the installment payment program, the Commission will retain its exclusive, senior secured position with respect to the license. The Commission also will retain its senior secured position with respect to the proceeds of the sale of such license. Accordingly, we clarify that RUS may not obtain a security interest in an FCC license in instances where the FCC itself is a secured creditor, but may obtain a subordinated interest in the proceeds subject to the requirements of the licensee's installment payment obligations (*e.g.*, those set forth in the security agreement between the licensee and the FCC).

52. We believe that relaxing our security interest policy to permit licensees to grant RUS a conditional security interest in their FCC licenses will greatly enhance the value of a licensee's available collateral by facilitating RUS's ability (as a secured party) to keep the licensees' assets together as a package. While we acknowledge that it may be possible for a licensee—primarily through careful corporate structuring—to cobble together a set of interests that it can offer to a lender as security that approximates a security package containing the license, we believe that rural licensees will be much better served if they can approach RUS for financing without having to incur the potentially substantial transactional and other administrative costs that might be necessary to create such a package.

53. Our decision to relax the current restrictions on security interests reflects the Commission's increased reliance on market-oriented policies to facilitate and encourage competition. At the same time, limiting this initiative to RUS, as was proposed in the *Rural NPRM,* avoids any suggestion that the Commission's recognition of a third party property interest in an FCC license itself conveys any type of ownership interest prohibited by the Communications Act. Although this relaxation of our security interest policy marks the first time that the Commission has recognized such an interest, the third party involved (RUS) is a federal governmental agency. Thus, we do not believe that anyone—licensees, their lenders, or the courts—would mistakenly construe our action as a retreat from the principle of the Communications Act that the spectrum itself is a public resource and cannot be ''owned'' or deemed private property. This principle is stated most explicitly in sections 301 and 304 of the Act. Section 301 provides for the control of the United States over ''all the channels of radio transmission'' and for ''the use of such channels, but not the ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority.'' Section 301 also states that ''no such license shall be construed to create any right, beyond the terms, conditions, and periods of the license.'' Section 304 provides that the Commission cannot grant any station license until ''the applicant thereof shall have waived any claim to the use of * * * the electromagnetic spectrum as against the regulatory power of the United States.'' Furthermore, pursuant to section 310(d), the Commission must review and approve license assignments and transfers of control, assess and confirm the basic qualifications of assignees and transferees, and, more generally, determine whether the transaction in question will serve the public interest, convenience and necessity.

54. In view of the limitations of such provisions as sections 301, 304 and 310(d), it is clear that the Communications Act prohibits a licensee from ''owning'' the spectrum it uses, and that the Commission cannot grant, with a license, any such ownership interests. At the same time, however, we recognize that a licensee holds certain ''spectrum usage rights,'' as defined within the terms, conditions, and period of the FCC license at the time of issuance. The Commission has used the security interest prohibition as one bright line to mark off the point at which a licensee's spectrum usage rights end and the government's control of spectrum begins. By permitting RUS—but only RUS—to take a conditional security interest in an FCC license, we maintain the heart of this bright line: *i.e.*, a prohibition on anyone other than the federal government holding a property interest in something as closely associated with spectrum as an FCC license. RUS (like the FCC) is an agency of the United States with a particular mandate from Congress. We believe that permitting it to obtain a security interest in an FCC license will further its mandate and is fully consistent with the view of spectrum as a public resource. Moreover, by conditioning any assignment or transfer of *de facto* or *de jure* control of the license on prior Commission approval pursuant to section 310(d), we ensure that the Commission retains ultimate control over the spectrum. Thus, the FCC's approval must be obtained before RUS can foreclose on a security interest it may hold in an FCC license or before RUS or any other entity may otherwise obtain control of the license or licensee. This prior approval will satisfy our Congressional mandate, while at the same time encouraging capital formation in rural areas.

55. We recognize that one could argue that a grant of a security interest in an FCC license does not convey any ownership of spectrum, but rather ownership of the licensee's private spectrum usage rights associated with the FCC license. However, after carefully considering whether this argument would support extending the relaxation of our security interest policy to non-United States lenders, we have decided to limit our action to RUS, as stated in the *Rural NPRM.* Thus, we will maintain a bright line prohibition against private (non-government) lenders taking a security interest in an FCC license.

56. As an additional matter, we believe that relaxing our policy to permit the grant of conditional security interests in FCC licenses to RUS is unlikely to result in RUS exercising inappropriate influence over the licensee. As noted earlier, licensees may grant security interests in the proceeds of the sale of their licenses, as well as in their assets and stock. We have received no evidence, and we have no reason to suspect, that RUS has used any of these types of transactions, already permitted under our rules and policies, to exercise inappropriate influence over any FCC licensee. In light of these circumstances, we do not believe that permitting a licensee to grant RUS a conditional security interest

in the license itself will increase the likelihood of such inappropriate influence.

57. We note the concerns of some that modifying our policy to permit RUS to obtain a security interest could impede the ability of a wireless provider to obtain financing from other lenders. However, we note that providing licensees with the ability to offer their license as collateral would create an opportunity, not a requirement, and that the wireless provider, as in all loan decisions, will initially determine whether the business risks outweigh the benefits of using its license for collateral. Licensees have the option of obtaining financing through RUS; in the event they find RUS's terms unsuitable, they may elect to work with private lenders. Licensees are not required to provide RUS with a conditional security interest, although this modification of our policy permits them to do so, at their option.

3. Cellular Cross-Interest Rule

58. *Background.* To facilitate additional access to capital by cellular carriers in rural areas, the Commission sought comment regarding whether the prohibition against cellular cross-interests in all RSAs remains in the public interest. As set forth in § 22.942 of the Commission's rules, the prohibition substantially limits the ability of parties to have interests in cellular carriers on different channel blocks in the same rural geographic area. To the extent licensees on different channel blocks have any degree of overlap between their respective cellular geographic service areas (CGSAs) in an RSA, § 22.942 prohibits any entity from having a direct or indirect ownership interest of more than five percent in one such licensee when it has an attributable interest in the other licensee. An attributable interest is defined generally to include an ownership interest of 20 percent or more or any controlling interest. An entity may have a non-controlling and otherwise non-attributable direct or indirect ownership interest of less than 20 percent in licensees for different channel blocks in overlapping CGSAs within an RSA.

59. The Commission consolidated into the instant proceeding two petitions that seek reconsideration of the decision in the December 2001 *Spectrum Cap Sunset Order*, which, on the basis of the state of competition in CMRS markets, sunset the CMRS spectrum cap rule in all markets and eliminated the cellular cross-interest rule in MSAs because cellular carriers in urban areas no longer enjoyed first-mover, competitive advantages. *See* 2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Docket No. 01–14, *Report and Order*, 67 FR 1626 (January 14, 2002) and Final rule; correction, 67 FR 4675 (January 31, 2002) (*Spectrum Cap Sunset Order*). In March 2002, the Commission sought comment on petitions filed by Dobson Communications Corporation, Western Wireless Corporation, and Rural Cellular Corporation (Dobson/Western/RCC) and Cingular Wireless LLC (Cingular) seeking reconsideration of the portion of the *Spectrum Cap Sunset Order* that retained the cellular cross-interest rule in RSAs. *See* Petitions for Reconsideration of Action in Rulemaking Proceeding, 67 FR 13183 (March 21, 2002). While the Commission left the cross-interest rule in place in RSAs, it indicated in the *Spectrum Cap Sunset Order* that it would consider waiver requests and reassess the need for the rule at a future date.

60. In the *Rural NPRM*, the Commission made clear that it sought to balance its efforts to remove unnecessary regulatory barriers to financing and investment of cellular service in rural areas with the need to safeguard competition in RSAs. As an initial matter, it sought comment on a tentative conclusion to retain the current cellular cross-interest rule in RSAs with three or fewer CMRS competitors. Assuming the Commission were to decide to retain a number-based rule, the *Rural NPRM* also sought comment on how to define a ''competitor'' under such a proposal, whether a ''competitor'' might be any CMRS provider with significant geographic overlap with the cellular licensee, and whether a transition period was necessary to sunset the rule for those RSAs with four or more competitors.

61. In the alternative, the Commission sought comment on a range of other options for modifying or eliminating the current rule in a way that promotes investment in rural areas while retaining adequate competitive safeguards. For example, the Commission sought comment on whether to eliminate the prohibition for all RSAs where the ownership interest being obtained is not a controlling interest (*i.e.*, where the interest is a non-controlling interest and where the transaction otherwise would not require prior FCC approval). It sought comment on the extent to which the waiver option has deterred or prevented acquisition of capital in rural markets. Although a specific waiver process has existed to address this barrier to investment in rural areas, the Commission noted that the transactions costs and regulatory uncertainty surrounding any waiver procedure may deter some beneficial investment in these areas. Finally, the Commission sought comment on the option of extending case-by-case review, as established in the *Spectrum Cap Sunset Order*, to promote investment and reduce the possibility of impeding transactions that are actually in the public interest. The Commission recognized the important role that the cellular cross-interest rule has provided in the past against the possibility of significant additional consolidation of cellular providers in rural areas, but it inquired whether the public interest may be better served by the benefits of pure case-by-case review.

62. *Discussion.* Based on our review of certain arguments raised on reconsideration and in the comments regarding the advantages of case-by-case review, as well as developments since the release of the *Spectrum Cap Sunset Order* in 2001, we find that reliance on a uniform case-by-case review process for aggregations of spectrum and cellular cross interests in RSAs is currently the better approach as compared to prophylactic limits. We believe that continued application of the cellular cross-interest rule in RSAs may impede market forces that could drive financing and development of new services in rural and underserved areas. Accordingly, we find that it is in public interest to apply a more flexible approach in reviewing cellular competition in rural areas and, as a result, we will extend our section 310(d) case-by-case review to all cellular markets.

63. We therefore eliminate the cellular cross-interest rule in RSAs and will utilize our case-by-case approach to review transactions where a level of cellular cross interests arises to a substantial transfer or assignment under section 310(d) of the Act. In addition, if a party with a controlling or otherwise attributable interest in one cellular licensee within an RSA obtains a non-controlling interest of more than 10 percent in the other cellular licensee in an overlapping CGSA, we will require the licensee to notify the Commission within 30 days of the date of consummation of the transaction by filing updated ownership information (using an FCC Form 602) reflecting the specific level of investment. This notification requirement will sunset at the earlier of: (1) Five years after the release of this item, or (2) at the cellular licensee's specific renewal deadline. By

employing this approach to maintain scrutiny over those cross interests that pose a particular risk to competition in the near term, we conclude that we have struck the proper balance between promoting investment and protecting consumers against potential competitive harms in rural areas.

64. Although the Commission last determined that the level of CMRS economic competition was not meaningful enough to warrant complete elimination of the cellular cross-interest rule pursuant to section 11 of the Act, it did not fully consider in its *Spectrum Cap Sunset Order* whether a move to case-by-case review for cross interests in RSAs would be in the public interest under the broader scope of its 2000 biennial review of spectrum aggregations limits. To perform meaningful and timely review of spectrum aggregation transactions without the CMRS spectrum cap rule, the Commission explained that it needed time to develop effective guidelines for this process, as well as to ensure that sufficient resources were devoted to the task. In contrast, because the concerns underlying the original purpose of the cross-interest rule had been achieved in MSAs, the Commission was able to immediately eliminate the rule in that context without having to consider to any great extent the rule's necessity as compared to other, less burdensome tools. When the Commission subsequently determined that market conditions in rural areas had not changed sufficiently such that it should eliminate the cellular cross-interest rule in RSAs pursuant to section 11 of the Act, it concluded its reexamination of the rule and did not evaluate whether it would nevertheless be in the public interest to extend the advantages of flexible case-by-case review to aggregation and cross interests of cellular spectrum in rural areas.

65. Notwithstanding section 11 of the Communications Act and the Commission's past findings regarding the level of economic competition in rural markets, we decide on reconsideration of our *Spectrum Cap Sunset Order* and based on the comments filed in response to the *Rural NPRM* that it is in the public interest to eliminate the cellular cross-interest rule. Instead, parties will be permitted to file under our case-by-case review process for substantial cross interests in all cellular spectrum and report to the Commission a certain level of cellular cross interests in rural areas that do not arise to an assignment or transfer of control. Such a change in approach, supported by adequate resources and procedures and facilitated by collection of sufficient industry information along with appropriate enforcement mechanisms, is currently the better approach for evaluating whether proposed cross interests reflect opportunities for increased financing and new services or indicate potential risks of anticompetitive market conditions. The Commission indicated that its 2000 biennial review would consider whether other factors beyond the impact of competition made the cross interest rule appropriate for modification, and in this context, we find they do.

