Before the

FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of

Amendment of Part 90 of the Commission's Rules To Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service	)))))	PR Docket No. 89-552 RM-8506
Implementation of Sections 3(n) and 332 of the Communications Act	)))	GN Docket No. 93-252
Regulatory Treatment of Mobile Services	)	
Implementation of Section 309(j) of the Communications Act -- Competitive Bidding	)))	PP Docket No. 93-253

THIRD REPORT AND ORDER; FIFTH NOTICE OF PROPOSED RULEMAKING

Adopted: February 19, 1997 **Released: March 12, 1997**

Comments Due: April 15, 1997 Reply Comments Due: April 30, 1997

By the Commission: Chairman Hundt approving in part, dissenting in part, and issuing a statement; Commissioners Ness and Chong issuing separate statements.

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THIRD REPORT AND ORDER

I. INTRODUCTION

1. By this Third Report and Order, we adopt rules to govern the future operation and licensing of the 220-222 MHz band (220 MHz service). This action is taken as part of our continuing implementation of the regulatory framework for mobile radio services enacted by Congress in Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, which amended Sections 3(n) and 332 of the Communications Act of 1934.[1] As part of the implementation of the Budget Act, we initiated a series of rulemaking proceedings to provide guidelines for the regulation of commercial and private mobile radio services, including the 220 MHz service, consistent with the policy of regulatory symmetry as reflected in the revisions to Section 332 of the Act.

2. One of our actions resulting from these proceedings, the *CMRS Third Report and Order* in GN Docket No. 93-252,[2] addressed a variety of issues relating to the licensing of the 220 MHz service, but deferred a detailed examination of that service to a separate rulemaking proceeding. That proceeding was initiated by the adoption of the Second Memorandum Opinion and Order and Third Notice of Proposed Rulemaking in PR Docket No. 89-552 (*Third Notice*),[3] where we proposed a new licensing plan for 220 MHz service. The Third Report and Order adopted today generally establishes that proposal for the Phase II [4] licensing of the 220-222 MHz band, with some modifications that we discuss in the following sections.

3. As stated in the *Third Notice*, our goal is to establish a flexible regulatory framework that will allow for the efficient licensing of the 220-222 MHz band, eliminate unnecessary regulatory burdens on both Phase I and Phase II licensees, and enhance the competitive potential

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[1] Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI, §§ 6002(b)(2)(A), 6002(b)(2)(B), 107 Stat. 312, 392 (1993) (Budget Act). Section 3(n) of the Communications Act has been redesignated as Section 3(14). *See* Section 3(c)(4) of the Telecommunications Act of 1996. The reference to former Section 3(n) in Section 332 has been changed to a reference to Section 3. *See* Section 3(d)(2) of the Telecommunications Act of 1996.

[2] Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Third Report and Order, 9 FCC Rcd 7988 (1994) (*CMRS Third Report and Order*), *recon. pending*.

[3] Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, PR Docket No. 89-552, Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, and Implementation of Section 309(j) of the Communications Act--Competitive Bidding, 220-222 MHz, PP Docket No. 93-253, Second Memorandum Opinion and Order and Third Notice of Proposed Rulemaking, 11 FCC Rcd 188 (1995) (*Third Notice*).

[4] We refer herein to licenses granted pursuant to this new framework as Phase II licenses. Licenses granted under the rules that existed prior to the adoption of this Order are referred to herein as Phase I licenses.

of the 220 MHz service in the mobile services marketplace. [5] We believe that the adoption of the rules set forth in today's Order will enable us to continue to promote the development of advanced radio technologies, while making the widest variety of mobile communications services available to the American public.

4. In the Fifth Notice of Proposed Rulemaking, we propose to permit Phase I nationwide licensees to partition their licenses. We also seek comment on whether to permit and how to implement spectrum disaggregation for both Phase I and Phase II licensees.

II. EXECUTIVE SUMMARY

5. The following is a summary of the rules adopted in this Order for Phase II licensing of the 220-222 MHz band:

A. NATIONWIDE LICENSING

6. We will return the pending, mutually exclusive applications for the four non-commercial, Phase I nationwide licenses and adopt a new licensing procedure for the 30 channels associated with these licenses. The Phase II licensing of these channels will be governed by the following rules:

- The 30 channels will be licensed on a nationwide basis to all applicants -- *i.e.*, applicants that intend to use the channels to offer commercial services as well as applicants that intend to use the channels for their private, internal use.

- The channels will be assigned, in the form of three 10-channel authorizations, through competitive bidding, based upon our conclusion that the principal use of the spectrum will be for the provision of for-profit, subscriber-based services.

B. NON-NATIONWIDE LICENSING

7. We will assign Phase II, non-nationwide 220 MHz channels in the following manner:

- Fifty channels in 175 geographic areas defined as Economic Areas by the Bureau of Economic Analysis, Department of Commerce (``EA licenses") and 75 channels in the geographic areas defined by six ``Regional Economic Area Groupings" (``Regional licenses") as follows:

[5] *Third Notice*, 11 FCC Rcd at 193 (para. 2).

NON-NATIONWIDE 220 MHz CHANNEL ALLOCATION PLAN

EA BLOCK	CHANNELS
A: Channel Groups[6] 2, 13	10
B: Channel Groups 3, 16	10
C: Channel Groups 5, 18	10
D: Channel Groups 8, 19	10
E: Channels 171-180	10
TOTAL	**50**

REGIONAL BLOCK	CHANNELS
F: Channel Groups 1, 6, 11	15
G: Channel Groups 4, 9, 14	15
H: Channel Groups 7, 12, 17	15
I: Channel Groups 10, 15, 20	15
J: Channels 186-200	15
TOTAL	**75**

- We make these channels available to all eligible applicants, and we resolve mutually exclusive applications for these channels through competitive bidding.

- We permit EA and Regional licensees to operate stations anywhere within their geographic borders, provided that their transmissions do not exceed a predicted field strength of 38 dBuV/m at their border, and they protect the base stations of Phase I licensees in accordance with the existing co-channel separation criteria for 220 MHz stations.

- We provide a 10-year license term for EA and Regional licensees, and we require EA and Regional licensees to meet five- and ten-year construction benchmarks.

- We continue to assign, on a single-station basis, 10 channels to applicants eligible in the Public Safety Radio Services (PSRS) and five channels to applicants eligible in the Emergency Medical Radio Service (EMRS) to meet internal communications needs.

[6] The Channel Groups indicated in the allocation plan are the 5-channel, non-contiguous assignments identified as ``Group Nos. 1, 2, 3" *etc*., in Section 90.721 of the Commission's Rules, 47 C.F.R. § 90.721.

- We assign five of the 10 PSRS channel pairs on a shared basis to all public safety eligibles. In so doing, we enable public safety licensees within a particular geographic area to share these channels and coordinate the location and operation of base stations on these channels, which will enable them to communicate more effectively with each other during emergencies.

- We assign channels in the PSRS and EMRS pools on a first-come, first-served basis and resolve mutually exclusive applications by random selection procedures.

C. PAGING OPERATIONS; CHANNEL AGGREGATION

- We allow Phase I and Phase II, nationwide and non-nationwide 220 MHz licensees to operate paging systems without the requirement that such use be on an ancillary basis to land mobile operations.

- We allow Phase I and Phase II, nationwide and non-nationwide 220 MHz licensees, to aggregate any of their contiguous 5 kHz channels and operate on channels wider than 5 kHz, so long as they comply with the prescribed spectrum efficiency standard.

D. OTHER ISSUES

1. Technical and Operational Matters

8. We modify our existing 220 MHz rules with regard to certain technical and operational matters as follows:

- We allow Phase I and Phase II, nationwide and non-nationwide, non-CMRS 220 MHz licensees to operate fixed stations without the requirement that such use be on an ancillary basis to land mobile operations.

- We allow licensees using the 220-222 MHz band for geophysical telemetry operations to operate fixed stations on a temporary basis, without the requirement that such use be ancillary to land mobile operations, and on a secondary basis to Phase I and Phase II licensees authorized to operate on 220 MHz channels on a primary basis.

2. Application Procedures

9. We adopt the following procedures and definitions for initial applications, amended applications, applications to modify authorizations, and renewal of authorizations:

- We define initial applications for 220 MHz licenses as applications for the nationwide, EA, and Regional licenses to be assigned in Phase II.

- We adopt the same procedures for amending applications and modifying authorizations for Phase II 220 MHz licenses that are established for other Part 90 Commercial Mobile Radio Services (CMRS).

- We adopt the same procedures for obtaining grants of Special Temporary Authority (STA) for Phase II 220 MHz licenses that are established for other Part 90 CMRS services.

- We adopt for all 220 MHz licensees the renewal standards adopted in the *CMRS Third Report and Order* for Part 90 CMRS services.

E. COMPETITIVE BIDDING RULES

1. Competitive Bidding Design

10. We will award a total of three nationwide, 30 Regional, and 875 EA licenses in the Phase II 220 MHz service. We will use a single simultaneous multiple round auction to award these licenses. Both incumbents and new entrants are eligible to bid for all nationwide, Regional, and EA licenses.

11. The Wireless Telecommunications Bureau will, by Public Notice prior to the auction, announce guidelines for bid increments, *i.e.*, the amount or percentage by which the bid must be raised above the previous round's high bid in order to be accepted as a valid bid in the current bidding round. We will use a simultaneous stopping rule and the Milgrom-Wilson activity rule for this auction. The timing and duration of auction rounds will be determined by the Wireless Telecommunications Bureau and announced by Public Notice or by announcement during the auction. We will use bid withdrawal and default rules for this auction similar to those used in the broadband PCS auctions.

2. Procedural and Payment Rules

12. Applicants will apply for the Phase II 220 MHz auction by filing a short-form application (FCC Form 175), indicating the markets and spectrum blocks for which they seek to apply, and paying an upfront payment. The Wireless Telecommunications Bureau will set the amount of the upfront payment taking into account such factors as the population in each geographic license area and the value of similar spectrum.

13. At the conclusion of the auction, winning bidders must submit their down payments and file their long-form applications (FCC Form 600). The down payments required of all winning bidders will be 20 percent of their winning bids.

3. Regulatory Safeguards

14. The Phase II 220 MHz auction will be subject to regulatory safeguards to prevent applicants from colluding during the auction or obtaining unjust enrichment from subsequent transfers of their licenses.

4. Designated Entities

15. We will not establish an entrepreneurs' block for the 220 MHz band. Instead small businesses will be eligible for bidding credits and an installment payment plan. For purposes of determining small business status, we will attribute the gross revenues of all controlling principals

in the small business applicant as well as the gross revenues of affiliates of the applicant. We define two categories of small businesses: (1) a small business is an entity that, together with affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years; and (2) a very small business is an entity that, together with affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years.