66. Although we recognize the safeguard that the cellular cross-interest rule has provided against the possibility of significant additional consolidation of control over cellular spectrum in rural areas and the attendant serious anticompetitive effects, we find that the public interest is better served by the benefits of case-by-case review with its greater degree of flexibility to reach the appropriate decision in each case, reduced likelihood of prohibiting beneficial transactions or levels of investment both in urban and rural areas, and ability to account for the particular attributes of a transaction or market. The greater regulatory flexibility offered by this change in tools for review outweighs any ''guarantees'' to the competitive nature of cellular competition in rural areas ensured by the current cross-interest rule, as that rule may inadvertently discourage transactions and cross interests that could be found to be in the public interest. We believe that no cross interest or transaction should be presumptively prohibited in RSAs and that we should consider such proposals under an approach that is consistent with the same case-by-case analysis that is employed in all other CMRS contexts.

67. In the *Spectrum Cap Sunset Order,* the Commission gave much consideration to the availability of less burdensome case-by-case review before it decided that the CMRS spectrum cap rule was no longer necessary in the public interest. Given the level of competitive market forces and the benefits of flexible case-by-case review, it determined that it had the means to sunset the CMRS spectrum cap rule in all markets, RSAs as well as MSAs. The Commission decided to retain the cellular cross-interest rule in RSAs based on reasoning that the likelihood of approving a cellular consolidation between two providers in a given market was small and that it would be more efficient and less costly for the Commission to maintain a prophylactic rule and to entertain waiver requests for the small subset of transactions in RSAs where competition was more robust. In review, given advancements in our case-by-case processing procedures and resources since December 2001, we believe that we can repeal the rule to better encourage transactions and levels of financing that are in the public interest while maintaining much of the protection afforded by the cellular cross-interest rule. We recognize that the current waiver approach may interfere with investment in rural areas by discouraging certain financing in the RSA portions of a regional market but not in the MSA portions. Our approach in essence relaxes the permitted threshold to 49.9 percent. However, for the reasons explained here, we disagree with the argument that there is no conceivable situation where the public interest could be served by considering such transactions in RSAs. Our decision here is to change tools for review to a more precise standard, and we make no determination that such proposed transactions are any more likely to be found to be in the public interest.

68. Case-specific review, along with information resources and enforcement mechanisms, is a more targeted process to examine the actual competitive positions involved in a particular transaction or level of cross interests and ensure that acquisitions of and cross interests in spectrum do not have anticompetitive effects that render them contrary to the public interest. As the Commission indicated in the *Spectrum Cap Sunset Order* in the context of the CMRS spectrum cap rule, we can rely on case-by-case review of CMRS spectrum aggregation (including cross interests of cellular spectrum in rural areas) to fulfill our statutory mandates to promote competition, ensure diversity of license holdings, and manage the spectrum resource in the public interest. We have been increasing the resources available to review spectrum aggregation transactions and developing internal procedures for review of concentration of CMRS spectrum in general, and cross interests of cellular spectrum in rural areas in particular. While it at first places greater resource demands on parties and the Commission, over time, these actions will provide parties, including small businesses, with legal precedent and a reasonable degree of certainty and transparency regarding cross interests of cellular spectrum in rural areas and should minimize the administrative costs of case-by-case review for all applicants and licensees, as well as Commission staff. In addition, we believe there may be an inequity that

distorts the market in any area in which more than just the two cellular licensees hold spectrum and find that the better approach to safeguarding competition is to take account of the particular circumstances of each market through case-specific review.

69. To review aggregations or cross interests of cellular spectrum in rural areas, we eliminate § 22.942 of the Commission's rules, 47 CFR 22.942, such that applicants and parties will only be required to obtain prior Commission approval for transactions subject to section 310(d) of the Act. Although we are imposing a reporting requirement to collect ownership information on certain levels of interests that do not trigger section 310(d) review, we have adopted reporting thresholds that reflect a comparatively higher 10 percent level of permitted cross interest by a party with a controlling interest in a given cellular licensee. Under § 22.942, a party with a controlling interest in one of the cellular licensees may only have a 5 percent direct or indirect ownership interest in the other licensee in that CGSA. Under the new reporting standard, we will allow a party with a controlling or otherwise attributable interest in one of the cellular licensees to have a non-controlling or otherwise non-attributable direct or indirect ownership of up to and including 10 percent in the other cellular licensee in overlapping CGSAs without notification. We have not been able to determine conclusively that such cross interests pose a significant threat to competition, and this new 10 percent threshold will afford petitioners and commenters some relief from restrictions on financing in the RSA portions of a regional market. Moreover, it harmonizes the reporting threshold with our FCC Form 602 ownership reporting requirements imposed currently on all licensees.

70. We do not make any determination here on the extent to which cellular carriers may continue to hold a dominant market share in rural areas or whether a consolidation of cellular licenses in RSAs would likely result in a significant reduction in competition. We note, however, that a concentration of interests between the two cellular licensees in rural areas would more likely result in a significant reduction in competition than an aggregation of additional CMRS spectrum by such licensees. In addition, we note that different risks to competition are present depending on whether a proposed cross interest would be held by a telecommunications carrier or by a third-party bank or other source of financing. By reviewing substantial aggregations of cellular cross-interests on a case-by-case basis, as discussed above, we retain the flexibility to evaluate individual transactions on their own merits and account for these different factors in determining whether approval of the transaction will serve the public interest under section 310(d).

D. Increasing Licensee Flexibility

1. Performance Requirements

71. *Background.* Over the past decade, the Commission has shifted away from site-based licensing for wireless licensees and has adopted more flexible, geographic-area based allocations that provide licensees with greater freedom to provide different types of services. In making this shift, the Commission also has adopted performance benchmarks that increase licensees' flexibility to offer a variety of services, including service that may not require ubiquitous geographic coverage. As a general matter, geographic-area licensees are not required to construct their entire geographic area in order to retain their authorizations. Instead, depending upon the specific service, the Commission's rules may require coverage of a certain percentage of the licensed area's population or a certain percentage of the licensed area's geographic area. For many, but not all services, the Commission has adopted a flexible ''substantial service'' construction standard that allows licensees that are providing a beneficial use of the spectrum to retain their authorizations without satisfying a prescribed population-or geographic-based construction requirement. The substantial service standard was intended to provide flexibility for services with a variety of uses for the spectrum (*i.e.*, fixed or mobile, voice or data) or with a high level of incumbency that would prevent a new geographic-based licensee from meeting the coverage requirements. While the definition of ''substantial service'' is generally consistent among wireless services, the factors that the Commission will consider when determining if a licensee has met the standard vary among services. Once a licensee satisfies its construction requirement during its initial license term, the Commission's rules currently do not require that the licensee satisfy additional construction requirements during subsequent renewal terms other than the standards necessary to achieve a renewal expectancy.

72. In the *Rural NPRM,* the Commission proposed modifications to our construction requirements to promote licensee flexibility and the build-out of rural areas. First, the Commission proposed to adopt a ''substantial service'' construction benchmark for all wireless geographic area licensees that are subject to build-out requirements but that did not have the option of meeting those requirements by providing substantial service. Specifically, the Commission proposed to amend its regulations to extend the substantial service construction benchmark to the following licensees: 30 MHz broadband PCS licensees; 800 MHz SMR licensees (blocks A, B, and C); certain 220 MHz licensees; LMS licensees; Multipoint Distribution Service and Instructional Television Fixed Service (MDS/ITFS) licensees; and 700 MHz public safety licensees. The Commission observed that construction benchmarks that mandated population-or geographic-specific coverage might hinder licensees from serving niche or less populated areas, and might unintentionally discourage construction in rural areas. Second, the Commission asked whether we should adopt geographic-based construction requirements for private and commercial terrestrial wireless services that are licensed on a geographic area basis and that do not have a geographic-based requirement. The Commission noted that a geographic benchmark would provide licensees who did not intend to focus construction efforts on population centers with an alternative. Third, the Commission asked whether we should adopt substantial service ''safe harbors'' that are tailored to providing coverage in rural areas, and proposed safe harbors for mobile as well as fixed services. Finally, the Commission also asked whether requiring compliance with additional construction requirements in license terms following initial renewal of the license might be likely to increase build-out in rural areas.

73. *Discussion.* In large part, we adopt the proposal, as set forth in the *Rural NPRM,* to extend the substantial service construction benchmark to all wireless services that are licensed on a geographic area basis. Specifically, we amend our regulations to provide a substantial service construction benchmark for the following licensees: 30 MHz broadband PCS licensees; 800 MHz SMR licensees (blocks A, B, and C); certain 220 MHz licensees; LMS licensees; and 700 MHz public safety licensees. These licensees now have the option of satisfying their construction requirements by providing substantial service or by complying with other service-specific construction benchmarks already available to them

under the Commission's rules. We decline to take any action with respect to the MDS/ITFS and the 71–76 GHz, 81–86 GHz and 92–95 GHz (70/80/90 GHz) bands, because construction rules for these bands recently have been or will be addressed in service-specific proceedings.

74. Based on the record before us, we believe that modifying our rules to permit these additional licensees to satisfy their construction requirements by providing substantial service will increase their flexibility to develop rural-focused business plans and deploy spectrum-based services in more sparsely populated areas without being bound to concrete population or geographic coverage requirements. As the Commission noted in the *Rural NPRM,* particularly in cases where a licensee has a population-based construction requirement, licensees have both an economic and practical incentive to achieve compliance with the Commission's build-out obligation by providing service to urban areas. Further, current population-specific benchmarks may have the unintended consequence of encouraging several licensees within a particular market to provide coverage to the same populous areas. In order to satisfy its construction obligations and safeguard its license, even a late entrant who is the fourth or fifth competitor in a particular area initially may choose to duplicate existing carriers' footprints while other, more sparsely populated areas may be without such competition or even service at all. With the additional flexibility afforded by a substantial service option, however, licensees will be free to develop construction plans that tailor the deployment of services to needs that are otherwise unmet, such as the provision of service to rural or niche markets. While a substantial service alternative, by itself, does not guarantee that all licensees will serve rural areas, the additional flexibility of this alternative undoubtedly improves the likelihood of rural deployment and provides licensees with the opportunity to target unserved rural areas. Moreover, providing these licensees with the option of satisfying their construction requirements by providing substantial service in their licensed areas will increase parity among geographic area licensees. This action promotes more equal regulatory footing with respect to construction obligations.

75. We disagree with those who urge the adoption of a substantial service standard only for those licensees with ''small geographic territories.'' Our intent in providing licensees with a substantial service option is not to mandate, but to encourage and facilitate construction in less populated areas by providing licensees with sufficient flexibility to develop unique business plans that do not require ubiquitous coverage or coverage of densely populated areas. In keeping with our market-oriented policies, we do not propose to require licensees to deploy services where their market studies or other analyses indicate that service would be economically unsustainable. As we stated earlier, the adoption of the substantial service standard provides licensees with the flexibility to provide coverage to other, less populated areas and still satisfy its coverage requirement without necessarily focusing on more urban population centers.

76. We also decline at this time to abandon our substantial service performance benchmark in favor of stricter, more specific build-out obligations, and a 'keep what you use' approach similar to the 'unserved area' licensing regime established for cellular service. As demonstrated by our trend towards licensing services on a geographic-area basis, we believe that licensees can provide a meaningful and socially beneficial service without providing ubiquitous service and that providing licensees with sufficient flexibility to respond to market fluctuations will promote the public interest. However, we recognize that, for example because they can be used sequentially, market-based mechanisms and re-licensing approaches (such as ''keep what you use'') are not necessarily mutually exclusive. Accordingly, our *FNPRM* will continue this discussion of the appropriate re-licensing, and construction obligations for current and future licensees who hold licenses beyond their first term.

77. As an additional matter, we adopt safe harbors for providing substantial service to rural areas. As we state earlier, we adopt a default definition of ''rural area'' as a county with a population density of 100 persons per square mile or less, based upon the most recent Census data. We apply this definition for purposes of these rural-focused substantial service safe harbors. In light of the fact that the geographic area licenses are comprised of counties, we believe it is sensible and administratively efficient to adopt safe harbors for geographic area licenses that also are based upon counties. With respect to mobile wireless services, a licensee will be deemed to have met the substantial service requirement if it provides coverage to at least 75 percent of the geographic area of at least 20 percent of the ''rural areas'' within its licensed area. With respect to fixed wireless services, the substantial service requirement is met if a licensee constructs at least one end of a permanent link in at least 20 percent of the number of ''rural areas'' within its licensed area. Licensees may satisfy these construction requirements through lease agreements, provided these arrangements satisfy the conditions set forth in the *Secondary Markets Report and Order.* As we stated in the *Rural NPRM,* the use of a population density of 100 persons or fewer per square mile is derived from our finding in the *Eighth Competition Report,* which indicates that counties with population densities of 100 persons per square mile or less ''have an average of 3.3 mobile competitors, while the more densely populated counties have an average of 5.6 competitors.'' We believe that this population density-based definition provides a workable and reasonable point of differentiation between rural and non-rural areas, as we noted earlier.

78. We believe it is beneficial to adopt these safe harbors because they provide licensees with concrete examples of how they can provide substantial service through specific types of deployment in rural areas, thereby increasing certainty and alleviating concerns that the substantial service requirement is overly vague. We emphasize, however, that these safe harbors do not constitute the only means by which a licensee may provide substantial service. A licensee is therefore free to meet the substantial service test by satisfying one of the safe harbors or providing some alternative coverage to its licensed area, depending upon the individual needs of their consumers or their own unique business plans. We also note that the *Rural NPRM* provided licensees with additional guidance by setting forth a list of factors that we will consider in the context of determining whether a licensee is providing substantial service to rural areas. We affirm that we will consider these factors in evaluating substantial service showings. Specifically, we will look at the following factors: (1) Coverage of counties or geographic areas where population density is less than or equal to 100 persons per square mile; (2) significant geographic coverage; (3) coverage of unique or isolated communities or business parks; and (4) expanding the provision of E911 services into areas that have limited or no access to such services. While this list is not intended to be exhaustive or exclusive, we believe it illustrates the sorts of material factors we will consider in any rural substantial service analysis.

By adopting substantial service ''safe harbors,'' as well as by providing examples of the sorts of factors we will consider in evaluating substantial service showings, we believe we satisfactorily balance the competing interests of maximizing licensee flexibility while providing some measure of certainty.

79. We decline at this time to introduce a ''very rural area'' safe harbor or modify our safe harbors to include a population component. As we stated above, the safe harbors are not intended to be the only means of providing substantial service. We will take into consideration if a licensee is serving a ''very rural area'' or a very large geographic area.

80. We also decline to adopt a geographic-based benchmark for all wireless geographic area services that are subject to construction requirements but that otherwise do not have a geographic-specific construction requirement. We believe that licensees who wish to provide coverage to a particular geographic portion of their licensed area have the flexibility to do so pursuant to the ''substantial service'' standard. We conclude, based upon the record in this proceeding, that there is no demonstrated need to modify our regulations in this regard.

81. We also decline to adopt performance requirements for renewed licenses at this time. While we recognize the concerns of existing licensees regarding future construction requirements, we believe that re-licensing approaches such as ''keep what you use'' and market-based mechanisms are not necessarily mutually exclusive. While we do not make any such changes at this time, we initiate a *FNPRM* to continue our discussion of various re-licensing approaches and the merits, if any, of construction requirements for current and future licensees holding licensees beyond their first term.

82. We note that although we refrain from adopting renewal term performance requirements at this time, we will continue to examine the state of competition in rural areas and will revisit this decision in the event we observe that licensees cease deploying new services in rural areas and/or that secondary markets are not facilitating sufficient access to spectrum for would-be service rural service providers. We emphasize that, contrary to the assertions of some, the Commission retains the right to modify the terms and conditions of FCC licenses. The Commission's licensing system has never provided any vested right to specific license terms. Rather, it is well established that the Commission always retains the power to alter the terms of existing licenses by rule making. Further, at the time Congress introduced auctions into the licensing process, it made clear that this mechanism for assigning licenses was not intended to change the Commission's basic regulatory role or otherwise provide additional rights to auction-winning licensees. Thus, no auction bidder could have assumed that it was buying a license containing terms that the Commission could not modify.

2. Increasing Power Limits for Certain Services

83. *Background.* In the *Rural NPRM*, the Commission observed that ''[i]ncreasing the range of radio systems is one means of making it more economical to provide spectrum-based radio services in rural areas by potentially lowering infrastructure costs,'' and that ''[o]ne way to increase the range of radio systems is by increasing power levels.'' The Commission accordingly sought comment regarding whether we should modify our regulations governing power limits for operations in rural areas, as a means of encouraging service to these areas. Specifically, the Commission asked whether current power limits should be increased for stations located in rural areas and licensed under parts 22, 24, 27, 80, 87, 90, and 101 of our rules. The Commission also sought comment regarding the implementation of higher power limits, such as how to define ''rural area'' for purposes of increased power limits and whether, in the case of base/mobile systems, both the base and mobile stations must be located within a rural area. The Commission further acknowledged that there may be certain challenges in implementing increased power levels in rural areas and sought comment on how increased power might increase the potential for harmful interference to neighboring systems or otherwise limit the number of paths in a given area.

84. *Discussion.* Based on the record in this proceeding, we believe that, in principle, increasing power limits in rural areas can benefit consumers in rural areas by reducing the costs of infrastructure and otherwise making the provision of spectrum-based services to rural areas more economic. When we balance this potential benefit, however, against the potential costs of harmful interference, we recognize that we must act carefully to ensure that increased power limits do not cause harmful interference for other licensees. After reviewing the record and evaluating the technical and operational rules for the various services at issue in this proceeding, we conclude that increasing cellular, PCS, and AWS power limits may provide measurable benefits without creating harmful interference for co-channel or adjacent licensees. As we discuss in the following paragraphs, we find that the current cellular, PCS, and AWS technical and coordination rules (with some modifications) will be sufficient to ensure that licensees are able to utilize increased power levels at certain base stations without causing harmful interference.

85. *Cellular.* We amend our regulations governing the Cellular Radiotelephone Service and authorize increased power limits for cellular base stations that either: (1) Are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census; or (2) extend coverage into cellular unserved areas, as those areas are defined in § 22.949 of the Commission's rules. Specifically, we amend § 22.913(a) of our rules to provide that the Effective Radiated Power (ERP) of such base transmitters must not exceed 1000 Watts. This power increase doubles permissible ERP for selected cellular base stations; prior to this amendment, § 22.913(a) provided that the ERP of base transmitters and cellular repeaters must not exceed 500 Watts. We recognize that a ''one size fits all'' approach to spectrum management is unlikely to yield optimal spectral efficiency and that, particularly in areas where there is less congestion or where other unique factors are present, it is appropriate to amend our operating parameters to afford licensees greater flexibility. As the Spectrum Policy Task Force noted, ''spectrum policy must evolve towards more flexible and market-oriented regulatory models,'' in order ''[t]o increase opportunities for technologically innovative and economically efficient spectrum use.'' Our action today is consistent with the recommendations of the Spectrum Policy Task Force, which advised that the Commission explore ways of promoting spectrum access and flexibility in rural areas, and stated that the Commission's interference and other technical rules should ''afford spectrum users the flexibility to operate at higher power in less congested areas, which are typically rural, so long as such higher power operations do not cause interference and do not receive additional interference protection.''

86. We believe that this amendment of our regulations governing cellular power limits will promote coverage to rural areas by making it more

economical to provide service to these areas. As a result of this power increase, cellular licensees may be able to extend their coverage area and use fewer base stations, thereby lowering their infrastructure costs. Relaxed limits for licensed operations will provide much-needed relief to rural operators by substantially reducing the costs associated with construction of such systems.'' We estimate that increasing authorized base station power limits to 1,000 Watts ERP may increase the distance to the licensee's Service Area Boundary (SAB) by as much as 12.5 percent and may increase overall coverage area by as much as 26.6 percent. Consequently, we estimate that, as a result of this power increase, licensees may require up to 21 percent fewer cell sites to provide the same coverage with 1,000 Watts ERP as previously provided with 500 Watts ERP.

87. We limit this power increase to cellular base stations that are located in rural areas or that are providing coverage to unserved areas. We define ''rural areas'' for purposes of increased power limits as counties with a population density of 100 persons per square mile or less. Specifically, permitting power increases in areas where the population density is 100 persons or less captures much of the geographic area where service is not provided by both the A- and B-block cellular carriers (or, in some instances, by either cellular carrier). After conducting an analysis of current cellular licenses in the United States, we have determined that there are 625 counties that have some area that is not covered by the license of an A-block and/or B-block cellular provider. Of these 625 counties, 577 of these counties have a population density of 100 persons per square mile or less. As an additional matter, in order to promote cellular coverage to areas that lack cellular service but otherwise are not captured by this definition of ''rural area,'' we amend our rules to permit carriers to use higher power at base stations located in counties with a greater population density, provided those base stations are providing coverage to unserved areas, as defined by our rules. We also limit this power increase to cellular base stations more than 72 kilometers (45 miles) from the Mexican and Canadian borders, consistent with our current agreements with those countries.

88. We note that some expressed concern that higher power limits might result in harmful interference to other licensees. We have carefully considered the concerns raised by commenters and believe that this limited amendment of our cellular rules will increase licensee flexibility without increasing the likelihood of harmful interference. Our regulations governing the provision of cellular service already contain specific safeguards that are designed to minimize the likelihood of harmful interference by clearly defining protected service areas for each cell site, and requiring licensee coordination near system boundaries. We find that applying these same requirements to higher power base stations will minimize the potential for harmful interference. Specifically, the Service Area Boundary (SAB) of each cellular base station is defined by a formula based on antenna height and transmitter power, and the formula's underlying assumptions are still valid for power levels up to 1000 Watts. Using the existing formula, the SAB distance for a particular base station will increase as the power level increases. However, because the rules prevent a base station SAB from overlapping other licensees' CGSAs, such power increases will only be permitted so long as they do not infringe upon other licensees' systems.

89. As an additional safeguard, the Commission's rules currently provide that licensees must coordinate channel usage at each transmitter location within 75 miles of any transmitter locations authorized to other licensees or proposed by tentative selectees or other applicants. This requirement recognizes that the SAB/CGSA overlap restriction described above permits licensees to provide service quality signal levels up to the edge of another licensee's system boundary. While this approach facilitates seamless coverage for consumers, it requires careful coordination among neighboring licensees in order to avoid interference. For years licensees have been coordinating system frequency plans with one another in order to ensure high levels of service quality and seamless roaming along system boundaries. Going forward, we believe this coordination requirement will perform equally well in coordinating high power operations.

90. Our decision here to authorize higher power levels for cellular licensees, subject to certain safeguards to protect other cellular services does not diminish in any way the obligations we impose today on cellular licensees in the *800 MHz Order* to protect public safety and other non-cellular operations in the adjacent 800 MHz band from interference. *See* Improving Public Safety Communications in the 800 MHz Band Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02–55, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, FCC 04–168 (rel. August 6, 2004) (*800 MHz Order*) published at 69 FR 67823 (November 22, 2004). As explained in detail in the *800 MHz Order,* we adopt a specific standard defining ''unacceptable interference'' to such operations in that band and require other licensees, including cellular licensees, to immediately take all steps necessary, including the implementation of Enhanced Best Practices, to abate such interference. Cellular licensees wishing to utilize the increased power levels authorized in this Order can do so only to the extent that they also remain in compliance with their *800 MHz Order* obligations.

91. Some have stated that increased power limits would not necessarily facilitate increased coverage due to handset limitations or other technical constraints. Although increasing the power of the handset might address this issue by increasing the mobile unit's ability to ''talk'' to the base station, we note that increasing such power could be problematic, in light of the fact that a handset is likely to be used in urban as well as rural areas and might introduce interference concerns if used in an urban setting. Accordingly, we find that there is no need to increase handset power limits at this time. We do not believe that increasing handset power is necessary, however, in order for cellular licensees to benefit from increased power limits. First, nearly all cellular phones on the market today operate at power levels well under the maximum permitted under our rules, which suggests that our regulations already permit sufficient handset power. Today's handsets generally utilize low power in order to comply with our RF safety rules and to extend battery life. Second, cellular licensees may overcome handset constraints by employing an external means of boosting the handset's signal, or by adding amplifiers at the base station to boost the received signal. For example, a cellular carrier may use an external amplifier or otherwise use a tower top amplifier at the base station. In any case, cellular technology continues to develop and we expect that technical limitations may diminish over time as technology evolves. Further, our action affords licensees with additional flexibility to take advantage of new technological advancements without being unduly constrained by Commission requirements.

92. In addition, we note that some wireless carriers are considering the use of directional antennas to improve

network performance, and that such antennas have the potential to help improve communications in rural areas by achieving higher gain, mitigating the effects of multipath, improving frequency bandwidth performance, and providing better directional control over emissions. As such, directional handset antennas would provide improved reception quality at the cellular tower receiver, significant improvement of voice quality near the edge of a cell, potentially larger cell sites with fewer base stations, and lower power consumption in handsets, improving battery life. Although handsets that employ directional antennas may need to be slightly reoriented when used in certain locations, techniques such as antenna diversity are being considered to combat large-scale fading effects caused by shadowing from large obstacles (*e.g.*, buildings or other terrain features). Because directional handset antennas have the potential to significantly increase the strength of signals transmitted from handsets, as well as provide efficiency benefits both to the wireless network and to battery life, there are several benefits that could be gained from their increased use in handsets. Importantly, directional handset antennas, coupled with an increase in base stations' transmitted power, have the potential to significantly improve wireless communications in many rural areas.