16. Very small businesses meeting the not more than $3 million benchmark are eligible for a 25 percent bidding credit on any Phase II 220 MHz license; small businesses meeting the not more than $15 million benchmark are eligible for a ten percent bidding credit on any Phase II 220 MHz license. Licensees who qualify as small businesses or very small businesses in 220 MHz auctions will be eligible to pay their winning bid amount in quarterly installments over the term of the license with interest charges to be fixed at the time of licensing at a rate equal to the rate for ten-year U.S. Treasury obligations plus 2.5 percent. These licensees may make interest-only payments for the first two years of the license term. We do not adopt reduced upfront payments or reduced down payments for small businesses in the Phase II 220 MHz service.

17. We will adopt unjust enrichment provisions similar to those adopted for narrowband PCS and the 900 MHz SMR service. If a licensee that qualifies for bidding credits and installment payments seeks to assign or transfer control of its license during its term to an entity that does not meet the small business or very small business definition, we will require payment of all or a portion of the bidding credit, remaining principal and any interest accrued through the date of assignment as a condition of the license assignment or transfer.

5. Partitioning and Disaggregation

18. We will permit any holder of a Phase II 220 MHz license to partition portions of its authorization and enter into contracts with eligible parties, allowing such parties to file long-form applications for the usable channels within the partitioned area. We will not at this time authorize spectrum disaggregation for the Phase II 220 MHz service.

F. USE OF SPECTRUM FOR PARTICULAR SERVICES

19. The Commission makes no warranties about the use of this spectrum for particular services. Applicants should be aware that a Commission auction represents an opportunity to become a Commission licensee in this service, subject to certain conditions and regulations. A Commission auction does not constitute an endorsement by the Commission of any particular services, technologies, or products, nor does a Commission license constitute a guarantee of business success. Applicants should perform their individual due diligence before proceeding as they would with any new business venture.

III. BACKGROUND

A. THE 220-222 MHZ SERVICE

20. In 1988, the Commission adopted the *220 MHz Allocation Order*,[7] reallocating the 220-222 MHz band from the Amateur Radio service to private and Federal Government land mobile use. In so doing, we dedicated this spectrum for the development of spectrally-efficient narrowband technology to afford this technology an opportunity to gain acceptance in the marketplace. The 220 MHz service was then established in 1991 with the adoption of the *220 MHz Report and Order*.[8] It is regulated under Subpart T of Part 90 of our Rules. [9]

21. In the *220 MHz Report and Order*, the Commission adopted service rules for the assignment of 200 five kilohertz (kHz) channel pairs in the 220-222 MHz band to both Federal Government and private land mobile users. We authorized 60 of the 200 channel pairs for nationwide licensing, with 10 of these designated for assignment to Federal Government entities. The remaining 50 nationwide channel pairs were reserved for non-Government users, with 20 channel pairs designated for ``commercial" use and 30 channel pairs designated for ``non-commercial" use.[10] The 20 commercial channel pairs were divided into four five-channel blocks and the 30 non-commercial channel pairs were divided into two 10-channel and two five-channel blocks. We allocated the remaining 140 channel pairs for non-nationwide use by both Government and non-Government licensees. We also decided that all applications for 220 MHz channels would be granted on a first-come, first-served basis and that mutually exclusive applications would be assigned through random selection procedures. [11]

22. On May 1, 1991, the Commission began accepting applications for nationwide and non-nationwide licenses in the 220-222 MHz band. We received more than 59,000 applications, and on May 24, 1991, the Private Radio Bureau imposed a freeze on the filing of all applications,

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[7] Amendment of Part 2 of the Commission's Rules Regarding the Allocation of the 216-225 MHz Band, Report and Order, GEN Docket No. 87-14, 3 FCC Rcd 5287 (1988) (*220 MHz Allocation Order*); *recon. denied*, Memorandum Opinion and Order, 4 FCC Rcd 6407 (1989), *aff'd*, American Radio Relay League v. FCC, No. 89-1602, 918 F. 2d 978, 1990 WL 191636 (D.C. Cir. 1990).

[8] Amendment of Part 90 of the Commission's Rules To Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Services, PR Docket No. 89-552, Notice of Proposed Rule Making, 4 FCC Rcd 8593 (1989) (*220 MHz Notice*); Report and Order, 6 FCC Rcd 2356 (1991) (*220 MHz Report and Order*); Further Notice of Proposed Rule Making, 7 FCC Rcd 898 (1992) (*220 MHz Further Notice*); *recon. granted in part, denied in part, & rules amended*, Memorandum Opinion and Order, 7 FCC Rcd 4484 (1992) (*220 MHz Memorandum Opinion and Order*); Erratum, DA 92-1177 (released Aug. 28, 1992); Second Erratum, 7 FCC Rcd 6297 (1992); *recon. granted in part, denied in part*, Order, 8 FCC Rcd 4161 (1993) (*220 MHz Second Reconsideration Order*), *recon. pending, appeal dismissed*, Evans v. FCC, Case No. 92-137, (D.C. Cir. Mar. 18, 1994).

[9] Subpart T of Part 90 of the Commission's Rules, 47 C.F.R. §§ 90.701-90.757.

[10] At the time of the adoption of the *220 MHz Report and Order*, we used the term ``commercial" to refer to licensees who would operate as carriers under Part 90 of our rules and provide commercial radio services to end users. We used the term ``non-commercial" to refer to licensees who would use spectrum to satisfy their own internal communications requirements. These terms do not correlate directly with the terms Commercial Mobile Radio Service (CMRS) and Private Mobile Radio Service (PMRS), as defined in Section 20.3 of the Commission's Rules, 47 C.F.R. § 20.3.

[11] *220 MHz Report and Order*, 6 FCC Rcd at 2364-65 (paras. 59, 62).

which included initial and modification applications, for the 220 MHz service. [12] In 1992[13] and 1993[14] we conducted random selection proceedings to resolve mutually exclusive non-nationwide and nationwide applications, respectively, and issued nearly 3,800 authorizations for non-nationwide stations and four licenses for nationwide, commercial systems. On July 30, 1992, certain aspects of the Commission's procedures for the filing and acceptance of 220 MHz license applications were appealed to the United States Court of Appeals for the District of Columbia. [15] In light of that appeal, the Private Radio Bureau announced that the construction deadline for all non-nationwide 220 MHz stations would be 120 days after the disposition of the *Evans v. FCC* case.[16] Following the settlement of the case in March 1994, the deadline for licensees to construct their systems and place them in operation has been extended on five separate occasions to allow licensees sufficient time to construct their systems. [17] In addition, as a consequence of the freeze,

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[12] Acceptance of 220-222 MHz Private Land Mobile Applications, Order, 6 FCC Rcd 3333 (1991) (*220 MHz Freeze Order*). The Private Radio Bureau imposed the suspension on licensing processing so that it could complete the disposition of the large number of applications before accepting more applications.

[13] Public Notice, Commission Announces Lottery for Rank Ordering of 220-222 MHz Private Land Mobile ``Local" Channels, 7 FCC Rcd 6378 (1992) (*Public Notice: Non-Nationwide Lottery*).

[14] Public Notice, Commission Announces Lottery to Select Commercial Nationwide 220-222 MHz Band Private Land Mobile Licensees, DA 93-159 (released Feb. 16, 1993), 58 Fed. Reg. 09174 (Feb. 19, 1993) (*Public Notice: Nationwide Lottery*).

[15] Evans v. FCC, Case No. 92-1317 (D.C. Cir., filed July 30, 1992).

[16] *Public Notice: Non-Nationwide Lottery*, 7 FCC Rcd at 6378.

[17] Specifically, the Bureau extended the construction deadline to December 2, 1994, in an Order released on March 30, 1994. *See* Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Services, PR Docket No. 89-552, Order, 9 FCC Rcd 1739 (1994). On August 19, 1994, the Private Radio Bureau then released a Public Notice extending the construction deadline to April 4, 1995. *See* Public Notice, Private Radio Bureau Extends Time to Construct Non-Nationwide 220 MHz Stations Through April 4, 1995 and Lifts Freeze for Applications to Modify Site Locations, 10 FCC Rcd 744 (1994). In the *CMRS Third Report and Order*, the Commission again identified April 4, 1995, as the construction deadline. *See* *CMRS Third Report and Order*, 9 FCC Rcd at 8077 (para. 184). On February 17, 1995, the Wireless Telecommunications Bureau released an Order extending the deadline to December 31, 1995. *See* Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Services, PR Docket 89-552, Order, 10 FCC Rcd 3356 (1995). On December 15, 1995, the Bureau released an Order providing for a further extension of the construction deadline contingent upon the closure of the Commission as a result of any furlough of Federal Government employees. The ensuing 23-day Federal furlough resulted in an extension of the construction deadline to February 2, 1996, pursuant to a formula established in the Bureau Order. *See* Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Services, PR Docket No. 89-552, Order, DA 95-2490 (released Dec. 15, 1995). Finally, the *220 MHz Second Report and Order* established a March 11, 1996, construction deadline, but licensees seeking modification of their authorization to relocate their base stations were granted until August 15, 1996, to construct their base station and place it in operation or commence service. *See* Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Services, PR Docket No. 89-552, Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Second Report and Order, 11 FCC Rcd 3668 at 3674-5 (para. 26, 28) (1996) (*220 MHz Second Report and Order*) *recon. pending*.

licensees wishing to relocate their authorized facilities through license modifications were unable to do so. Because of the freeze on 220 MHz applications, licensees relied on grants of Special Temporary Authority to modify their authorizations. On January 26, 1996, we adopted the *220 MHz Second Report and Order.*[18] In that proceeding, we re-opened the filing window for non-nationwide 220 MHz licensees who sought to obtain modification of the authorizations to relocate their base stations.[19]

B. LEGISLATIVE AND COMMISSION ACTIONS PURSUANT TO BUDGET ACT

23. On August 10, 1993, Congress enacted the Budget Act, in which it, *inter alia*, amended Section 332 of the Communications Act of 1934 [20] to replace the existing land mobile radio regulatory scheme with two newly defined categories of mobile services: commercial mobile radio service (CMRS) and private mobile radio service (PMRS). CMRS is defined as ``any mobile service (as defined in section 3 [of the Communications Act]) that is provided for profit and makes interconnected service available (A) to the public or (B) to such classes of eligible users as to be effectively available to a substantial portion of the public." [21] PMRS is defined as ``any mobile service (as defined in section 3) that is not a commercial mobile service or the functional equivalent of a commercial mobile service, as specified by regulation by the Commission."[22]

24. The statute directed the Commission to implement these classifications in its regulations and to provide for comparable regulation of substantially similar CMRS services. Accordingly, we initiated our CMRS proceeding in GN Docket No. 93-252 and began the process of implementing the Budget Act in the *CMRS Second Report and Order* released on March 7, 1994.[23] In the *CMRS Second Report and Order,* we determined that our private land mobile service rules with respect to Specialized Mobile Radio (SMR), Business Radio, 220-222 MHz, and private paging allow, but do not require, licensees to offer for-profit, interconnected service to the public, thus meeting the CMRS definition. [24] We found that, to the extent that 220-222 MHz channels are used to offer for-profit and interconnected service, the channels fall within

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[18] *220 MHz Second Report and Order,* 11 FCC Rcd 3668 .