93. *Broadband PCS.* Similar to our treatment of cellular above, we will provide for increased power limits for broadband PCS. Specifically, we increase power levels by 100 percent for broadband PCS base stations located in rural areas, in parity with the cellular power levels adopted in this proceeding. We note that broadband PCS power levels are tied to antenna heights, so that the authorized power for a given broadband PCS base station would vary, depending upon the accompanying antenna height. For example, a base station with an antenna with a height above average terrain (HAAT) of 300 meters or less may operate at a maximum of 1640 watts peak equivalent isotropically radiated power (EIRP). Thus, for base stations of 300 meters or less in rural areas, we will allow an increase from 1640 to 3280 watts EIRP.

94. As with the modification of our cellular regulations, we believe that this modification of our PCS regulations will allow licensees to increase their coverage while using fewer base stations, thereby reducing the costs of providing service to rural areas. We estimate that permitting broadband PCS licensees to increase their power by 100 percent will increase the distance from the base station to the edge of their coverage area by 17 percent and will increase the overall coverage area by 36 percent. As a result, we estimate that a broadband PCS licensee using increased power will require 27 percent fewer sites in order to provide the same coverage provided using current power limits.

95. We find that the current market-boundary signal strength limit, in conjunction with a coordination requirement, will minimize the potential for harmful interference among licensees. Currently, broadband PCS licensees cannot exceed a signal strength of 47 dBμV/m at their geographic market-boundary unless neighboring licensees agree to a higher level. This means that, regardless of the location, height, or power level of broadband PCS base stations, the signal level at the market-boundary may not exceed this maximum level without mutual agreement. Therefore, we find that permitting a 100 percent increase in power levels at broadband PCS base stations will not increase the potential for harmful interference beyond what exists today. At the same time, we note that the 47 dBμV/m limit is a ''service quality'' signal level that promotes coverage up to the edge of the market boundary, and seamless roaming across market boundaries in certain instances. In other words, although there is no formal coordination requirement, neighboring licensees must as a practical matter coordinate frequency plans and site locations along market boundaries in order to avoid interference. As a cautionary measure, we will require that licensees using higher power levels coordinate operations with all licensees within 75 miles of the relevant base station. This requirement will supplement the existing signal strength limit and underscore our intention that licensees must coordinate spectrum usage along common boundaries. We note that this power increase applies only to broadband PCS base stations, and not to mobile units. For the reasons stated above for the 800 MHz cellular service, we find that there is not reason to increase mobile power levels at this time.

96. We also note that the Commission is taking steps to address interference concerns more generally and that these additional measures might protect other licensees from harmful interference. We are optimistic that these initiatives might effectively address interference concerns in a flexible manner and alleviate the need to impose detailed, service-specific coordination requirements.

97. Finally, as we did with 800 MHz cellular, we limit this power increase to broadband PCS base stations located in counties with population densities of less than 100 persons per square mile and those located more than 75 miles from the Mexican and Canadian borders. As stated above, we find that a majority of areas likely to be unserved or underserved are located in such counties. Further, because our existing agreements with Mexico and Canada are based on the prior maximum power limits, we retain those limits for border areas.

98. *AWS.* In 2003, the Commission adopted the PCS power limit of 1640 watt EIRP for AWS base stations. *See* Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02–353, Report and Order, 69 FR 5711 (February 6, 2004) (*AWS Report and Order*). The Commission noted, however, that the *Rural NPRM* had proposed an increase in the power limit for PCS operations in rural areas and indicated that, in the event we adopted higher power limits for PCS services, we would ''explore the possibility of similar power increases for AWS.'' Thus, similar to our treatment of cellular and broadband PCS above, we will provide for increased power limits for AWS. Specifically, we increase power levels for AWS base stations located in rural areas by 100 percent, or up to 3280 watts EIRP in parity with the cellular and broadband PCS power levels adopted in this proceeding.

99. As with the modification of our cellular and broadband PCS regulations, we believe that this modification of our AWS regulations will allow licensees to increase their coverage while using fewer base stations, thereby reducing the costs of providing service to rural areas. We estimate that increasing authorized base station power limits to 3280 Watts EIRP may increase the distance to the licensee's edge of coverage by as much as 17 percent and may increase overall coverage area by as much as 36 percent. Consequently, we estimate that, as a result of this power increase, licensees may require up to 27 percent fewer cell sites to provide the same coverage with 3,280 Watts EIRP as previously provided with 1640 Watts EIRP. We estimate that permitting AWS licensees to increase their power by 100 percent will increase the distance from the base station to the edge of their coverage area in an amount similar to broadband PCS, thereby requiring fewer sites in order to provide the same

coverage provided using current power limits.

100. As with broadband PCS, we find that the current market-boundary signal strength limit, in conjunction with a coordination requirement, will minimize the potential for harmful interference among AWS licensees, and licensees in neighboring bands. Therefore, as a cautionary measure, we will require that licensees using higher power levels coordinate operations with all affected licensees within 75 miles of the relevant base station and with certain satellite entities. As with broadband PCS, this requirement will supplement the existing signal strength limit and underscore our intention that licensees must coordinate spectrum usage along common boundaries. At present, AWS licensees already must coordinate with nearby, incumbent co-channel and adjacent channel Part 101 and MDS licensees. Due to concern about the possibility of both out-of-band emission (OOBE) and receiver overload interference from AWS base stations to BAS and CARS operations, the Commission also has decided that AWS licensees must coordinate their operations with affected BAS and CARS licensees. In addition to these existing coordination requirements, higher power AWS operations must also be coordinated with adjacent channel AWS licensees, Part 21 MDS licensees operating above 2155 MHz, as well as all Government and non-Government satellite entities operating in the 2025–2110 MHz band.

101. We note that this power increase applies only to AWS base stations, and not to mobile units. For the reasons stated above for the 800 MHz cellular service, we find that there is not reason to increase mobile power levels at this time. Finally, as we did with broadband PCS, we limit this power increase to AWS base stations located in counties with population densities of less than 100 persons per square mile. As stated above, we find that a majority of areas likely to be unserved or underserved are located in such counties.

102. *Other Radio Services.* At this time we will not adopt increased power levels in other radio services. We also decline to modify power levels for: (1) 2.3 GHz WCS facilities; or (2) licensed terrestrial services that operate in frequency bands that are shared by satellite services.

103. We also decline the request of one commenter that the Commission adopt higher power limits and increased operating parameters for the Multichannel Video Distribution and Data Service (MVDDS). First, the Commission expressly excluded MVDDS stations licensed under Part 101 from the scope of its power limits inquiry, noting that the Commission recently increased power levels for all MVDDS stations in a separate proceeding. Second, that commenter's request constitutes a late-filed petition for reconsideration of this prior Commission action. Furthermore, we decline to take any action with respect to unlicensed services in this proceeding. We will incorporate comments addressing power limits for unlicensed services into the record of the Cognitive Radio NPRM and will respond to these comments in the context of that proceeding.

104. In conclusion, we decline to adopt increased power limits for any of the other radio services for which we sought comment in the *Rural NPRM,* due to lack of support in the record. We note, however, that licensees in these services may file a request for waiver of these power limits. We will entertain waiver requests on a case-by-case basis. Any such waiver request should demonstrate how a waiver of our power limits will promote the public interest. In addition, licensees seeking to obtain a waiver of our power limits must adequately address any potential interference concerns that may arise as a result of such increased power.

3. Infrastructure Sharing

105. *Background.* The *Rural NPRM* sought comment on whether clarifying the Commission's policy on infrastructure sharing may promote service in rural markets. The Commission also stated that certain carriers in the United States have entered into sharing arrangements, and sought comment on the extent to which infrastructure sharing would promote service in rural areas and on the costs and benefits associated with such arrangements in the context of competition. Infrastructure sharing offers the potential for wireless service providers to share facilities and other infrastructure in order to provide spectrum-based services on a more cost-effective basis, including service to rural areas. A key objective underlying such arrangements is the possible reduction in costs of capital construction in rural areas, and the creation of opportunities for enhanced and expanded coverage. A number of infrastructure sharing arrangements have been entered into in the United States, and some of the parties to such transactions have claimed that these lead to lower costs associated with expanded geographic coverage. Generally, because there are fewer providers in rural areas than in more populated areas, infrastructure sharing may permit more providers to operate in rural areas and thus encourage more competitors to enter those markets.

106. As noted in the *Rural NPRM,* infrastructure sharing includes sharing of infrastructure-related equipment, including antennas, towers, and network elements such as switches and nodes. Commission rules and policies, including our environmental rules, have enabled the sharing of towers and other antenna support structures for the provision of spectrum based services by multiple service providers. Moreover, the Commission has both facilitated and encouraged the collocation of antennas on existing towers. Existing operators have taken advantage of these policies to enter into tower sharing arrangements. Indeed, some companies have made a business of constructing and maintaining towers on which multiple licensees can locate their transmitters and receivers.

107. In addition to these infrastructure sharing arrangements, parties may also be able to expand or improve service to rural areas through spectrum leasing arrangements—whereby licensees in effect share the use of their licensed spectrum with spectrum lessees—under the policies, rules, and procedures established in the *Secondary Markets* proceeding. In the *Secondary Markets Report and Order,* the Commission established policies and rules to enable spectrum users in most wireless radio services to gain access to licensed spectrum by entering into different types of spectrum leasing arrangements with licensees, and streamlined its approval procedures for license assignments and transfers of control. Also, in the *Secondary Markets Second Report and Order,* we clarified that spectrum leasing parties may enter into a variety of dynamic leasing arrangements in which licensees and spectrum lessees share the use of the same licensed spectrum.

108. Depending on their structure, infrastructure sharing arrangements may raise transfer of control considerations under section 310(d) of the Communications Act, as amended. Under that statute, prior Commission approval is required to transfer control of or assign licenses (or parts of licenses, where permitted) to third parties. For many licensees in the wireless radio services, the Commission has interpreted section 310(d) *de facto* control requirements pursuant to its *Intermountain Microwave* decision, which focuses on whether the licensee, as opposed to an unlicensed third party, exercises close working control over different aspects of the operation of the

station facilities that use the spectrum. *See* Nonbroadcast and General Action Report No. 1142, (*Intermountain Microwave Public Notice),* 12 FCC 2d 559 (February 6, 1963). Specifically, the Commission applied six factors for determining who has *de facto* control by examining whether a licensee: (1) Has unfettered use of all station facilities and equipment; (2) controls daily operations; (3) determines and carries out the policy decisions (including preparation and filing of applications with the Commission); (4) is in charge of employment, supervision and dismissal of personnel operating the facilities; (5) is in charge of the payment of financial obligations, including expenses arising out of operations; and (6) receives the monies and profits from the operation of the facilities. Under *Intermountain Microwave,* the Commission has interpreted section 310(d) *de facto* control to require that the licensees exercise close working control of both the actual facilities/equipment operating the radiofrequency (RF) energy and the policy decisions, *e.g.*, business decisions, regarding use of the spectrum.

109. In its *Secondary Markets Report and Order,* the Commission determined that, in the context of spectrum leasing, it would replace the *Intermountain Microwave* standard with a more flexible standard for determining whether there has been a transfer of *de facto* control under section 310(d). Under the new *de facto* control standard adopted in that proceeding, we no longer require that, when leasing spectrum, licensees exercise close working control over station facilities, determine the services that are provided, or set the policies affecting the station(s) operating with the spectrum licensed to them under their authorizations. Instead, the Commission determined that licensees in applicable wireless services may lease spectrum usage rights to spectrum lessees, without the need for prior Commission approval, so long as the licensee continues to exercise effective working control over the use of the spectrum it leases.

110. The *Rural NPRM* stated that, where infrastructure sharing arrangements do not involve a transfer of control of licensed spectrum usage rights under section 310(d), Commission review is not required, but that infrastructure sharing arrangements that involve a transfer of control under section 310(d) require Commission review. The Commission noted that in the *Secondary Markets* proceeding it has streamlined the transfer of control and assignment process, and sought comment in the *Rural NPRM* on whether other steps may be taken that could further streamline this process. Comment was sought on the factors to consider in evaluating infrastructure sharing arrangements that require section 310(d) approval in order to effectively balance competition among providers and expanded coverage in rural areas.

111. *Discussion.* We believe that infrastructure sharing offers the potential for benefits to both providers and consumers. Infrastructure sharing should be encouraged because of the potential for savings in capital costs for construction of facilities necessary to deploy wireless services, and for the improved or enhanced coverage in rural and other areas that otherwise may not be economical for providers to offer without some form of sharing. As we observed in the *Rural NPRM,* infrastructure sharing arrangements have been considered in both the United States and in Europe, with apparently favorable results. The actions we take today seek to further encourage beneficial infrastructure sharing arrangements.

112. We determine in this *Report and Order* that a revised *de facto* control standard, different from the *de facto* control standard under *Intermountain Microwave,* should be extended to infrastructure sharing arrangements that only involve the sharing of facilities such as physical structures and equipment. Specifically, the revised *de facto* control standard for spectrum leasing in *Secondary Markets* shall apply for interpreting whether a licensee retains *de facto* control for purposes of section 310(d) when it is engaged in an infrastructure sharing arrangement. We believe that this policy will encourage the development of arrangements that potentially reduce costs for providers and improve coverage in rural areas. We note, however, that to the extent that licensees are sharing spectrum usage rights with third parties under spectrum leasing arrangements, such arrangements will be subject to the policies, rules, and procedures set forth in the Commission's *Secondary Markets* proceeding in WT Docket No. 00–230.