[19] *Id.*

[20] Communications Act of 1934, 47 U.S.C. §§ 151-614 (Communications Act).

[21] *Id*., Section 332(d)(1), 47 U.S.C. § 332(d)(1).

[22] *Id.*, Section 332(d)(3), 47 U.S.C. § 332(d)(3). The term ``mobile service," as used in the quoted language in the text, is defined in Section 3(27) of the Communications Act, 47 U.S.C. § 153(27).

[23] Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Second Report and Order, 9 FCC Rcd 1411 (1994) (*CMRS Second Report and Order*); Erratum, 9 FCC Rcd 2156 (1994), *recon. pending*.

[24] *CMRS Second Report and Order,* 9 FCC Rcd at 1450-53 (paras. 88-97).

the definition of CMRS. We also adopted a timetable for transition to the new regulatory structure for reclassified CMRS licensees as set forth in the Budget Act. Licensees authorized before enactment of the Act on August 10, 1993, and reclassified as CMRS continued to be regulated as private service providers for a three-year period, until August 10, 1996. [25]

25. In addition, the Budget Act granted the Commission the authority to use competitive bidding to choose among mutually exclusive applications for initial licenses. [26] Under Section 309(j)(2) of the Communications Act, the Commission may use competitive bidding if it finds that the principal use of the spectrum is reasonably likely to involve the offering of service to subscribers in return for compensation for such service. Also, Section 309(j)(2) requires the Commission to find that competitive bidding will promote the objectives described in Section 309(j)(3).

26. On April 20, 1994, we adopted the *CMRS Further Notice*, in which we proposed revisions to our technical, operational, and licensing rules and procedures for reclassified CMRS services.[27] The Budget Act required that we determine if a reclassified private land mobile service is ``substantially similar'' to a common carrier service and, if so, the extent to which it is ``necessary and practical'' to modify our rules to ensure that the two services are subject to ``comparable'' technical requirements. [28]

27. On August 9, 1994, we adopted the *CMRS Third Report and Order*. We noted therein that a substantial majority of commenters addressing the 220 MHz service contended that, for technical reasons, 220 MHz service is not substantially similar to any Part 22 service. [29] We concluded, however, that most commenters had taken a relatively narrow view of the range and scope of CMRS competition, and that, for purposes of determining whether CMRS services are substantially similar, 220 MHz offerings have the potential to compete with other commercial mobile offerings as technology evolves and the offerings begin to gain commercial acceptance. [30]

28. After reviewing the pleadings, we decided to defer consideration of a new licensing plan for the 220 MHz service based on different-sized channel blocks or service areas to a separate proceeding, where a more comprehensive record could be developed. [31] While adopting

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[25] *Id*. at 1512-14 (paras. 278-84).

[26] Communications Act, § 309(j), 47 U.S.C. § 309(j).

[27] Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Further Notice of Proposed Rule Making, 9 FCC Rcd 2863 (1994) (*CMRS Further Notice*).

[28] Budget Act, § 6002(d)(3).

[29] *CMRS Third Report and Order*, 9 FCC Rcd at 8006-07 (para. 34).

[30] *Id*. at 8026 (para. 67).

[31] *Id*. at 8055 (paras. 126-127).

the use of competitive bidding procedures to resolve competing CMRS applications, we specifically deferred the adoption of new application filing and selection procedures for the 220 MHz service to the instant proceeding.[32] We also deferred any decision regarding the definition of initial applications, amendments to applications, and license modifications for the service to this proceeding.[33]

[32] *Id*. at 8141 (para. 345).

[33] Because of the freeze on 220 MHz applications, licensees relied on grants of Special Temporary Authority (STAs) to modify their authorizations, and many of the commenters requested special provisions to enable them to file modification applications before any new application procedures were put in place. *See CMRS Third Report and Order*, 9 FCC Rcd at 8147-48 (paras. 359-62). These concerns were addressed in the *220 MHz Second Report and Order*. *See 220 MHz Second Report and Order*, 11 FCC Rcd 3668.

C. 220 MHz Third Notice

29. On July 28, 1995, the Commission adopted the *220 MHz Third Notice*, which proposed a new framework for the operation and licensing of the 220-222 MHz band. In that proceeding, we proposed that: (1) Phase II 220 MHz spectrum be authorized through a combination of nationwide and regional licensing; (2) 220 MHz licensees be permitted to offer certain, currently unauthorized communications services on a primary basis, (*e.g.*, paging, and fixed operations); (3) we would preserve allocations of 220 MHz spectrum for eligibles in the Public Safety Radio Services and the Emergency Medical Radio Service (EMRS); and (4) mutually exclusive applications for all Phase II channels, with the exception of the channels allocated for public safety and EMRS entities, would be assigned through competitive bidding.

IV. DISCUSSION

A. Overview

30. Based on our review of the comments in the *CMRS Further Notice*, the *CMRS Third Report and Order*, and related CMRS decisions, and the status of the 220 MHz service under the current regulations, we decided, in the *220 MHz Third Notice*, to propose a revised regulatory scheme for the 220 MHz service. The proposed rules would govern all Phase II applicants and licensees in the 220 MHz service, as well as certain existing Phase I licensees. Our plan was to retain the basic framework of the technical and operational rules consistent with the original service goals, but to revise them to permit more flexible operations consistent with the goals of the Budget Act for reclassified CMRS licensees. We received 33 comments and 15 reply comments, from a broad segment of interested parties, in response to the various proposals we made in the *Third Notice.* A list of commenters is found in Appendix C.

B. Channel Assignment and Service Area Rules

31. In the *Third Notice*, we indicated that by providing both nationwide and non-nationwide 220 MHz channels, we would enable a variety of services to be made available to the public. We therefore proposed that both nationwide and non-nationwide assignments continue to be made available in Phase II in the 220 MHz service. We now conclude that in Phase II licensing of the 220 MHz band, we should provide for both nationwide and non-nationwide channels. The channel assignment and service rules that we are adopting for nationwide and non-nationwide licensing of the 220 MHz band are discussed in the following sections.

1. Nationwide Licensing

a. *Background*

32. We decided, in our 220 MHz Report and Order, to authorize 60 of the 200 channel pairs in the 220-222 MHz band for nationwide licensing. Ten of these channel pairs were for assignment to Federal Government entities and of the remaining 50 channel pairs reserved for non-Government users, 20 were designated for ``commercial'' use and 30 were designated for

``non-commercial" use.[34] The 20 commercial channel pairs were divided into four five-channel blocks (Channels 21-25, 26-30, 151-155, and 156-160). The 30 non-commercial channel pairs were divided into two 10-channel blocks (Channels 51-60 and 141-150), and two five-channel blocks (Channels 81-85 and 86-90). On May 1, 1991, we received 140 applications for the four commercial licenses. We also received 14 applications for the two 10-channel non-commercial licenses and 20 applications for the two five-channel non-commercial licenses. [35]

33. The rules adopted in the *220 MHz Report and Order* provided that applicants for nationwide authorizations would have to submit additional information to satisfy specified entry criteria and financial requirements.[36] Applicants were not required to file this information at the time they filed their applications, but rather were to be notified in a public notice when this information should be submitted.[37] In our *220 MHz Memorandum Opinion and Order,* released July 16, 1992, we modified the entry criteria and financial requirements for nationwide authorizations.[38] Subsequently, a petition was filed seeking reconsideration of certain of these modifications relating to the licensing of nationwide, *non-commercial* systems. Consequently, the Private Radio Bureau announced, in a September 29, 1992, Public Notice, [39] that it would require the amending application information from nationwide commercial applicants by November 19, 1992, but that it would not accept filings from non-commercial applicants until the adoption of an order addressing the petition for reconsideration of the *220 MHz Memorandum Opinion and Order*. Following the receipt of the filings from the commercial applicants, the Bureau conducted a lottery on March 31, 1993,[40] that led to the assignment of the four nationwide commercial licenses.[41] In the *220 MHz Second Reconsideration Order,* released June 21, 1993, we addressed the matters relating to non-

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[34] *220 MHz Report and Order*, 6 FCC Rcd at 2361 (paras. 34-36).

[35] Subsequently, one of the 34 applicants withdrew its application pursuant to the rule changes we adopted in the *220 MHz Memorandum Opinion and Order* that we found significantly altered the construction and operational requirements for the nationwide, non-commercial channels. We permitted nationwide, non-commercial applicants to withdraw their applications and provided for the refund of their filing fees. *220 MHz Memorandum Opinion and Order,* 7 FCC Rcd at 4489 n. 66 (para. 23).

[36] *220 MHz Report and Order,* 6 FCC Rcd at 2363-64 (paras. 50-55); Section 90.713 of the Commission's Rules, 47 C.F.R. § 90.713.

[37] *220 MHz Report and Order*, 6 FCC Rcd at 2364 n.118 (para. 55).

[38] *220 MHz Memorandum Opinion and Order,* 7 FCC Rcd at 4493 (para. 41).

[39] Public Notice, November 19, 1992 Date Established for Commercial Nationwide 220-222 MHz Band Applicants To File Application Amendments To Satisfy Entry Criteria, DA 92-1321 (released Sept. 29, 1992), 57 Fed. Reg. 49475 (Oct. 1, 1992).

[40] *Public Notice: Nationwide Lottery*, 58 Fed. Reg. 09174.

[41] Public Notice, Commission Announces Tentative Selectees for 220-222 MHz Nationwide Commercial Private Land Mobile Channels, DA 93-376 (released April 1, 1993), 58 Fed. Reg. 26322 (May 3, 1993).

commercial nationwide licensing raised on reconsideration. [42] However, following the adoption of the *220 MHz Second Reconsideration Order,* we received three additional petitions seeking reconsideration of certain decisions in that Order. With this proceeding not yet terminated, we have not solicited the amending application information from the applicants for non-commercial licenses.

b. *In General*

(1) Proposal

34. In the *Third Notice* we found, citing the experience in the nationwide narrowband PCS auction, that there was an apparent demand in the mobile communications marketplace for nationwide licenses. We also found nationwide licenses would increase competition among nationwide wireless communications providers and would help meet future customer demand for nationwide service. We tentatively concluded that the 30 channels originally designated for nationwide, non-commercial use should continue to be designated for nationwide operations. We sought comment on whether these channels should be so designated or whether they should be made available for some form of non-nationwide operations. [43]

(2) Comments

35. No commenters argue against a designation for nationwide channels. Metricom, in supporting a nationwide channel designation, argues that, without a nationwide designation, carriers seeking to offer nationwide services would be forced to acquire five regional licenses or more than 150 EA licenses. [44] Pagenet favors nationwide licensing because, in its view, there clearly is consumer demand for nationwide services. [45]

(3) Decision

36. We conclude that, recognizing the consumer demand for nationwide services, the 30 channels originally designated for nationwide use should continue to be allotted for nationwide operations. Nationwide licenses will alleviate the problem of licensees having to aggregate smaller licensed service areas in order to provide their customers with nationwide service. Also, since potential competitive services have designations for nationwide service, a nationwide designation in this service will lead to increased competition among those services. Licensees authorized on these channels will be permitted to construct stations and place them in operation anywhere in the Nation so long as licensees ensure that: (1) they operate their stations in accordance with the provisions of Sections 1.1301 through 1.1319 of our Rules (Procedures

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[42] *220 MHz Second Reconsideration Order*, 8 FCC Rcd at 4164 (para. 11).