113. The Commission stated in the *Secondary Markets Report and Order* that revision of the *de facto* transfer of control test ''may be warranted as the public's interests and needs change and the nature of a service evolves.'' The Commission further stated that ''continuing to focus on one type of control (*e.g.*, control over facilities) may no longer constitute the best way to further the complex and sometimes competing public interest goals of today.'' The ''sea change'' that has taken place in the regulatory and technological environment for wireless services was addressed by the Commission, which identified some of the actions it has taken to promote innovative policies that seek to increase communications capacity and efficiency of spectrum use, and to make spectrum available for new uses and users.

114. There have been significant changes in the communications industry since the *Intermountain Microwave de facto* standard was established over 40 years ago, including the rise of new technologies for the industry and the Commission's increasing efforts to afford quick and effective means for parties to adapt to markets and to the needs of consumers. Under these circumstances, we no longer believe that it is necessary to continue to require that a licensee exercise immediate direct control over every facility that may be operating in connection with the provision of services using its spectrum. Accordingly, we will apply the more flexible *de facto* control standard set forth in the *Secondary Markets Report and Order* when interpreting whether a licensee (or spectrum lessee) retains *de facto* control for purposes of section 310(d) when it is engaged in an infrastructure sharing arrangement involving facilities only. Under this standard, the licensee (or spectrum lessee) remains responsible for ensuring compliance with the Communications Act and all applicable policies and rules. This responsibility includes maintaining reasonable operational oversight with respect to any activities relating to the infrastructure sharing arrangement so as to ensure that the operator of the facilities complies with all applicable technical and service rules, including safety guidelines relating to radiofrequency radiation. In addition, the licensee must retain responsibility for meeting all applicable frequency coordination obligations and resolving interference-related matters, and must retain the right to inspect the facility operations and to terminate the infrastructure sharing arrangement to ensure compliance.

115. The Commission retains the ability to investigate and terminate any infrastructure sharing arrangement to the extent it determines that the arrangement constitutes an unauthorized transfer of *de facto* control under our new standard.

116. Our elimination of the *Intermountain Microwave de facto* control standard with respect to infrastructure sharing arrangements

generally, however, in no way affects the application of our rules to determine eligibility for designated entity and entrepreneur licensee status. A designated entity or entrepreneur licensee will be permitted to enter into an infrastructure sharing arrangement, without application of our unjust enrichment rules and transfer restrictions, only so long as the arrangement does not result in another entity's becoming a controlling interest or affiliate of the licensee, such that the licensee would no longer meet our eligibility requirements for designated entity or entrepreneur benefits. For these determinations, our existing attribution rules, including our definitions of controlling interest and affiliation (which incorporate the *Intermountain Microwave* principles of *de facto* control), will continue to control. However, in determinations involving infrastructure sharing arrangements, our attribution rules will be applied in the same manner in which, as we clarified in the *Secondary Markets Report and Order,* they are to be applied in determinations involving spectrum manager leasing arrangements. We expect each designated entity or entrepreneur licensee contemplating entering into an infrastructure sharing arrangement to analyze in advance whether such an arrangement would adversely affect the licensee's ongoing eligibility for size-based benefits.

117. The assessment of potential competitive effects of transactions, whether they are transfers of control, license assignments, or infrastructure sharing arrangements, remains an important element of our policies to promote facilities-based competition and guard against the harmful effects of anticompetitive conduct. We believe that our encouragement of infrastructure sharing arrangements as potentially effective means to promote the provision of spectrum based services to rural areas is consistent with our consideration of competitive effects and potential competitive harm. Providers and consumers may be in a position to benefit from the potential for lower capital costs for facilities and improved coverage.

118. One commenter expressed concern that interference issues similar to those that have been raised in other proceedings may result from infrastructure sharing arrangements, particularly with respect to the potential for interference that may result from the collocation of antennas. Licensees that are parties to infrastructure sharing arrangements will be responsible for resolving all interference-related matters that may result from such arrangements in a manner consistent with the Commission's interference-based service rules. Our notification requirement that we adopt here also helps us to ensure that licensees and non-licensee parties to an arrangement are complying with our interference and non-interference related policies and rules.

119. *Potential Barriers* to *Infrastructure Sharing.* A number of comments request that the Commission act to remove impediments to infrastructure sharing at the state and local level, particularly as they relate to tower siting. The Commission is asked to form a national policy that would seek to remove these barriers and establish direction for state and local authorities to establish clear and consistent siting policies. Some comments ask generally that the Commission preempt state and local regulations that block the deployment of services in rural areas.

120. Section 332(c)(7) of the Act preserves state and local authority over zoning and land use decisions for personal wireless service facilities, but also limits that authority. The limitations include that state or local governments may not unreasonably discriminate among providers of functionally equivalent services, and may not regulate in a manner that prohibits or has the effect of prohibiting the provision of personal wireless services. A state or local government also must act on applications within a reasonable period of time, and must make any denial of an application in writing supported by substantial evidence in a written record. The statute also preempts state and local decisions to regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency (RF) emissions to the extent the facilities comply with the Commission's RF rules.

121. We encourage state and local authorities, when considering requests to deploy wireless facilities and when establishing facilities siting policies, to consider the impacts of their decisions on the availability of competitive wireless service. We note some localities have imposed tower siting requirements that make both initial construction and subsequent sharing of facilities difficult. We believe that state and local governments should consider measures that would reduce regulatory burdens for those projects that are least likely to implicate local land use concerns, while retaining reasonable review processes for proposals that are more likely to have significant effects. In this regard, the Commission and its former Local and State Government Advisory Committee (LSGAC) have provided guidance to state and local authorities to assist them in devising efficient procedures for verifying that antenna facilities comply with the Commission's RF exposure guidelines. We will consider offering similar guidance in the future in response to specific needs.

122. With respect to preemption, as discussed above, section 332(c)(7) of the Communications Act of 1934 as amended, generally preserves local authority over land use decisions, and limits the Commission's authority in this area. In appropriate cases, the Commission or its Bureaus have considered petitions alleging that particular regulations impinge on areas within the Commission's exclusive jurisdiction. We will continue to address such issues in the future where supported by law.

123. Finally, we note that we have taken action to improve our own rules and procedures respecting other tower siting issues, including those relating to our environmental review, in order to facilitate the timely deployment of wireless services. We will continue to consider further improvements in the future where necessary.

4. Rural Radiotelephone Service/Basic Exchange Telecommunications Radio Service

124. *Background.* In the *Rural NPRM,* the Commission sought comment on several issues related to the current use and demand for service in the Rural Radiotelephone Service (RRS) and the Basic Exchange Telecommunications Radio Service (BETRS). Additionally, the Commission sought comment on whether its current rules and policies for RRS and BETRS are limiting factors towards a more expansive use of these services. As indicated in the *Rural NPRM*, RRS was established to provide, in most instances, basic telephone service to subscribers in locations deemed so remote that traditional wireline service or service by other means is not feasible. BETRS is a digital counterpart to the traditional, analog RRS, and can be characterized as more spectrally efficient than RRS, provides private calling, and has a much lower call blocking rate than RRS. All RRS and BETRS authorizations are issued on a secondary, non-interfering basis.

125. Specifically, in the *Rural NPRM*, the Commission sought comment on the current level of demand for RRS and BETRS and noted that according to its licensing records, a relatively low number of licenses have been issued for the spectrum. In addition, the

Commission sought comment on the demand for basic communications services, other than wireline, and inquired about how the demand is being met if it is not through the use of RRS and BETRS spectrum. Furthermore, the Commission sought comment on whether access to RRS and BETRS spectrum is an impediment to the provision of these services, if a demand exists.

126. With respect to current policies and rules, the Commission sought comment on the proposal to remove the eligibility restriction for BETRS that restricts the issuance of a license to only those entities that receive state approval to provide a basic exchange telephone service. The Commission also sought comment on whether expanding the secondary status of RRS and BETRS to other spectrum bands would facilitate and encourage construction in rural areas. Finally, the Commission sought comment on whether additional spectrum, issued on a primary basis, is needed at this time for RRS and BETRS.

127. *Discussion.* We conclude that it is appropriate to remove the eligibility restrictions contained within § 22.702 of our rules regarding state approval prior to the issuance of a BETRS license. Although no comments were received regarding this specific proposal, we believe the removal of this restriction is in the public interest. As it stands now, a potential BETRS licensee must demonstrate that it has received state approval to provide basic exchange telephone service prior to applying for a BETRS license. We believe by eliminating this restriction, a potential regulatory barrier is removed and the process for gaining access to BETRS spectrum is simplified and expedited. Nonetheless, we retain the current requirement that a BETRS station must be constructed within 12 months of the issuance of a license, therefore minimizing the potential for warehousing spectrum in those instances where a BETRS licensee does not receive state approval, where required, to provide basic exchange telephone service.

128. The Commission consolidated into the instant proceeding two petitions that seek reconsideration of its decision in the *Spectrum Cap Sunset Order.* In March 2002, the Commission sought comment on petitions filed by Dobson Communications Corporation, Western Wireless Corporation, and Rural Cellular Corporation (Dobson/Western/RCC) and Cingular Wireless LLC (Cingular) seeking reconsideration of the portion of the *Spectrum Cap Sunset Order* that retained the cellular cross-interest rule in RSAs. See Petitions for Reconsideration of Action in Rulemaking Proceeding, 67 FR 13183 (March 21, 2002). For the Commission's discussion and disposition of those two petitions see paragraphs 58 through 70 above and paragraph 182 below.

IV. Procedural Matters

129. As required by the Regulatory Flexibility Act (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rulemaking* in WT Docket Nos. 02–381, 01–14, and 03–202, released October 6, 2003. The Commission sought written public comment on the proposals in the *Rural NPRM*, including comment on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

A. Need for, and Objectives of, the Report and Order

130. We adopt several measures, as indicated below, intended to increase the ability of wireless service providers to use licensed spectrum resources flexibly and efficiently to offer a variety of services in a cost-effective manner. The Commission takes steps to promote access to spectrum and facilitate capital formation for entities seeking to serve rural areas or improve service in rural areas. We expect that these decisions will facilitate the deployment of new and advanced wireless services, including broadband services, and thereby foster much-needed economic development.

131. *Definition of ''rural area''.* We establish the presumption that, unless otherwise specified in the context of specific policies or regulations governing wireless communications services, counties with a population density of 100 persons or less per square mile constitute ''rural areas'' for purposes of the Commission's wireless spectrum policies.

132. *Size of geographic service areas and re-licensing issues.* We examine Commission policies affecting access to spectrum and the provision of service in rural areas. In particular, the Commission considers its policies governing the licensing of spectrum, both with respect to initial licensing through the competitive bidding process, as well as subsequent re-licensing after an authorization is returned to the Commission. Specifically, the *Report and Order* affirms that the Commission will continue to establish licensing areas on a service-by-service (or band-by-band) basis as appropriate, based upon the flexibility that such an approach provides and our past experience in determining the initial size of service areas. The Commission also reaffirms that when developing rules for licensing individual services in the future, it will consider using smaller service areas in some spectrum blocks to encourage deployment in rural areas for the service in question.

133. *Cellular cross-interest rule and conditional security interests to RUS.* We also take the following steps to facilitate increased access to capital for rural licensees, and eliminate the remaining components of the cellular cross-interest rule that currently apply only in Rural Service Area (RSA) markets and transitions to case-by-case review for cellular transactions, while closely examining those that present a significant likelihood of substantial competitive harm in a market. The Commission also revises the policies governing security interests in wireless licenses by permitting licensees, at their discretion, to grant such interests to the Department of Agriculture's Rural Utilities Service (RUS).

134. *Increase of power limits for certain services.* We amend the Commission's regulations to increase permissible power levels for base stations in certain wireless services that are located in rural areas or that provide coverage to otherwise unserved areas. In doing so, the Commission anticipates that coverage of such areas will be more economical, as licensees may provide increased coverage of rural areas using fewer base stations and less associated infrastructure. The Commission believes these actions will increase licensee flexibility and permit more cost-effective coverage of rural areas.

135. *Substantial service construction requirement.* We also amend regulations to permit certain geographic-area licensees to provide substantial service as a means of complying with their construction requirements, thus countering existing disincentives to build out less densely populated areas.

136. *Infrastructure sharing.* Finally, we conclude that the revised *de facto* control standard for spectrum leasing adopted in the Commission's *Secondary Markets* proceeding generally shall apply for interpreting whether a licensee retains *de facto* control for purposes of section 310(d) of the Communications Act when it is engaged in an infrastructure sharing arrangement.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

137. We received no comments in response to the IRFA. However, as described below, we have nonetheless considered potential significant

economic impacts of our actions on small entities.

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

138. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act. A ''small business concern'' is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).

139. *Cellular Licensees.* The SBA has developed a small business size standard for small businesses in the category ''Cellular and Other Wireless Telecommunications.'' Under that SBA category, a business is small if it has 1,500 or fewer employees. According to the Bureau of the Census, only twelve firms out of a total of 1,238 cellular and other wireless telecommunications firms operating during 1997 had 1,000 or more employees. Therefore, even if all 12 of these firms were cellular telephone companies, nearly all cellular carriers are small businesses under the SBA's definition.

140. *220 MHz Radio Service—Phase I Licensees.* The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz band. The Commission has not developed a definition of small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, we apply the small business size standard under the SBA rules applicable to ''Cellular and Other Wireless Telecommunications'' companies. This category provides that a small business is a wireless company employing no more than 1,500 persons. According to the Census Bureau data for 1997, only 12 firms out of a total of 1,238 such firms that operated for the entire year, had 1,000 or more employees. If this general ratio continues in the context of Phase I 220 MHz licensees, the Commission estimates that nearly all such licensees are small businesses under the SBA's small business standard.

141. *220 MHz Radio Service—Phase II Licensees.* The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is subject to spectrum auctions. For this service in 1997, we adopted a small business size standard for defining ''small'' and ''very small'' businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. This small business standard indicates that a ''small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. A ''very small business'' is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed $3 million for the preceding three years. The SBA has approved these small size standards. Auctions of Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998. In the first auction, 908 licenses were auctioned in three different-sized geographic areas: Three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold. Thirty-nine small businesses won 373 licenses in the first 220 MHz auction. A second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses. A third auction included four licenses: 2 BEA licenses and 2 EAG licenses in the 220 MHz Service. No small or very small business won any of these licenses.

142. *Lower 700 MHz Band Licenses.* We adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits. We have defined a small business as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years. A very small business is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years. Additionally, the lower 700 MHz Service has a third category of small business status that may be claimed for Metropolitan/Rural Service Area (MSA/RSA) licenses. The third category is entrepreneur, which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years. The SBA has approved these small size standards. An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of the six EAGs) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses. A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: 5 EAG licenses and 476 CMA licenses. Seventeen winning bidders claimed small or very small business status and won sixty licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.

143. *Upper 700 MHz Band Licenses.* In 2001, the Commission authorized service in the upper 700 MHz band. The related auction, previously scheduled for January 13, 2003, has been postponed.

144. *Paging.* In 1997, we adopted a size standard for ''small businesses'' for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A small business is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. The SBA has approved this definition. An auction of Metropolitan Economic Area (MEA) licenses commenced on February 24, 2000, and closed on March 2, 2000. Of the 2,499 licenses auctioned, 985 were sold. Fifty-seven companies claiming small business status won 440 licenses. An auction of Metropolitan Economic Area (MEA) and EA licenses commenced on October 30, 2001, and closed on December 5, 2001. Of the 15,514 licenses auctioned, 5,323 were sold. One-hundred thirty-two companies claiming small business status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs commenced on May 13, 2003, and closed on May 28, 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses. Currently, there are approximately 24,000 Private Paging site-specific licenses and 74,000 Common Carrier Paging licenses. According to the most recent *Trends in Telephone Service,* 608 private and common carriers reported that they were engaged in the provision

of either paging or ''other mobile'' services. Of these, we estimate that 589 are small, under the SBA-approved small business size standard. We estimate that the majority of private and common carrier paging providers would qualify as small entities under the SBA definition.

145. *Broadband Personal Communications Service (PCS).* The broadband PCS spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission has created a small business size standard for Blocks C and F as an entity that has average gross revenues of less than $40 million in the three previous calendar years. For Block F, an additional small business size standard for ''very small business'' was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA. No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auctions. A total of 93 ''small'' and ''very small'' business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F. On March 23, 1999, the Commission reauctioned 155 C, D, E, and F Block licenses; there were 113 small business winning bidders.

146. *Narrowband PCS.* The Commission held an auction for Narrowband PCS licenses that commenced on July 25, 1994, and closed on July 29, 1994. A second commenced on October 26, 1994 and closed on November 8, 1994. For purposes of the first two Narrowband PCS auctions, ''small businesses'' were entities with average gross revenues for the prior three calendar years of $40 million or less. Through these auctions, the Commission awarded a total of 41 licenses, 11 of which were obtained by four small businesses. To ensure meaningful participation by small business entities in future auctions, the Commission in 2000 for this service adopted a two-tiered small business size standard. A ''small business'' is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $40 million. A ''very small business'' is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than $15 million. The SBA has approved these small business size standards. A third auction commenced on October 3, 2001 and closed on October 16, 2001. Here, five bidders won 317 (MTA and nationwide) licenses. Three of these claimed status as a small or very small entity and won 311 licenses. A fourth auction commenced on September 24, 2003 and closed on September 29, 2003. Here, four bidders won 48 licenses. Four of these claimed status as a very small entity and won 48 licenses. Finally, a fifth auction commenced on September 24, 2003 and closed on September 25, 2003. Here, one bidder won five licenses. That bidder claimed status as a very small entity.

147. *Specialized Mobile Radio* (SMR). The Commission awards ''small entity'' bidding credits in auctions for SMR geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than $15 million in each of the three previous calendar years. The Commission awards ''very small entity'' bidding credits to firms that had revenues of no more than $3 million in each of the three previous calendar years. The SBA has approved these small business size standards for the 900 MHz Service. The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 1996. Sixty bidders claiming that they qualified as small businesses under the $15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels began on October 28, 1997, and was completed on December 8, 1997. Ten bidders claiming that they qualified as small businesses under the $15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band. A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.

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

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

150. *Private Land Mobile Radio* (PLMR). PLMR systems serve an essential role in a range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories, and are often used in support of the licensee's primary (non-telecommunications) business operations. For the purpose of determining whether a licensee of a PLMR system is a small business as defined by the SBA, we could use the definition for ''Cellular and Other Wireless Telecommunications.'' This definition provides that a small entity is any such entity employing no more than 1,500 persons. The Commission does not require PLMR licensees to disclose information about number of employees, so the Commission does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition. Moreover, because PLMR licensees generally are not in the business of providing cellular or other wireless telecommunications services but instead use the licensed facilities in support of other business activities, we are not certain that the Cellular and Other Wireless Telecommunications category is appropriate for determining how many PLMR licensees are small entities for this analysis. Rather, it may be more appropriate to assess PLMR licensees under the standards applied to the particular industry subsector to which the licensee belongs.

151. The Commission's 1994 Annual Report on PLMRs indicates that at the end of fiscal year 1994, there were 1,087,267 licensees operating 12,481,989 transmitters in the PLMR bands below 512 MHz. Because any

entity engaged in a commercial activity is eligible to hold a PLMR license, the revised rules in this context could potentially impact every small business in the United States.

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

153. *Wireless Communications Services.* This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission defined ''small business'' for the wireless communications services (WCS) auction as an entity with average gross revenues of $40 million for each of the three preceding years, and a ''very small business'' as an entity with average gross revenues of $15 million for each of the three preceding years. The SBA has approved these definitions. The FCC auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity. An auction for one license in the 1670–1674 MHz band commenced on April 30, 2003 and closed the same day. One license was awarded. The winning bidder was not a small entity.

154. *39 GHz Service.* The Commission defines ''small entity'' for 39 GHz licenses as an entity that has average gross revenues of less than $40 million in the three previous calendar years. ''Very small business'' is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. The SBA has approved these definitions. The auction of the 2,173 39 GHz licenses began on April 12, 2000, and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses.

155. *Local Multipoint Distribution Service.* An auction of the 986 Local Multipoint Distribution Service (LMDS) licenses began on February 18, 1998, and closed on March 25, 1998. The Commission defined ''small entity'' for LMDS licenses as an entity that has average gross revenues of less than $40 million in the three previous calendar years. An additional classification for ''very small business'' was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. These regulations defining ''small entity'' in the context of LMDS auctions have been approved by the SBA. There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and 387 B Block licenses. On March 27, 1999, the Commission re-auctioned 161 licenses; there were 32 small and very small business winning bidders that won 119 licenses.

156. *218–219 MHz Service.* The first auction of 218–219 MHz (previously referred to as the Interactive and Video Data Service or IVDS) spectrum resulted in 178 entities winning licenses for 594 Metropolitan Statistical Areas (MSAs). Of the 594 licenses, 567 were won by 167 entities qualifying as a small business. For that auction, we defined a small business as an entity that, together with its affiliates, has no more than a $6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than $2 million in annual profits each year for the previous two years. For this service in 1999, we defined a small business as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not exceeding $15 million for the preceding three years. A very small business is defined as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its affiliates, has average annual gross revenues not exceeding $3 million for the preceding three years. The SBA has approved of these definitions. At this time, we cannot estimate the number of licenses that will be won by entities qualifying as small or very small businesses under our rules in future auctions of 218–219 MHz spectrum. Given the success of small businesses in the previous auction, and the prevalence of small businesses in the subscription television services and message communications industries, we assume for purposes of this FRFA that in future auctions, many, and perhaps all, of the licenses may be awarded to small businesses.

157. *Location and Monitoring Service* (LMS). Multilateration LMS systems use non-voice radio techniques to determine the location and status of mobile radio units. For purposes of auctioning LMS licenses, the Commission has defined ''small business'' as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding $15 million. A ''very small business'' is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding $3 million. These definitions have been approved by the SBA. An auction for LMS licenses commenced on February 23, 1999, and closed on March 5, 1999. Of the 528 licenses auctioned, 289 licenses were sold to four small businesses. We cannot accurately predict the number of remaining licenses that could be awarded to small entities in future LMS auctions.

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

159. *Air-Ground Radiotelephone Service.* We use the SBA definition applicable to cellular and other wireless telecommunication companies, *i.e.*, an entity employing no more than 1,500 persons. There are approximately 10 licensees in the Air-Ground Radiotelephone Service, and the Commission estimates that almost all of them qualify as small entities under the SBA definition.

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

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

162. With respect to the second category, which consists of entities that use, or seek to use, MAS spectrum to accommodate their own internal communications needs, we note that MAS serves an essential role in a range of industrial, safety, business, and land transportation activities. MAS radios are used by companies of all sizes, operating in virtually all U.S. business categories, and by all types of public safety entities. For the majority of private internal users, the definitions developed by the SBA would be more appropriate. The applicable definition of small entity in this instance appears to be the ''Cellular and Other Wireless Telecommunications'' definition under the SBA rules. This definition provides that a small entity is any entity employing no more than 1,500 persons. The Commission's licensing database indicates that, as of January 20, 1999, of the 8,670 total MAS station authorizations, 8,410 authorizations were for private radio service, and of these, 1,433 were for private land mobile radio service.

163. *Incumbent 24 GHz Licensees.* The rules that we adopt could affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. The Commission did not develop a definition of small entities applicable to existing licensees in the 24 GHz band. Therefore, the applicable definition of small entity is the definition under the SBA rules for ''Cellular and Other Wireless Telecommunications.'' This definition provides that a small entity is any entity employing no more than 1,500 persons. The 1992 Census of Transportation, Communications and Utilities, conducted by the Bureau of the Census, which is the most recent information available, shows that only 12 radiotelephone (now Wireless) firms out of a total of 1,178 such firms that operated during 1992 had 1,000 or more employees. This information notwithstanding, we believe that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band: Teligent and TRW, Inc. It is our understanding that Teligent and its related companies have less than 1,500 employees, though this may change in the future. TRW is not a small entity. Thus, only one incumbent licensee in the 24 GHz band is a small business entity.

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

165. *700 MHz Guard Band Licenses.* For this service in 2000, we adopted a small business size standard for ''small businesses'' and ''very small businesses'' for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A ''small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $15 million for the preceding three years. Additionally, a ''very small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years. An auction of 52 MEA licenses commenced on September 6, 2000, and closed on September 21, 2000. Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001 and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.

166. In addition, the SBA has developed a small business size standard for Cable and Other Program Distribution, which includes all such companies generating $12.5 million or less in annual receipts. According to Census Bureau data for 1997, there were a total of 1,311 firms in this category, total, that had operated for the entire year. Of this total, 1,180 firms had annual receipts of under $10 million, and an additional 52 firms had receipts of $10 million or more but less than $25 million. Consequently, we estimate that the majority of providers in this service category are small businesses that may be affected by the rules and policies proposed in the *Rural NPRM.*

C. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

167. With respect to the cellular cross-interest rule, in the event that a party with a controlling or otherwise attributable interest in one cellular licensee within an RSA obtains a non-controlling interest of more than 10 percent in the other cellular carrier, the Commission will require that the cellular licensee file a notification with the Commission that will include updated ownership information (FCC Form 602) to reflect this investment. This notification requirement will sunset at the earlier of: (1) Five years after the effective date of this item, or (2) at the cellular licensee's specific renewal deadline.