[43] *Third Notice*, 11 FCC Rcd at 207 (para. 33).

[44] Metricom Comments at 9.

[45] Pagenet Comments at 4.

Implementing the National Environmental Policy Act of 1969); (2) they operate their stations in compliance with their air safety responsibilities, as outlined in Part 17.6 of our Rules; and (3) they are in compliance with all applicable international agreements (*e.g.*, Section 90.715 relating to operation in U.S./Mexican border areas).

c. *Non-Commercial Channel Set-Aside*

(1) Proposal

37. In the *Third Notice*, we noted that we previously did not decide to set aside spectrum for nationwide, non-commercial operations to satisfy some perceived demand on the part of the public for the use of such spectrum. Rather, we were concerned with implementing rules that would encourage the development of 5 kHz technology, and thus concluded that a combination of commercial and non-commercial nationwide channels would ``promote the widest variety of advanced narrowband development."[46] With our Phase I authorization of 3,800 non-nationwide licenses, which will be used for both commercial and non-commercial purposes, we believed that we had taken steps to promote the development of narrowband technology, as envisioned in the *220 MHz Report and Order.* We tentatively concluded, therefore, that there should be no set-aside for non-commercial channels in Phase II licensing, and that nationwide channels should be made available equally to all applicants. We sought comment on this tentative conclusion. [47]

(2) Comments

38. Several commenters urge the Commission to maintain a non-commercial set-aside for the 220 MHz service.[48] Global, 360, and Airborne argue that the Commission originally designated a non-commercial set-aside based on perceived demand on the part of large companies to meet their internal communication needs.[49] Several commenters argue that there is a continuing demand for a non-commercial set-aside in this service. [50] Some commenters contend that the fact that there are 33 applications for the nationwide, non-commercial licenses proves this demand still exists.[51] Several commenters reason that these companies would not have spent their

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[46] *220 MHz Report and Order*, 6 FCC Rcd at 2361 (para. 36).

[47] *Third Notice*, 11 FCC Rcd at 208 (para. 34).

[48] Airborne Comments at 2; Comtech Comments at 2-4; Comtech Reply at 3; Global Comments at 2-3; 360 Comments at 2; ITA Comments at 3-6; Columbia Reply at 7; AMTA Comments at 10; AMTA Reply at 7.

[49] Global Comments at 2-3; 360 Comments at 2; Airborne Comments at 2.

[50] Airborne Comments at 2; AMTA Comments at 10; AMTA Reply at 7; Columbia Reply at 7; Comtech Reply at 3; Global Comments at 2-3; ITA Comments at 3-6; 360 Comments at 2.

[51] AMTA Comments at 10; AMTA Reply at 7; Global Comments at 2; 360 Comments at 2; Columbia Reply at 5.

time and funds applying for these licenses if they had no need for them. [52] AMTA states that companies still need these non-commercial licenses to meet their critical internal communication needs.[53] Airborne, Fleet, UTC, and Columbia state in their comments that, if they are awarded one of these licenses, they will use the license to meet internal communication needs. [54]

39. Several commenters argue that, for reasons such as cost, [55] high demand for commercial services,[56] and inability to meet companies' technical requirements, [57] commercial services are not able adequately to fulfill their internal communications needs. [58] Ericsson contends that the pending applications illustrate that the primary use of these 220 MHz spectrum licenses will not be commercial.[59] ITA argues that the Commission has the authority to require additional information from the applicants to ensure that potential licensees will use the spectrum internally.[60] Furthermore, Comtech also argues that narrowband technology still needs to be promoted and that a non-commercial set aside will spur growth in this area. [61]

40. Other commenters argue that there should not be a set-aside for non-commercial nationwide use in the 220 MHz service. [62] Pagenet contends that, with the advances that have been made in efficient use of the spectrum, it is hard to envision any business with internal communication needs which will require the total spectrum allotted for each 220 MHz authorization.[63] U.S. Mobilcomm contends that, since the Commission's rules allow for the

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[52] Global Comments at 3; 360 Comments at 2.

[53] AMTA Reply at 7.

[54] Airborne Comments at 2; Fleet Comments at 2; UTC Comments at 2-3; Columbia Reply at 7.

[55] Airborne Comments at 2; ITA Comments at 6.

[56] Airborne Comments at 2.

[57] Airborne Comments at 2; ITA Comments at 6-8.

[58] Airborne Comments at 2; ITA Comments at 6-8.

[59] Ericsson Comments at 2.

[60] ITA Comments at 8.

[61] Comtech Comments at 3-4.

[62] Metricom Comments at 8-9; Pagenet Comments at 8-9; Pagenet Reply at 16-17; SMR Comments at 7-9; SMR Reply at 5-6; U.S. Mobilcomm Comments at 4.

[63] Pagenet Comments at 8.

leasing of excess capacity, there is already a *de facto* commercial allotment of this spectrum.[64] Pagenet alleges that a non-commercial set-aside will do nothing to encourage the development and efficient use of the 220 MHz band.[65] U.S. Mobilcomm and Pagenet argue that, if the spectrum is redesignated, marketplace economics will ensure that licensees will use the spectrum to the fullest possible extent.[66] Metricom contends that redesignating this spectrum for commercial use will open the nationwide spectrum to a myriad of uses that would provide a variety of services to consumers.[67] Pagenet points out that wide-area or nationwide service needs of individual companies can be met by commercial operators.[68]

41. Several commenters point out that the original reason for the non-commercial set-aside was to encourage development of 5 kHz technology, and not to satisfy perceived demand for non-commercial use.[69] Metricom argues that this goal has been achieved through the authorization of 3,800 licenses for 220 MHz services.[70] SMR and U.S. Mobilcomm state that narrowband technology has been widely developed and employed.[71]

(3) Decision

42. We find that it would be in the public interest to also allow commercial operations on the channels formerly designated solely for non-commercial operations. Our decision is based in part upon our conclusion that making the spectrum available for both commercial and non-commercial use is an effective means of promoting efficient use of the spectrum. First, the parties in this proceeding demonstrate apparent demand for nationwide spectrum for the provision of commercial services to the public.[72] Second, we think that allowing Phase II 220 MHz nationwide licensees to partition their licenses[73] and, in addition, proposing to permit them to

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[64] U.S. Mobilcomm Comments at 4. *See also* Pagenet Reply at 16.

[65] Pagenet Comments at 8.

[66] U.S. Mobilcomm Comments at 4; Pagenet Comments at 8-9.

[67] Metricom Comments at 9.

[68] Pagenet Comments at 8.

[69] Metricom Comments at 8; SMR Comments at 8 n.7; SMR Reply at 5 n.12; U.S. Mobilcomm Comments at 4 n.4.

[70] Metricom Comments at 8.

[71] SMR Comments at 8 n.7; SMR Reply at 5-6; U.S. Mobilcomm Comments at 4 n.4.

[72] *See, e.g.*, Pagenet Reply at 16; SMR Reply Comments at 7; U.S. MobilComm Comments at 4.

[73] See para. 308, *infra*.

disaggregate their spectrum[74] should also help to meet the needs of non-commercial users. Third, we believe that companies may be able to meet some of their internal communications needs through the purchase of service from a commercial provider.[75] Fourth, we are not precluding a nationwide licensee from using some or all of its spectrum for internal communications. Thus, an applicant that is committed to the use of spectrum for non-commercial purposes will have the opportunity to acquire a license for the spectrum at auction, just as they might purchase a license from an existing licensee in the secondary market. Also, if the highest value for this spectrum (as determined by the marketplace) is internal communications, then the auction winner will use the spectrum for that use.

d. *Assignment of Nationwide Channels*

(1) Channel Assignment Method

(a) *Proposal*

43. In deciding the assignment methodology for resolving mutually exclusive applications for the Phase II nationwide channels, we are instructed by Section 309(j) of the Communications Act and the *Competitive Bidding Second Report and Order*to determine the principal use of the spectrum. In proposing to make the 30 Phase II nationwide licenses available for both commercial and non-commercial use, we indicated in the *Third Notice* that we could not determine with absolute certainty, in advance of authorization, whether the primary use of this spectrum would be for licensees' internal use or for the provision of for-profit, subscriber-based services. Based on a review of our records, we tentatively concluded that the vast majority of the 59,000 applicants for 220 MHz non-nationwide stations intended to use their authorized spectrum to provide services to subscribers on a for-profit basis.[76]

44. Although we recognized that the projected use of 220 MHz channels for non-nationwide operations may not necessarily parallel the planned use of the channels by nationwide licensees, we believed that the fact that most non-nationwide applicants apparently intended to use the channels for commercial use was a strong indication that this will also likely be the principal use of the spectrum by prospective nationwide licensees. We thus tentatively concluded that the principal use of the 30 channels allocated for nationwide use is most likely to be for the transmission or reception of communications signals to subscribers for compensation and, therefore, in accordance with Section 309(j)(2)(A) of the Communications Act, mutually

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[74] See para. 321, *infra.*

[75] United Parcel Service, for example, is meeting its needs for a nationwide data network by obtaining cellular services from an alliance consisting of McCaw, GTE Mobile Communications, PacTel Cellular, and Southwestern Bell Mobile Systems. *Special Mobile Phone News Subscriber Supplement Mobile Data: Lead, Follow or Get Out of the Way,* Mobile Phone News, Oct. 8, 1992.

[76] *Third Notice,* 11 FCC Rcd at 209 (para. 36).

exclusive applications for initial licensing of these channels should be assigned by competitive bidding.[77]

(b) *Comments*

45. Pagenet notes that there is no doubt that once this spectrum is awarded licensees in fact will use the spectrum for commercial, for-profit activities. [78] ITA, UTC, and Ericsson argue, however, that there is no evidence to indicate that the current applicants for these channels would offer commercial services.[79] UTC also notes that even if the Commission concludes that the current applicants would be likely to offer subscriber-based service, the auction statute does not compel the Commission to use competitive bidding. [80]

(c) *Decision*

46. Based on our analysis in the *Third Notice*, we adopt our proposal to assign mutually exclusive applications for nationwide licenses through competitive bidding. In the *Competitive Bidding Second Report and Order*, we found that the Commission must look to the service rather than the individual licenses to determine whether the principal use of the spectrum is reasonably likely to meet the criteria set forth in Section 309(j). [81] The three commenters who maintain that the use of this spectrum will be for non-commercial purposes do so on the basis of the most likely principal use by *current* 220 MHz applicants. Even if we were to agree *arguendo* with the claims made by these commenters, we do not believe it would be reasonable or prudent to base our analysis concerning the principal use of this spectrum solely on the likely principal use by current applicants. These applicants applied for non-commercial licenses; potential licensees who want to use this spectrum for commercial purposes would not have applied for these licenses during the original filing period because the licenses were designated for non-commercial use.