D. Steps Taken To Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

168. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.

169. We adopt several measures intended to increase the ability of wireless service providers to use licensed spectrum resources flexibly and efficiently to offer a variety of services in a cost-effective manner. The Commission also takes steps to promote access to spectrum and facilitate capital formation for entities, including small entities, seeking to serve rural areas or improve service in rural areas. As explained *infra*, the actions set forth in this *Report and Order* are consistent with the RFA. Given that many carriers serving or seeking to serve rural areas may be considered small entities for FRFA purposes, the steps taken in this *Report and Order* will aid such entities.

170. *Definition of ''rural area''.* We establish a baseline definition of ''rural area'' that includes those counties (or the equivalent) with a population density of 100 persons or less per square mile. While some supported alternative plans such as defining ''rural areas'' as any area within an RSA or refraining from adopting new definitions at all, we rejected these alternatives because it believes its county- and population-based definition provides an appropriate practical guideline for carriers, including carriers qualifying as small entities, which serve or seek to serve rural areas. We believe the ''100 persons or less'' definition best serves the Commission's goals both in ease of the definition's administration and its foundation in widely available population data. Further, by treating the designation not as a uniform definition but rather as a presumption that will apply only to Commission proceedings for which the term ''rural area'' has not been expressly defined, the Commission can maintain continuity and avoid confusion with respect to definitions of ''rural'' already in existence for specific policies.

171. *Size of geographic service areas.* We conclude that maintaining the flexibility to establish geographic areas on a service-by-service basis and promoting the use of a variety of service areas, including small areas such as MSAs/RSAs, are in the public interest. Some commenters made an alternative proposal that the Commission should mandate that small markets such as RSAs are available in every future auction in order to ensure that small carriers are able to acquire licenses at auction. We also received a variety of suggestions on the appropriate size of geographic areas, ranging from a belief that all licenses should be based on MSAs/RSAs to the recommendation of even smaller areas based on counties. We rejects those alternatives, concluding that service area size should not be determined by a bright-line rule as some suggest but rather on service-by-service basis so that the Commission can evaluate all factors relevant to the types of spectrum being licensed.

172. When determining the scope of geographic licenses, we generally consider a number of factors, including the size for each area or areas that will be licensed; the amount of spectrum to be available under each license and whether there should be paired spectrum blocks available for auction. We have designated various sizes of geographic service areas, including smaller market sizes, in order to encourage participation in spectrum auctions and to facilitate deployment of wireless services. Our service-specific approach ensures flexibility while providing an opportunity for spectrum to be made available over small areas such as MSAs or RSAs depending on the record and other considerations relevant to the specific spectrum. This in turn increases the likelihood of service to rural markets by all carriers, including small entities.

173. *Re-licensing issues.* In this document, we conclude that because secondary markets rules and policies are aimed at improving access to spectrum in an efficient manner for all carriers, including small entities, and we therefore would not revise any of its specific re-licensing policies at this time. Before reaching this conclusion, we sought comment on when, and under what circumstances, we should apply re-licensing provisions to prospective spectrum designations in order to evaluate mechanisms that it could employ in the future that would potentially increase service by making spectrum available to those seeking to serve a given area, particularly if the area is rural in nature. We sought comment on a number of different re-licensing mechanisms that could result in increased access to spectrum, including a ''keep what you use'' approach, a ''complete forfeiture'' approach, and geographic overlays. In reaching our decision, we fully considered but rejected, at this time, the ''keep what you use'' re-licensing approach in the context of future band designations. We indicated that, after being given time to mature and take effect, if the secondary markets rules and policies do not provide sufficient incentives to increase spectrum access in rural areas, we would support future consideration of ''keep what you use'' approaches in the context of specific service rulemakings for new licensed services.

174. *Cellular cross-interest rule.* We eliminate the remaining components of the cellular cross-interest rule that currently apply only in RSAs and transitions to case-by-case review for cellular transactions. To facilitate additional access to capital by cellular carriers in rural areas, the Commission, before adopting this new rule, sought comment regarding whether the prohibition against cellular cross-interests in all RSAs remains in the public interest and whether the current cross-interest rule should be retained in RSAs with three or fewer CMRS competitors. Alternatively, we sought comment on whether to eliminate the prohibition for all RSAs where the ownership interest being obtained is not a controlling interest (*i.e.*, where the interest is a non-controlling interest and where the transaction otherwise would not require prior FCC approval). We, however, rejected these alternatives and found that elimination of the cellular cross-interest rule and reliance on a uniform case-by-case review process for all aggregations of spectrum and potentially anticompetitive cellular cross-interests in RSAs is currently the better approach as compared to the old, prophylactic limits. We believe that modification of the rule is necessary to better encourage more transactions and levels of financing that are in the public interest while still maintaining much of the protection afforded by the cellular cross-interest rule. We recognize that the approach limiting cross-interests in RSAs, as well as the proposal to eliminate the rule only in counties with more than three competitors, may interfere with investment in rural areas by discouraging certain financing in the RSA portions of a regional market but not in the MSA portions. We believe that elimination of the cellular cross-interest rule will provide greater

flexibility to all carriers, including small entities.

175. *Conditional security interests to RUS.* We relax our security interest policy to permit commercial and private wireless, terrestrial-based licensees to grant RUS a conditional security interest in their FCC licenses. We believe this action will significantly increase the financing opportunities for all licensees, including those classified as small entities, by increasing the value of their available collateral. Although one commenter suggested in the alternative that permitting RUS to obtain a security interest in an FCC license would make the RUS lending process more onerous, the Commission rejected this idea and believes that its new policy will enhance RUS loan opportunities. We believe that allowing FCC licenses to be used as collateral will serve the public interest by facilitating licensees' access to capital. In doing so, the policy will provide increased flexibility for all licensees, including small entities, seeking to expand into rural areas.

176. *Increase of power limits for certain services.* We amend our regulations to increase cellular, PCS, and AWS power limits in rural areas as a means of encouraging service to these areas. In doing so, the Commission evaluated the technical and operations rules for the various services at issue and found that increasing power limits may provide measurable benefits without creating harmful interference. Although it considered and alternative proposal to adopt such flexibility for other services in addition to cellular, PCS, and AWS, we rejected this alternative due to lack of support in the record. However, licensees in other services may file a request for waiver of service-specific power limits.

177. *Substantial service construction requirement.* We amend our regulations to provide a substantial service construction benchmark for the following licensees: 30 MHz broadband PCS licensees; 800 MHz SMR licensees (blocks A, B, and C); certain 220 MHz licensees; LMS licensees; and 700 MHz public safety licensees. These licensees now have the option of satisfying their construction requirements by providing substantial service or by complying with other service-specific construction benchmarks already available to them under the Commission's rules. As part of the amendments and in order to provide licensees with guidance, we adopt safe harbors for providing substantial service to rural areas: A licensee will be deemed to have met the substantial service requirement if it provides coverage to at least 75 percent of the geographic area of at least 20 percent of the ''rural areas'' within its licensed area. With respect to fixed wireless services, the substantial service requirement is met if a licensee constructs at least one end of a permanent link in at least 20 percent of the number of ''rural areas'' within its licensed area.

178. We implement this rule change in order to increase licensees' flexibility to develop rural-focused business plans and to allow all licensees, including small entities, to deploy spectrum-based services in more sparsely populated areas without being bound to concrete population or geographic coverage requirements. Certain commenters urged the adoption of a substantial service standard only for those licensees with ''small geographic territories.'' We rejected this alternative, stating that it would only result in focused coverage of populated areas instead of more rural areas. We also rejected proposals for a ''very rural area'' safe harbor or to modify safe harbors to include a population component. We noted that several commenters proposed as an alternative that a population component be included to make the safe harbor more meaningful for licensees whose licensed areas include counties with large land areas. These commenters argued that in such circumstances, it may be easier for a licensee to satisfy population requirements instead of the substantial service safe harbor. In rejecting these alternatives, we've stated that the safe harbors are not intended to be the only means of providing substantial service, and that we will take into consideration a situation in which a licensee is serving a ''very rural area'' or a very large geographic area.

179. *Infrastructure sharing.* We adopt a more flexible *de facto* control standard when interpreting whether a licensee (or spectrum lessee) retains *de facto* control for purposes of section 310(d) when engaging in an infrastructure sharing arrangement involving facilities only. Although the *Secondary Markets Report and Order* initially set out this policy for the purposes of spectrum sharing only, the Commission believes that extending this policy to infrastructure sharing arrangements will provide the potential for savings in both capital costs for the construction of facilities and for improved coverage in rural areas. The Commission noted that most commenters supported the adoption of this more flexible standard, which they believe will help to alleviate the significant financial barriers small regional entities face when constructing wireless networks. Some commenters, on the other hand, stated their concern with the potential for interference that may result from the collocation of antennas. In rejecting this concern as needless, the Commission pointed out that all parties to infrastructure sharing arrangements, including small entities, must continue to comply with the Commission's interference and non-interference related rules and policies.

F. Reports to Congress and SBA

180. The Commission will send a copy of this *Report and Order*, including the FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act. In addition, the Commission will send a copy of the *Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. In addition, the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this *Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

V. Ordering Clauses

181. Pursuant to the authority contained in sections 4(i), 11, 303(r), 309(j) and 706 of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 157, 161, 303(r), and 309(j), the *Report and Order* is adopted.

182. The Petition for Reconsideration filed by Cingular Wireless LLC, in WT Docket No. 01–14 on February 13, 2002, and the Petition for Reconsideration filed by Dobson Communications Corp./Western Wireless Corp./Rural Cellular Corp. in WT Docket No. 01–14 on February 13, 2002 are granted, to the extent described above.

183. Pursuant to sections 4(i), 7, 303(c), 303(f), 303(g), 303(r), and 332 of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 157, 303(c), 303(f), 303(g), 303(r), and 332, the rule changes specified below are adopted. The rules will become effective February 14, 2005, except for § 1.919(c), which contains an information collection requirement that is not effective until approved by the Office of Management and Budget (OMB). The agency will publish a document in the **Federal Register** announcing the effective date of § 1.919(c).

184. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, shall send a copy of the *Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects

47 CFR Part 1

Administrative practice and procedure, Communications common carriers, Radio, Reporting and Recordkeeping requirements, Telecommunications.

47 CFR Part 22

Communications common carriers, Radio.

47 CFR Part 24

Personal communications services, Radio.

47 CFR Part 27

Wireless Communications Service.

47 CFR Part 90

Business and industry, Common carriers, Radio, Reporting and recordkeeping requirements.

Federal Communications Commission.

William F. Caton,

Deputy Secretary.

Rule Changes

■ For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 1, 22, 24, 27, and 90 as follows:

PART 1—PRACTICE AND PROCEDURE

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

Authority: 47 U.S.C. 151, 154(i), 154(j), 155, 225, 303(r), 309 and 325(e).

■ 2. Section 1.919 is amended by redesignating paragraphs (c), (d), and (e) as paragraphs (d), (e), and (f), and by adding a new paragraph (c) to read as follows:

§ 1.919 Ownership information.

* * * * *

(c) *Reporting of Cellular Cross-Ownership Interests.* (1) A cellular licensee of one channel block in a cellular geographic service area (CGSA) must report current ownership information if the licensee, a party that owns a controlling or otherwise attributable interest in the licensee, or a party that actually controls the licensee, obtains a direct or indirect ownership interest of more than 10 percent in a cellular licensee, a party that owns a controlling or otherwise attributable interest in a cellular licensee, or a party that actually controls a cellular licensee, for the other channel block in an overlapping CGSA, if the overlap is located in whole or in part in a Rural Service Area (RSA), as defined in § 22.909 of this chapter. The ownership information must be filed on a FCC Form 602 within 30 days of the date of consummation of the transaction and reflect the specific levels of investment.

(2) For the purposes of paragraph (c) of this section, the following definitions and other provisions shall apply:

(i) *Non-controlling interests.* A direct or indirect non-attributable interest in both systems is excluded from the reporting requirement set out in paragraph (c)(1) of this section.

(ii) *Ownership attribution.* For purposes of paragraph (c) of this section, ownership and other interests in cellular licensees will be attributed to their holders pursuant to the following criteria:

(A) Controlling interest shall be attributable. Controlling interest means majority voting equity ownership, any general partnership interest, or any means of actual working control (including negative control) over the operation of the licensee, in whatever manner exercised.

(B) Partnership and other ownership interests and any stock interest amounting to 20 percent or more of the equity, or outstanding stock, or outstanding voting stock of a cellular licensee shall be attributed.

(C) Non-voting stock shall be attributed as an interest in the issuing entity if in excess of the amounts set forth in paragraph (c)(2)(ii)(B) of this section.

(D) Debt and instruments such as warrants, convertible debentures, options, or other interests (except non-voting stock) with rights of conversion to voting interests shall not be attributed unless and until converted.