47. There is no evidence in the record which contradicts our tentative conclusion in the *Third Notice* that, if the 30 Phase II nationwide channels are available to all prospective applicants, then the principal use of the spectrum is most likely to be for the transmission or reception of communications signals to subscribers for compensation. In reaching the decision that this spectrum should be auctioned, we find that assigning this spectrum through competitive bidding will promote achievement of our legislative mandate to ensure an ``efficient . . . Nation-

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[77] *Id*.

[78] Pagenet Comments at 7; Pagenet Reply at 5.

[79] UTC Comments at 6; ITA Comments at 8; Ericsson Comments at 2.

[80] UTC Comments at 7.

[81] Implementation of Section 309(j) of the Communications Act--Competitive Bidding, PP Docket No. 93-253, Second Report and Order, 9 FCC Rcd 2348, 2354 (para. 34) (1994) (*Competitive Bidding Second Report and Order*).

wide . . . radio communication service with adequate facilities at reasonable charges . . . ." [82] We also conclude that use of competitive bidding to assign this spectrum contributes to our statutory obligation to seek to promote the development of new technologies and service to benefit the public,[83] and to seek to promote efficient and intensive use of the spectrum. [84]

(2) Channel Block Sizes

(a) *Proposal*

48. In the *220 MHz Report and Order*, we assigned the 30 nationwide, non-commercial channels in two five-channel and two 10-channel blocks. [85] In the *Third Notice* we proposed to allow future 220 MHz licensees to offer a wider variety of communications services than are currently permitted in the 220 MHz service. We noted that, in order to provide these services, nationwide licensees may require more spectrum than would be available in an authorization consisting of only five 5 kHz channels. We therefore proposed to assign the 30 nationwide channels in Phase II in three 10-channel blocks (Channels 51-60, 81-90, and 141-150) of 5 kHz channels. We sought comment on this proposed channel assignment plan, as well as any alternative channel assignment proposals. [86]

(b) *Comments*

49. The only parties addressing this issue, Metricom and Pagenet, support the proposed channel assignment plan. [87] Metricom notes that many of the new services being proposed will require far greater bandwidth than a five-channel block. [88] Pagenet believes that the assignment of 10-channel blocks will allow licensees to compete in the CMRS marketplace by offering a variety of PCS type, one-way, two-way, data, and other services. [89]

(c) *Decision*

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[82] Section 1 of the Communications Act, 47 U.S.C. § 151.

[83] Section 309(j)(3)(A) of the Communications Act, 47 U.S.C. § 309(j)(3)(A).

[84] Section 309(j)(3)(D) of the Communications Act, 47 U.S.C. § 3039(j)(3)(D).

[85] *220 MHz Report and Order*, 6 FCC Rcd at 2361 (paras. 35-36).

[86] *Third Notice*, 11 FCC Rcd at 209-10 (para. 37).

[87] Metricom Comments at 10; Pagenet Comments at 9-10.

[88] Metricom Comments at 10.

[89] Pagenet Comments at 9-10.

50. We agree with the commenters that the Commission's proposal to expand the permitted uses in the 220 MHz band requires that we reexamine our original channel block sizes. In order to accommodate these new services, many of which will require more spectrum than would be available in a five-channel block, we will adopt our proposal to assign the 30 nationwide channels in Phase II in three 10-channel blocks (Channels 51-60, 81-90, and 141-150). We believe that this plan will increase the economic viability of the 220 MHz systems, thus allowing the licensees to more fully serve the needs of the public. We also conclude that our decision to license 220 MHz nationwide licenses in 10-channel blocks, along with our other decisions in this Order, will promote the purposes specified in Section 1 and Section 309(j)(3) of the Communications Act. For example, granting licensees the flexibility associated with larger spectrum blocks should help to promote technical innovation by providing licensees with additional flexibility to take advantage of new technology. At the same time, we believe that these 10-channel licenses will be small enough to provide an opportunity for small businesses. As stated above, we believe this plan will increase the economic viability of 220 MHz licenses, and thus promote competition in the CMRS marketplace.

(3) Limit on Nationwide Authorizations

(a) *Proposal*

51. In the *Third Notice* we noted that restricting the number of nationwide authorizations any single 220 MHz licensee may acquire may lead to greater competition among Phase II licensees. If, however, such licensees are in competition with other CMRS providers, we tentatively concluded that a restriction on the number of authorizations a single 220 MHz licensee may hold may not be necessary or appropriate. We therefore asked for comment on whether a limit should be placed on the number of Phase II nationwide authorizations that may be obtained by a single licensee.[90]

(b) *Comments*

52. Metricom states that 220 MHz licensees will face substantial competition from other services and therefore favors allowing one licensee to acquire multiple nationwide licenses. [91] Pagenet argues that limiting the number of licenses that can be held by any 220 MHz licensee will also limit a licensee's ability to offer unique services, therefore, the Commission would be manipulating the future CMRS marketplace without knowing the types of services that would ultimately be provided on the 220 MHz spectrum. [92]

(c) *Decision*

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[90] *Third Notice*, 11 FCC Rcd at 210 (para. 38).

[91] Metricom Comments at 10.

[92] Pagenet Comments at 10.

53. We agree with the commenters that 220 MHz licensees will not simply be in competition with other 220 MHz licensees but will also face competition from other services such as, cellular, PCS, and SMR. Since the 220 MHz licensees will be in competition with other CMRS providers, we conclude that there is no reasonable basis to fear that any threat to competition will arise as a result of allowing one 220 MHz service licensee to acquire multiple nationwide channel blocks.

(4) License Terms

54. We proposed in the *Third Notice* to establish a 10-year license term for nationwide 220 MHz licenses.[93] We received no comments on this proposal. We have previously adopted a uniform 10-year licensing term for all CMRS licenses, including narrowband and broadband PCS services and the 900 MHz SMR service. By adopting our proposal for a 10-year license term for nationwide 220 MHz authorizations, all of these services will have 10-year license terms. In addition, we believe that a 10-year license term will provide sufficient time for 220 MHz nationwide licensees to complete construction of their systems. We therefore adopt a 10-year license term for nationwide 220 MHz licensees.

(5) Aggregation

(a) *Proposal*

55. In the *Third Notice* we proposed that both Phase I and Phase II licensees be permitted to aggregate their contiguous channels to create wider bandwidth channels. We expressed the belief that our existing 5 kHz-wide channels unnecessarily restrict the types of services that can be provided in the 220 MHz band and prevent other, perhaps equally spectrally efficient, technologies from being employed in the band. In drawing our tentative conclusion, we acknowledged that allowing 220 MHz licensees to aggregate their channels is a significant departure from our initial decision not to allow 220 MHz licensees to group narrowband channels.[94]

(b) *Comments*

56. Several commenters, primarily manufacturers of 5 kHz equipment, assert that there are many other spectrum bands, where digital and other technologies are being used but that only in the 220 MHz band is 5 kHz, narrowband technology employed and, therefore, they disagree with our proposal to allow 220 MHz to aggregate contiguous channels. [95] These commenters, believe that, if we adopt this proposal, we would be abandoning our commitment to the implementation of narrowband technologies and would severely jeopardize their ability to

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[93] *Third Notice*, 11 FCC Rcd at 210 (para. 39).

[94] *Third Notice*, 11 FCC Rcd at 229 (para. 82). *See 220 MHz Notice*, 4 FCC Rcd at 8597 n.49 (para. 27).

[95] *See* SEA Comments at 9, 13; Securicor Reply at 3; E.F. Johnson Comments at 6; PCIA Comments at 8.

continue to develop and market that technology. [96] Other commenters, however, support the proposal to allow the aggregation of channels, arguing that this type of flexibility will allow 220 MHz licensees to offer a wider variety of communications services and more effectively compete in the wireless marketplace. [97]

(c) *Decision*

57. For the reasons set forth in Section IV.B.2.c(4)(b)(iv), *infra*, with regard to the licensing of non-nationwide 220 MHz spectrum, we conclude that Phase I and Phase II nationwide licensees should be permitted to aggregate their contiguous 5 kHz channels and operate on channels wider than 5 kHz. In doing so, however, licensees will be required to comply with the spectrum efficiency standard set forth in Section IV.B.2.c(5), *infra*.

2. Non-Nationwide Licensing

a. *Background*

58. In the *220 MHz Report and Order*, we allocated 140 of the 200 channel pairs in the 220 MHz service for non-nationwide use by both Government and non-Government licensees. The non-Government users eligible for authorization on these channels are those entities eligible for assignment under Subparts B, C, D, and E of Part 90 of our rules [98] as well as those entities who intend to use the spectrum to provide commercial services. [99] Forty of the 140 non-nationwide channels (Channels 161-200) were assigned for ``individual, non-trunked local use," [100] with the remaining 100 channels assigned in the form of 20 five-channel blocks designated for trunked operation. [101] Ten of the 40 individual, non-trunked channels (Channels 161-170) were reserved exclusively for applicants eligible in the Public Safety Radio Services, five channels (Channels 181-185) were to be used exclusively by applicants eligible in the Emergency Medical

[96] *See* SEA Comments at 9-10; SEA Reply at 5; E.F. Johnson Comments at 6; PCIA Comments at 8.

[97] AMTA Comments at 18; Metricom Comments at 4; Pagenet Comments at 11-12; Global Reply Comments at 3 (supporting channel aggregation only for nationwide licensees). *See also* Comtech Comments at 6.

[98] These are entities eligible in the Public Safety Radio Services (Subpart B), the Special Emergency Radio Services (Subpart C), the Industrial Radio Services (Subpart D), and the Land Transportation Radio Service (Subpart E). *See* Section 90.703(a) of the Commission's Rules, 47 C.F.R. § 90.703(a). The licensees eligible in these services would use 220 MHz spectrum to meet their internal communications needs.

[99] Section 90.703(c) of the Commission's Rules, 47 C.F.R. § 90.703(c).

[100] 220 MHz Report and Order, 6 FCC Rcd at 2362 (paras. 40-44); Section 90.719 of the Commission's Rules, 47 C.F.R. § 90.719.

[101] *220 MHz Report and Order* at 2358 (para. 16); Section 90.721 of the Commission's Rules, 47 C.F.R. § 90.721. In the non-trunked, or ``conventional" mode of operation, end users on a land mobile system must manually search for an unused channel. Trunking is a computerized technology that automatically selects an unused channel on the system and assigns it to the end user.