(E) Limited partnership interests shall be attributed to limited partners and shall be calculated according to both the percentage of equity paid in and the percentage of distribution of profits and losses.

(F) Officers and directors of a cellular licensee shall be considered to have an attributable interest in the entity with which they are so associated. The officers and directors of an entity that controls a cellular licensee shall be considered to have an attributable interest in the cellular licensee.

(G) Ownership interests that are held indirectly by any party through one or more intervening corporations will be determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain and application of the relevant attribution benchmark to the resulting product, except that if the ownership percentage for an interest in any link in the chain exceeds 50 percent or represents actual control, it shall be treated as if it were a 100 percent interest. (For example, if A owns 20 percent of B, and B owns 40 percent of licensee C, then A's interest in licensee C would be 8 percent. If A owns 20 percent of B, and B owns 51 percent of licensee C, then A's interest in licensee C would be 20 percent because B's ownership of C exceeds 50 percent.)

(H) Any person who manages the operations of a cellular licensee pursuant to a management agreement shall be considered to have an attributable interest in such licensee if such person, or its affiliate, has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence:

(1) The nature or types of services offered by such licensee;

(2) The terms upon which such services are offered; or

(3) The prices charged for such services.

(I) Any licensee, or its affiliate, who enters into a joint marketing arrangements with a cellular licensee, or its affiliate, shall be considered to have an attributable interest, if such licensee or affiliate has authority to make decisions or otherwise engage in practices or activities that determine, or significantly influence:

(1) The nature or types of services offered by such licensee;

(2) The terms upon which such services are offered; or

(3) The prices charged for such services.

(3) *Sunset Provisions.* This notification requirement will sunset at the earlier of:

(i) Five years after February 14, 2005, or

(ii) At the cellular licensee's specific deadline for renewal.

* * * * *

PART 22—PUBLIC MOBILE SERVICES

■ 3. The authority citation for part 22 continues to read as follows:

Authority: 47 U.S.C. 154, 222, 303, 309 and 332.

■ 4. Section 22.702 is revised to read as follows:

§ 22.702 Eligibility.

Existing and proposed communications common carriers are eligible to hold authorizations to operate conventional central office, interoffice and rural stations in the Rural Radiotelephone Service. Subscribers are also eligible to hold authorizations to operate rural subscriber stations in the Rural Radiotelephone Service.

■ 5. Section 22.913 is amended by revising paragraph (a) to read as follows:

§ 22.913 Effective radiated power limits.

* * * * *

(a) *Maximum ERP.* In general, the effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. However, for those systems operating in areas more than 72 km (45 miles) from international borders that:

(1) Are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census; or,

(2) Extend coverage on a secondary basis into cellular unserved areas, as those areas are defined in § 22.949, the ERP of base transmitters and cellular repeaters of such systems must not exceed 1000 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

* * * * *

§ 22.942 [Removed]

■ 6. Remove § 22.942.

PART 24—PERSONAL COMMUNICATIONS SERVICES

■ 7. The authority citation for part 24 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 302, 303, 309 and 332.

■ 8. Section 24.203 is amended by revising paragraph (a) to read as follows:

§ 24.203 Construction requirements.

(a) Licensees of 30 MHz blocks must serve with a signal level sufficient to provide adequate service to at least one-third of the population in their licensed area within five years of being licensed and two-thirds of the population in their licensed area within ten years of being licensed. Licensees may, in the alternative, provide substantial service to their licensed area within the appropriate five- and ten-year benchmarks. Licensees may choose to define population using the 1990 census or the 2000 census. Failure by any licensee to meet these requirements will result in forfeiture or non-renewal of the license and the licensee will be ineligible to regain it.

* * * * *

■ 9. Section 24.232 is revised to read as follows:

§ 24.232 Power and antenna height limits.

(a) Base stations are limited to 1640 watts peak equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT, except as described in paragraph (b) of this section. *See* § 24.53 for HAAT calculation method. Base station antenna heights may exceed 300 meters with a corresponding reduction in power; *see* Table 1 of this section. In no case may the peak output power of a base station transmitter exceed 100 watts. The service area boundary limit and microwave protection criteria specified in § 24.236 and § 24.237 apply.

TABLE 1.—REDUCED POWER FOR BASE STATION ANTENNA HEIGHTS OVER 300 METERS

HAAT in meters	Maximum EIRP watts
≤300	1640
≤500	1070
≤1000	490
≤1500	270
≤2000	160

(b) Base stations that are located in counties with population densities of 100 persons or fewer per square mile, based upon the most recently available population statistics from the Bureau of the Census, are limited to 3280 watts peak equivalent isotropically radiated power (EIRP) with an antenna height up to 300 meters HAAT; *See* § 24.53 for HAAT calculation method. Base station antenna heights may exceed 300 meters with a corresponding reduction in power; *see* Table 2 of this section. In no case may the peak output power of a base station transmitter exceed 200 watts. The service area boundary limit and microwave protection criteria specified in § 24.236 and § 24.237 apply. Operation under this paragraph must be coordinated in advance with all PCS licensees within 120 kilometers (75 miles) of the base station and is limited to base stations located more than 120 kilometers (75 miles) from the Canadian border and more than 75 kilometers (45 miles) from the Mexican border.

TABLE 2.—REDUCED POWER FOR BASE STATION ANTENNA HEIGHTS OVER 300 METERS

HAAT in meters	Maximum EIRP watts
≤300	3280
≤500	2140
≤1000	980
≤1500	540
≤2000	320

(c) Mobile/portable stations are limited to 2 watts EIRP peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

(d) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

■ 10. Section 24.237 is amended by revising paragraph (d) to read as follows:

§ 24.237 Interference protection.

* * * * *

(d) The licensee must perform an engineering analysis to assure that the proposed facilities will not cause interference to existing OFS stations within the coordination distance specified in Table 3 of a magnitude greater than that specified in the criteria set forth in paragraphs (e) and (f) of this section, unless there is prior agreement with the affected OFS licensee. Interference calculations shall be based on the sum of the power received at the terminals of each microwave receiver from all of the applicant's current and proposed PCS operations.

TABLE 3.—COORDINATION DISTANCES IN KILOMETERS

	PCS Base Station Antenna HAAT in Meters												
EIRP(W)	5	10	20	50	100	150	200	250	300	500	1000	1500	2000
0.1	90	93	99	110	122	131	139	146	152	173	210	239	263
0.5	96	100	105	116	128	137	145	152	158	179	216	245	269
1	99	103	108	119	131	140	148	155	161	182	219	248	272
2	120	122	126	133	142	148	154	159	164	184	222	250	274
5	154	157	161	168	177	183	189	194	198	213	241	263	282

TABLE 3.—COORDINATION DISTANCES IN KILOMETERS—Continued

PCS Base Station Antenna HAAT in Meters													
EIRP(W)	5	10	20	50	100	150	200	250	300	500	1000	1500	2000
10	180	183	187	194	203	210	215	220	225	240	268	291	310
20	206	209	213	221	229	236	242	247	251	267	296	318	337
50	241	244	248	255	264	271	277	282	287	302	331	354	374
100	267	270	274	282	291	297	303	308	313	329	358	382	401
200	293	296	300	308	317	324	330	335	340	356	386	409	436
500	328	331	335	343	352	359	365	370	375	391	421	440	
1000	354	357	361	369	378	385	391	397	402	418			
1200	361	364	368	376	385	392	398	404	409	425			
1640	372	375	379	388	397	404	410	416	421	437			
2400	384	387	391	399	408	415	423	427	431				
3280	396	399	403	412	419	427	435	439	446				

* * * * *

PART 27—MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

■ 11. The authority citation for part 27 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337 unless otherwise noted.

■ 12. Section 27.50 is amended by revising paragraph (d) to read as follows:

§ 27.50 Power and antenna height limits.

* * * * *

(d) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands:

(1) The power of each fixed or base station transmitting in the 2110–2155 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to a peak equivalent isotropically radiated power (EIRP) of 3280 watts and a peak transmitter output power of 200 watts. The power of each fixed or base station transmitting in the 2110–2155 MHz band from any other location is limited to a peak EIRP of 1640 watts and a peak transmitter output power of 100 watts. A licensee operating a base or fixed station utilizing a power of more than 1640 watts EIRP must coordinate such operations in advance with all Government and non-Government satellite entities in the 2025–2110 MHz band. Operations above 1640 watts EIRP must also be coordinated in advance with the following licensees within 120 kilometers (75 miles) of the base or fixed station: all Multipoint Distribution Service (MDS) licensees authorized under Part 21 in the 2155–2160 MHz band and all AWS licensees in the 2110–2155 MHz band.

(2) Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to a peak EIRP of 1 watt. Fixed stations operating in this band are limited to a maximum antenna height of 10 meters above ground, and mobile and portable stations must employ a means for limiting power to the minimum necessary for successful communications.

* * * * *

PART 90—PRIVATE LAND MOBILE RADIO SERVICES

■ 13. The authority citation for part 90 continues to read as follows:

Authority: 47 U.S.C. 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended.

■ 14. Section 90.155 is amended by revising paragraph (d) to read as follows:

§ 90.155 Time in which station must be placed in operation.

* * * * *

(d) Multilateration LMS EA-licensees, authorized in accordance with § 90.353, must construct and place in operation a sufficient number of base stations that utilize multilateration technology (*see* paragraph (e) of this section) to provide multilateration location service to one-third of the EA's population within five years of initial license grant, and two-thirds of the population within ten years. Licensees may, in the alternative, provide substantial service to their licensed area within the appropriate five- and ten-year benchmarks. In demonstrating compliance with the construction and coverage requirements, the Commission will allow licensees to individually determine an appropriate field strength for reliable service, taking into account the technologies employed in their system design and other relevant technical factors. At the five- and ten-year benchmarks, licensees will be required to file a map and FCC Form 601 showing compliance with the coverage requirements (*see* § 1.946 of this chapter).

* * * * *

■ 15. Section 90.685 is amended by revising paragraph (b) to read as follows:

§ 90.685 Authorization, construction and implementation of EA licenses.

* * * * *

(b) EA licensees in the 806–821/851–866 MHz band must, within three years of the grant of their initial license, construct and place into operation a sufficient number of base stations to provide coverage to at least one-third of the population of its EA-based service area. Further, each EA licensee must provide coverage to at least two-thirds of the population of the EA-based service area within five years of the grant of their initial license. EA-based licensees may, in the alternative, provide substantial service to their markets within five years of the grant of their initial license. Substantial service shall be defined as: ''Service which is sound, favorable, and substantially above a level of mediocre service.''

* * * * *

■ 16. Section 90.767 is revised to read as follows:

§ 90.767 Construction and implementation of EA and Regional licenses.

(a) An EA or Regional licensee must construct a sufficient number of base stations (*i.e.*, base stations for land mobile and/or paging operations) to provide coverage to at least one-third of the population of its EA or REAG within five years of the issuance of its initial license and at least two-thirds of the population of its EA or REAG within ten years of the issuance of its initial license. Licensees may, in the alternative, provide substantial service to their licensed areas at the appropriate five- and ten-year benchmarks.

(b) Licensees must notify the Commission in accordance with § 1.946

of this chapter of compliance with the Construction requirements of paragraph (a) of this section.

(c) Failure by an EA or Regional licensee to meet the construction requirements of paragraph (a) of this section, as applicable, will result in automatic cancellation of its entire EA or Regional license. In such instances, EA or Regional licenses will not be converted to individual, site-by-site authorizations for already constructed stations.

(d) EA and Regional licensees will not be permitted to count the resale of the services of other providers in their EA or REAG, *e.g.*, incumbent, Phase I licensees, to meet the construction requirement of paragraph (a) of this section, as applicable.

(e) EA and Regional licensees will not be required to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations.

■ 17. Section 90.769 is revised to read as follows:

§ 90.769 Construction and implementation of Phase II nationwide licenses.

(a) A nationwide licensee must construct a sufficient number of base stations (*i.e.*, base stations for land mobile and/or paging operations) to provide coverage to a composite area of at least 750,000 square kilometers or 37.5 percent of the United States population within five years of the issuance of its initial license and a composite area of at least 1,500,000 square kilometers or 75 percent of the United States population within ten years of the issuance of its initial license. Licensees may, in the alternative, provide substantial service to their licensed areas at the appropriate five- and ten-year benchmarks.

(b) Licensees must notify the Commission in accordance with § 1.946 of this chapter of compliance with the Construction requirements of paragraph (a) of this section.

(c) Failure by a nationwide licensee to meet the construction requirements of paragraph (a) of this section, as applicable, will result in automatic cancellation of its entire nationwide license. In such instances, nationwide licenses will not be converted to individual, site-by-site authorizations for already constructed stations.

(d) Nationwide licensees will not be required to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations.

[FR Doc. 04–27049 Filed 12–14–04; 8:45 am]

BILLING CODE 6712–01–P