Radio Service (EMRS),[102] and 15 channels (Channels 186-200) were designated for ``data-only" use.[103] The only restrictions on the remaining channels (Channels 171-180) are that they be licensed individually and that they be used for non-trunked operation. The current allocation of non-nationwide channels is described in the following Table:

[102] Amendment of Part 90 of the Commission's Rules To Create the Emergency Medical Radio Service, PR Docket No. 91-72, Report and Order, 8 FCC Rcd 1454 (1993) (*EMRS Report and Order).*

[103] *220 MHz Report and Order*, 6 FCC Rcd at 2362 (para. 44) (allocating Channels 181-200 for ``data-only" use). We subsequently reallocated five of these channels for the exclusive use of licensees in the Emergency Medical Radio Service in the *EMRS Report and Order*, thus leaving Channels 186-200 as the current ``data-only" channels. *See EMRS Report and Order,* 8 FCC Rcd at 1459 (para. 28).

The Existing (Phase I) Band Plan

EXISTING 220-222 MHz
CHANNEL ALLOCATION PLAN

NON-NATIONWIDE	CHANNELS
Twenty 5-Channel Trunked Groups	Group No. 1: Channels 1, 31, 61, 91 and 121 Group No. 2: Channels 2, 32, 62, 92, and 122 . . . Group No. 20: Channels 20, 50, 80, 110 and 140
Ten Public Safety Channels	Channels 161-170
Ten Non-Trunked Channels	Channels 171-180
Five EMRS Channels	Channels 181-185
Fifteen Data-Only Channels	Channels 186-200
TOTAL	**140 CHANNELS**

b. ***Assignment and Permissible Uses of Channels 161-200***

(1) Assignment of Public Safety Service Channels (Channels 161-170)

(a) ***Proposal***

59. In the *Third Notice*, we proposed to continue to set aside Channels 161-170 for Public Safety Radio Service entities. We indicated that we should continue this allocation because it would provide public safety eligibles with needed spectrum to coordinate their responses to various types of emergencies. We also sought comment as to whether use of five of the ten Public Safety Channels (Channels 161-165) for base station operations should be shared among all Public Safety eligibles. We indicated that under such an assignment scheme, all Public Safety eligibles in a given area would be able to construct base stations operating on these channels to better maximize interoperability among licensees. We noted that our current licensing scheme does not provide for such interoperability because an individual Public Safety licensee could

obtain base station authorization for the exclusive use of all of the 10 available channels in a particular area.[104]

(b) *Comments*

60. Several commenters favor the continued allocation of spectrum for pubic safety eligibles. For example, APCO ``strongly supports the Commission's proposal to retain the current 10-channel allocation for the Public Safety Radio Services and the 5-channel allocation for the EMRS in the 220-222 MHz band."[105] AMTA, while endorsing the proposal, suggests that ``[s]hould it be determined at some future date that these channels are not useful for [Public Safety and EMRS purposes, it] assumes the FCC will revisit that allocation." [106] Comtech[107] and Johnson also favor the proposal, but Comtech believes that public safety licensees should be prohibited from reselling excess capacity on their systems. [108] In support of its position, Comtech states that, ``[t]o the extent that remaining 220 MHz spectrum will be subject to auction, public safety licensees should not be permitted to offer services on spectrum that they obtain for free in competition with entities that are required to pay for spectrum." [109]

(c) *Decision*

61. We believe that it is in the public interest to continue to allocate ten 220 MHz non-nationwide channel pairs for the exclusive use of Public Safety eligibles. No commenters oppose this decision. Although Public Safety eligibles may obtain a license on any of the 220 MHz non-nationwide channels, we believe that it is reasonable at this time to dedicate 10 channels exclusively to Public Safety eligibles.[110] This decision is not intended to prejudice the comprehensive examination of the spectrum needs of Public Safety eligibles that we have recently

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[104] *See Third Notice*, 11 FCC Rcd at 213 (para. 45).

[105] APCO Comments at 2.

[106] AMTA Comments at 11-12.

[107] Comtech is a nationwide, commercial 220 MHz licensee, a holder of several non-nationwide authorizations, and a manager of the facilities of other non-nationwide 220 MHz licensees.

[108] Johnson Comments at 4; *cf.* Comtech Comments at 4.

[109] Comtech Comments at 4-5.

[110] We note that pursuant to the *Report and Order* in PR Docket No. 92-235, we are considering the realignment of the radio services encompassed by Subparts B and C of Part 90 of our Rules. If such a realignment is adopted, modifications may be made to the rules adopted herein with regard to the licensing of these channels. *See* Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket No. 92-235, Report and Order and Further Notice of Proposed Rulemaking, 10 FCC Rcd 10076 (1995) (*Refarming Report and Order*).

undertaken.[111] Our current decision maintains the status quo with respect to the number of channels available exclusively for public safety. In addition, our decision implements one of the Commission's statutory mandates under the Communications Act of ``promoting safety of life and property through use of wire and radio communication."[112] Because we are designating these 10 channels for use by Public Safety eligibles only, these channels will not be subject to competitive bidding. The Commission's authority to use competitive bidding to select among mutually exclusive applications does not extend to these public safety channels because the principal use of the spectrum will not be for the provision of services to subscribers in exchange for a fee.[113]

62. In the *220 MHz Report and Order* we indicated that, after five years, we would ``assess public safety use of this limited set-aside with a view to reassigning this spectrum if it is underutilized."[114] Due to the freeze on the acceptance of initial 220 MHz applications, in effect since May 24, 1991, it has not been possible to accurately evaluate use of these channels by the public safety community. We shall therefore conduct the assessment of the use of these channels at the end of the three-year period following the effective date of the rules adopted in this proceeding, and if we determine that these channels are underutilized, then we will initiate a proceeding to address designation of the channels for other uses. With regard to Comtech's recommendation that public safety licensees be prohibited from reselling excess capacity on their systems, we conclude that it would be best, at this time, to defer this issue to our upcoming proceeding that will deal broadly with matters relating to Public Safety.[115]

63. Under the rules adopted in the *220 MHz Report and Order,* all 10 of the public safety mobile frequency channels may be used by public safety eligibles for mobile or portable use on a shared basis.[116] Authorizations for base/mobile and base/portable operations on the public safety channel pairs, however, are assigned on an exclusive basis. We believe that the possibility of allowing a single licensee within a particular geographic area to exercise exclusive control over all of the available channels in that area would defeat the purpose of our allocation of these channels for mutual aid use. We therefore will assign five of the 10 channel pairs, Channels 161-165, on a

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[111] The Development of Operational, Technical, and Spectrum Requirements for Meeting Federal, State, and Local Public Safety Agency Communications Requirements Through the Year 2010, WT Docket No. 96-86, Notice of Proposed Rulemaking, 11 FCC Rcd 12460 (1996) (*Public Safety NPRM*).

[112] Section 1 of the Communications Act, 47 U.S.C. § 151.

[113] Communications Act, § 309(j), 47 U.S.C. § 309(j).

[114] *220 MHz Report and Order*, 6 FCC Rcd at 2360 (para. 27).

[115] In the Public Safety Notice of Proposed Rulemaking, we sought comment on whether exclusivity or leasing of excess public safety spectrum capacity would be a feasible means of increasing efficiency of spectrum use. *See Public Safety NPRM*, 11 FCC Rcd at 12489 (para. 81). We want to fully examine and analyze the comments in that proceeding before addressing the issue of whether public safety entities should or should not be permitted to lease excess capacity.

[116] Section 90.720 of our Rules permits Public Safety entities to operate mobile and portable stations -- under certain conditions, as specified in Section 90.720(a) -- on any of the Public Safety channels, without separate authorization. 47 C.F.R. § 90.720.

non-exclusive, *i.e.*, shared basis, to all public safety eligibles. Licensees operating on these channels in a given geographic area will coordinate amongst themselves to locate base stations to maximize interoperability. Under this allocation scheme, the public safety licensees within a particular geographic area will be able to share Channels 161-165 and coordinate the location and operation of base stations on these channels, which will enable them to communicate more effectively with each other during emergencies. We will assign the remaining base station five-channel pairs -- Channels 166-170 -- to individual licensees on an exclusive basis, with licensees on such frequencies authorized to construct a base station for base/mobile and base/portable operations.[117] Procedures for the assignment of these channels are contained in Section IV.B.2.d(2), *infra.* In addition, the existing requirement, under Section 90.713(d), that an applicant for authorization on the public safety/mutual aid channels may not have an interest in more than one pending application for public safety/mutual aid channels in the same geographic area will apply only to applicants seeking authorization on Channels 166-170. Finally, in accordance with the provisions of Section 90.720(a), we will continue to permit operation, without separate authorization, on all 10 public safety/mutual aid channels, by public safety eligibles using the channels in mobile or portable radios and, in accordance with Section 90.720(b), we will continue to require base/mobile and base/portable operations on all 10 channels to be on a secondary basis to the emergency communications that are identified in that section.

(2) Assignment of EMRS Channels (Channels 181-185)

(a) *Proposal*

64. In the *Third Notice* we proposed to continue to allocate five non-nationwide channels (Channels 181-185) for use by eligibles in the Emergency Medical Radio Service (EMRS), ``in order to provide spectrum for licensees involved in the delivery of emergency medical services."[118] We also asked for comment regarding whether we should combine the 10 Public Safety channels and five EMRS channels into a single 15-channel allocation and allow EMRS and all other Public Safety entities to be eligible for these 15 channels. If we were to adopt a single, 15-channel allocation for both EMRS and Public Safety eligibles, we asked further if we should modify our existing allocation scheme to designate Channels 171-180 as the Public Safety channels so that these channels would be contiguous with the EMRS channels.[119]

65. We also indicated in the *Third Notice* that, before accepting applications for the Public Safety and EMRS channels, we would act on a Petition for Reconsideration of our 1993

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[117] There is one licensee currently authorized to operate exclusively on the 220 MHz public safety channels for base/mobile operations. That licensee, call sign WPCC439, is authorized on Channels 161-165, which are to be shared channels under our Phase II rules. We will therefore continue to allow this licensee to retain its exclusive authorization on Channels 161-165 to conduct base/mobile operations.

[118] *Third Notice*, 11 FCC Rcd at 214 (para. 46). *See* Section 90.27(a) of the Commission's Rules, 47 C.F.R. § 90.27(a).

[119] *Third Notice*, 11 FCC Rcd at 214 (para. 46).

EMRS Report and Order establishing the Emergency Medical Radio Service. [120] This petition, filed by Dr. Michael Trahos (Trahos), asked that we allow certain entities authorized in the Special Emergency Radio Service (SERS) under Part 90 of our rules (*e.g.*, physicians, disaster relief organizations, *etc.*) to be eligible to operate on the 10 Public Safety channels. [121]

66. Finally, we also noted in the *Third Notice* that the American National Red Cross (Red Cross) had filed a petition for rulemaking seeking eligibility for disaster relief organizations to use the 220 MHz Public Safety channels, and also requesting further modification of our rules to expand the ways in which disaster relief organizations could use the Public Safety channels. [122] Specifically, the Red Cross asked that disaster relief organizations be permitted to use the Public Safety channels, *inter alia*, for the establishment and maintenance of temporary relief facilities, and for limited training exercises incidental to emergency communications plans. [123] Further, the Red Cross proposes that, due to its view that the public safety channels have been underutilized by public safety entities, [124] disaster relief organizations should be given exclusive authority to use such channels. [125] In the alternative, the Red Cross asks that, if use of the public safety channels is to be shared among disaster relief organizations and other public safety eligibles, then the disaster relief organizations should be permitted to ``pre-empt" use of the frequencies ``at the locations of disaster relief efforts" [126] or that 10 channels in another band, such as the 800 MHz band, be allotted for disaster relief organizations. [127] We asked for comment on the Petition for Rulemaking of the Red Cross.

(b) *Decision*

67. There were no comments discussing our proposal to continue to designate Channels 181-185 for use by EMRS eligibles, or our request for comment on making these channels available to all Public Safety eligibles. We will therefore continue to designate channels 181-185

[120] *Id*. at 214 (para. 48).

[121] Petition for Reconsideration of EMRS Report and Order filed by Dr. Michael C. Trahos, April 2, 1993. *See* Public Notice, Report No. 1936, April 27, 1993.

[122] *Third Notice*, 11 FCC Rcd at 215 (para. 49). *See* Petition for Rulemaking, filed by the American National Red Cross, Mar. 2, 1994 (Red Cross Petition).

[123] Red Cross Petition at 10.

[124] *Id*. at 13.

[125] *Id*. at 10.

[126] *Id*. at 10-11.

[127] *Id*. at 14.

for the exclusive use of EMRS eligibles.[128] As explained above with respect to Public Safety channels, we believe that it is in the public interest to continue to reserve five channels for use by EMRS eligibles, without requiring EMRS applicants to compete with applicants wishing to use the spectrum for commercial offerings. This decision will further the Commission's mandate under the Communications Act to ``promote safety of life and property through use of wire and radio communication."[129] As currently provided in Section 90.713(d) of our rules with regard to applicants for other categories of non-nationwide channels (*e.g.*, trunked, data-only, public safety/mutual aid), we will require that no applicant may have an interest in more than one pending application for authorization on EMRS channels within a particular geographic area. Also, there were no comments with regard to our proposal to assign the EMRS and Public Safety channels contiguously (*i.e.*, on Channels 171-185). We believe that there are two advantages to maintaining the current channel assignment scheme:

- Existing, Phase I licensees currently operating mobile or portable radios on these channels will be able to communicate with Phase II licensees.

- Equipment manufacturers that have built mobile or portable units on these channels for Phase I licensees will be able to assemble these units for Phase II licensees without having to employ a different set of frequencies.

Based upon these considerations, we conclude that we should continue to assign the Public Safety channels on Channels 161-170.

68. With regard to the Trahos Petition, we note that we adopted an Order dealing with the various petitions for reconsideration of the *EMRS Report and Order* on January 18, 1996.[130] In that proceeding, we granted the Trahos petition, and modified Section 90.720(a) of the Commission's Rules to permit individuals eligible to be licensed under Sections 90.35 (medical services), 90.37 (rescue organizations), 90.41 (disaster relief organizations), and 90.45 (beach patrols) to be authorized to operate mobile and portable units on the 10 public safety channels, without separate authorization, and modified Section 90.720(b) of the Commission's Rules to allow such individuals to obtain authorization for base/mobile and base/portable operations on these channels.[131]

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[128] We note that pursuant to the *Refarming Report and Order*, 10 FCC Rcd 10076, we are considering the realignment of the radio services encompassed by Subparts B and C of Part 90 of our Rules. If such a realignment is adopted, modifications may be made to the rules adopted herein with regard to the licensing of these channels.

[129] Section 1 of the Communications Act, 47 U.S.C. § 151.

[130] Amendment of Part 90 of the Commission's Rules to Create the Emergency Medical Radio Service, PR Docket No. 91-72, Memorandum Opinion and Order, 11 FCC Rcd 1708 (1996) (*EMRS Reconsideration Order*).

[131] *Id*. at 1712 (para. 23).

69. With regard to the Red Cross Petition, [132] we decided in the *EMRS Reconsideration Order*, as discussed above, that Public Safety eligibles and certain licensees eligible in the Special Emergency Radio Services (SERS), including disaster relief organizations, should be permitted, under Section 90.720(a) of the Commission's Rules, to operate mobile and portable radios on the 220 MHz public safety channels, without the need for separate authorization, to transmit communications: (1) relating to the immediate safety of life; or (2) to facilitate interoperability among public safety and the designated SERS entities. We recognize, however, that disaster relief organizations have unique requirements. [133] We will therefore amend Section 90.720(a) to allow disaster relief organizations to employ the 220 MHz public safety channels in the various non-emergency situations the Red Cross has identified.

70. We will not, however, confer on disaster relief organizations exclusive authority to operate on these channels or the authority to preempt other public safety users at the locations of disaster relief efforts. The 220 MHz public safety channels were intended to be used for interoperability by all entities involved in responding to emergencies, and we therefore do not believe that it would be appropriate to permit only one such entity to have exclusive use of the channels during emergencies. We disagree with the Red Cross's assertion that because only a limited number of public safety eligibles applied for base station authorizations on the public safety channels, this indicates that public safety entities will not have a need for these channels, especially in times of emergency. As explained above, public safety licensees are permitted to use the channels for mobile and portable communications without the need for separate authorization. Thus, the need by public safety entities for the 220 MHz Public Safety channels cannot necessarily be measured by the number of applications received for base and mobile or base and portable authorizations when such applications were accepted in 1991. [134] We therefore conclude that all licensees eligible to use the 220 MHz public safety channels under Section 90.720, as amended, will be required to share the use of the channels.

71. Finally, we turn to the suggestion made by the Red Cross that we consider the allocation of channels in a different band to create a nationwide allotment of 10 channels for use by disaster relief organizations. [135] We have concluded that there is not a sufficient basis on the current record to adopt the approach advanced by Red Cross. We therefore deny this part of the Red Cross Petition, for the following reasons. First, the Red Cross, in advancing its proposal, has not provided sufficient criteria with which to weigh the merits of competing claims for spectrum

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[132] No comments addressing the Red Cross Petition were filed.

[133] Red Cross Petition at 9-10 (noting that the more than 2,600 chapters of the Red Cross need channel use for training exercises and operational communications preparatory to disaster relief).

[134] On May 1, 1991, the Commission began accepting applications for licenses in the 220-222 MHz band. On May 24, 1991, the Private Radio Bureau suspended the acceptance of such applications. *See* Acceptance of 220-222 MHz Private Land Mobile Applications, Order, 6 FCC Rcd 3333 (Priv. Rad. Bur. 1991). The continuing freeze on the acceptance of 220 MHz applications has made it even more difficult to assess whether public safety entities have need for the use of the 220 MHz Public Safety channels.

[135] Red Cross Petition at 14.

allocations in the bands identified in the Red Cross Petition. [136] We do not believe that this proceeding, with its focus on licensing and service rules for services in the 220 MHz band, is an appropriate forum in which to examine and decide allocation issues affecting the utilization of other spectrum bands by incumbent or future service providers. [137] Our conclusion in this regard has been reinforced by the fact that no party has commented on the Red Cross' suggestion that we expand this proceeding to identify additional spectrum to address the concerns raised by the Red Cross in its petition.

72. Second, we believe that by authorizing disaster relief organizations to operate on the 220 MHz Public Safety channels on a shared basis with other members of the public safety community, we have satisfactorily addressed the emergency communications needs of such organizations. Further, by permitting use of the channels for the various non-emergency situations identified by the Red Cross, we enable disaster relief organizations to satisfy their unique communications requirements.

[136] *See id*. (suggesting the allocation of channels in certain 800 MHz bands).

[137] We note that the Commission is considering the future spectrum needs of all public safety entities in our Public Safety proceeding. *See Public Safety NPRM*, 11 FCC Rcd 12460.

(3) Data-Only Channels (Channels 186-200)

(a) *Proposal*

73. In the *Third Notice*, we proposed to eliminate the ``data-only" designation for Channels 186-200.[138] As indicated in the *220 MHz Report and Order*, this designation includes ``analog non-voice transmissions" or ``any digital transmission, voice or non-voice." [139] We also stated our belief that it is not necessary to continue to mandate ``data-only" operations by the approximately 300 Phase I licensees authorized on these channels, and we therefore proposed that Phase I licensees authorized on these channels be permitted to construct non-``data only" systems.

(b) *Decision*

74. Currently, there are no rules that restrict 220 MHz licensees from transmitting ``data-only" signals on 220 MHz channels in general, but licensees are required to transmit ``data-only" signals on certain 220 MHz channels. The comments favor elimination of the ``data-only" transmission requirement on these channels.[140] As stated in the *Third Notice*, we believe that in today's communications marketplace there will be sufficient demand for non-voice communications and services using digital modulation for voice communications, and therefore it is not necessary for us to allocate channels exclusively for data and digital operations. Thus, in Phase II licensing of the 220 MHz service, we will no longer reserve channels for data-only use. Furthermore, upon the effective date of the rules adopted in this proceeding, we will not require Phase I licensees authorized on Channels 186-195 to operate ``data-only" systems. Phase I licensees currently authorized to operate on Channels 186-195 and who wish to operate non-data-only systems will therefore, upon the effective date of the rules adopted in this proceeding, be permitted to do so. Such licensees, however, will still be required to meet their deadline to construct their base station and place it in operation, or commence service, as prescribed in the *220 MHz Second Report and Order.*

c. *Assignment of the Remaining 125 Non-Nationwide Channels*

75. Having adopted rules for the Phase II licensing of the Public Safety and EMRS channels, we now turn to the licensing of the remaining 125 non-nationwide channels (*i.e.*, the 100 channels currently allocated for five-channel trunked operations, Channels 171-180, and Channels 186-200).

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[138] *Third Notice*, 11 FCC Rcd at 215 (para. 50).

[139] *220 MHz Report and Order*, 6 FCC Rcd at 2362 (paras. 40, 43).

[140] *See* Pagemart Comments at 3, Johnson Comments at 4, and Kelley Comments at 2.

(1) Initiation of Phase II Licensing

76. In the *Third Notice*, we addressed the appropriateness of proceeding at this time with Phase II licensing of the 220-222 MHz band. We noted that some of the comments in response to the *CMRS Further Notice* contended that we should not proceed with the next phase of licensing the non-nationwide 220 MHz channels until the operation of our existing licensing approach could be adequately assessed.[141] We believed, however, that we should not delay the acceptance of new applications for 220 MHz spectrum while we evaluated the utility of our existing licensing scheme. We therefore tentatively concluded that we should initiate the second phase of licensing of the non-nationwide channels. There were no comments on this issue in response to the *Third Notice*. We conclude, therefore, that we should proceed in this Order with the initiation of Phase II licensing of the 220-222 MHz band. As stated in the *Third Notice*, this action will enable ``more widespread and varied services" to be made available to the public. [142]

(2) Eligibility

77. Currently, the 125 non-nationwide 220 MHz channels are available to applicants intending to provide subscriber-based services as well as applicants intending to use spectrum for their internal use. In the *Third Notice*, we proposed to continue to make these channels available in the second phase of licensing on an equal basis to all such applicants. [143] AMTA supports the licensing of the 125 channels for ``either commercial or non-commercial operations . . . ." [144] We conclude that applicants intending to provide subscriber-based services as well applicants intending to use spectrum for their internal use should be eligible to obtain authorizations on licenses associated with the 125 channels. All licensees authorized on these channels will also be permitted, but not required to provide interconnected service.

(3) Licensing Areas

(a) *Proposal*

78. Under our existing rules non-nationwide 220 MHz licensees are authorized on a site-by-site basis. In the *Third Notice*, however, we likened the Phase II 220 MHz service to other CMRS services (*e.g.*, narrowband PCS and 900 MHz SMR) and noted our tentative view that the 220 MHz service should be licensed within defined, geographic areas, rather than the current single-station approach. We therefore proposed that Phase II licensees authorized on the 125 non-nationwide channels be permitted to provide service within prescribed, Commission-defined geographic areas. These areas are: (1) the 172 geographic areas defined as ``Economic Areas" (``EAs") by the Bureau of Economic Analysis (BEA), Department of Commerce (``EA

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[141] *See, e.g.*, SEA Comments at 14-15.

[142] *Third Notice*, 11 FCC Rcd at 218 (para. 56).

[143] *Id*. at 218 (para. 57).

[144] AMTA Comments at 11.

licenses");[145] and (2) the geographic areas defined by five geographic regions described in the *Third Notice* (``Regional licenses").

(b) *Comments*

79. Commenters generally favor our proposal to license the 220 MHz band in EAs and Regions.[146] AMTA endorses licensing over these ``two distinct geographic areas," stating that it favors the use of EAs over MTAs and BTAs because ``EAs more closely approximate the coverage required by a typical consumer of a traditional two-way radio system than do either MTAs or BTAs."[147] Pagenet asserts that EA *and* Regional licensing would be a ``complement to nationwide" licensing, and would allow ``participation by small, medium and large carriers in which local to nationwide service will be provided by a number of different licensees in each marketplace."[148] Both AMTA and Comtech also request that no limit be placed on the number of channels a licensee may obtain within an EA or Region through the auction procedures. [149]

(c) *Decision*

80. In proposing these different-sized licensing areas, we indicated that these geographic areas would provide Phase II licensees with the opportunity to provide different types of service offerings, which would help them compete effectively with licensees in other communications services. We continue to believe that such a licensing approach will provide for the widest variety of communications services and, as Pagenet indicated, would allow for different-sized carriers to enter the 220 MHz marketplace. The participation in this marketplace by a variety of entities will also promote one of the objective's of Section 309(j) of the Act -- that of disseminating licenses among a wide variety of applicants. We will therefore license Phase II 220 MHz channels in EAs and Regions. As indicated in the *Third Notice*, under this licensing approach, Phase II licensees authorized in these geographic areas will be permitted to operate any number of base stations within their authorized area without being required to obtain a separate authorization for each station. However, in an effort to ensure that EA and Regional licensees and co-channel Phase I

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[145] The BEA has divided the Nation into regional economic areas that consist of metropolitan areas that are centers of economic activity and their economically-related surrounding counties. In February 1995, BEA concluded a redefinition of the areas based on newly available information on commuting patterns and adopted a new configuration of 172 EAs. *See* Proposed Redefinition of the BEA Economic Areas, 59 Fed. Reg. 55,416 (Nov. 7, 1994); Final Redefinition of the BEA Economic Areas, 60 Fed. Reg. 13,114 (Mar. 10, 1995). *See also* K. Johnson, ``Redefinition of the BEA Economic Areas," *Survey of Current Business*, Feb. 1995, at 75-81. We proposed to adopt BEA's list of 172 EAs to define the smallest geographic areas for Phase II licenses because of the accuracy of the redefined list in reflecting the current major markets on a local and regional basis.

[146] *See* Johnson Comments at 4; Pagenet Comments at 3; AMTA Comments at 11-12.

[147] AMTA Comments at 12, n.19.

[148] Pagenet Comments at 3.

[149] Comtech Comments at 9-10; AMTA Comments at 11.

licensees will be able to co-exist, we will require 220 MHz EA and Regional licensees -- as we required for 800 MHz SMR EA licensees [150] -- to provide us with notification, on a Form 600, of the technical parameters of all base stations and fixed stations. [151] EA and Regional licensees will also be required to notify us if such stations are added, removed, relocated, or otherwise modified. If such notification is provided within 30 days of station addition, removal, relocation or modification, no filing fee will be required. EA and Regional licensees must also ensure that: (1) they operate their stations in accordance with the provisions of Sections 1.1301 through 1.1319 of our Rules (Procedures Implementing the National Environmental Policy Act of 1969); (2) they operate their stations in compliance with their air safety responsibilities, as outlined in Part 17.6 of our Rules; and (3) they comply with all applicable international agreements (*e.g.*, Section 90.715 relating to operation in U.S./Mexican border areas). We also clarify that -- as we similarly provided in the *800 MHz SMR Report and Order* with regard to the channels of incumbent 800 MHz SMR licensees [152] -- if any channels of a Phase I licensee authorized in a particular EA or Region are recovered by the Commission, such channels will automatically revert to the EA or Regional licensee authorized on the channels in that EA or Region. Finally, as we indicated in the context of nationwide licensing, we believe that because 220 MHz licensees will be in competition with other communications services, such as narrowband PCS and SMR, we should allow them to obtain multiple authorizations in their EA or Region.

81. We provide a list of the codes and names for the Economic Areas in Appendix D. In response to a request by Puerto Rico Telephone Company in its comments in this proceeding, asking that we provide EA-like areas for U.S. territories, [153] we add three additional EA-like licensing areas for the 220 MHz service: EA 173 (Guam and the Northern Mariana Islands); EA 174 (Puerto Rico and the U.S. Virgin Islands); and EA 175 (American Samoa). Finally, while commenters did not address our proposed definitions for Regional licenses, we have examined our original proposal and have decided to create six Regions, rather than the five Regions proposed in the *Third Notice.* We believe that the six Regions identified in Appendix E [154] are more closely aligned with major areas of economic interest than the proposed five Regions. Also, licensing in six Regions instead of five Regions will potentially enable more providers to enter the 220 MHz service marketplace.

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[150] Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, Implementation of Sections 3(n) and 322 of the Communications Act Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, First Report and Order, Eighth Report and Order, and Second Further Notice of Proposed Rulemaking, 11 FCC Rcd 1463, at 1498 (para. 52) (1995) (*800 MHz SMR Report and Order*).

[151] See Section IV.C.1, *infra*. for discussion of our decision to permit fixed operations in the 220-222 MHz band.

[152] *800 MHz SMR Report and Order*, 11 FCC Rcd at 1501 (para. 59).

[153] Puerto Rico Telephone Company Comments at 2.

[154] The six geographic areas for Regional 220 MHz licensing are referred to as Regional Economic Area Groupings (REAGs). See Appendix E.

(4) Channel Allocation Plan

(a) *Proposed Band Plan*

82. In the *Third Notice*, we proposed the following band plan for non-nationwide Phase II licensing:

NON-NATIONWIDE 220 MHz CHANNEL ALLOCATION PLAN

EA BLOCK	CHANNELS
Channels 61-70	10
Channels 71-80	10
Channels 91-100	10
Channels 101-110	10
Channels 121-125	5
Channels 126-130	5
Channels 131-135	5
Channels 136-140	5
TOTAL	**60**

REGIONAL BLOCK	CHANNELS
Channels 171-180	10
Channels 186-200	15
Channels 1-10	10
Channels 11-20	10
Channels 31-50	20
TOTAL	**65**

83. In proposing this band plan, we sought to provide sufficient spectrum for all types of EA and Regional licensees to meet their communications needs. We also proposed a band plan that is comprised entirely of channel assignments involving contiguous channels. This proposal was a significant departure from the Phase I channel assignment scheme for the 125 non-nationwide channels, which contained only two contiguous channel blocks, *i.e.*, Channels 171-180

and 186-200, but provided 20 five-channel assignments consisting of channels spaced 150 kHz apart from one another.[155]

84. In the *Third Notice*, we also proposed to allow both Phase I and Phase II licensees to aggregate their contiguous channels to operate on channels wider than 5 kHz, and proposed to permit Phase I and Phase II licensees to operate paging systems on a primary basis. Our review of the resulting record indicates that developing the optimal band plan must take four elements into account: providing sufficient spectrum so that licensees will have operational flexibility; assigning some amount of spectrum on contiguous channel blocks; permitting aggregation of contiguous channels; and allowing paging operations on a primary basis. In the discussion that follows, we will focus on each of these four elements and explain and analyze how our consideration of each element has led us to adopt our Phase II band plan, which differs from the band plan proposed in the *Third Notice.*

(b) *Adopted Band Plan*

(i) Number of EA and Regional Channels

i. *Proposal*

85. In the *Third Notice*, we noted that Phase I licensees are authorized to use up to five channels, but we indicated that Phase II licensees operating in EAs, which would encompass areas larger than the areas covered by existing Phase I single stations, would likely have a requirement for more than five channels. We also observed that some Phase II licensees, particularly those intending to use the spectrum for their internal purposes, might not have a need for more than five channels, even if those channels are used in an area the size of an EA. [156] To accommodate the spectrum requirements of all potential EA licensees, we proposed to authorize Phase II EA licenses in five- and 10-channel blocks. We also indicated that Regional licensees, who will be offering communications services to much larger geographic areas, should be authorized on a larger number of channels, and we therefore proposed that Regional licenses be assigned in 10-, 15- and 20-channel blocks. Finally, we indicated that EA and Regional licensees needing less spectrum than provided through these particular authorizations could assign channels to other licensees in accordance with our partitioning proposals. [157]

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[155] For example, the 5-channel group identified as ``Group No. 10" consists of Channels 10, 40, 70, 100, and 130. *See* Section 90.721 of the Commission's Rules, 47 C.F.R. § 90.721.

[156] *Third Notice*, 11 FCC Rcd at 221 (para. 63).

[157] *Id*.

ii. *Comments; Decision*

86. Most commenters favor the assignment of larger numbers of channels to individual licensees than proposed. For example, Comtech opposes the use of 5-channel blocks, saying that in its experience as a non-nationwide licensee, ``[l]icensees cannot produce sufficient revenues with only five channels to justify the investment required to construct a [base station] facility," whereas the ``incremental costs of installing an additional five channels . . . allow for the production of sufficient revenue."[158] One commenter, Pagenet, supports the proposed band plan, stating that it ``should allow . . . licensees to compete in the CMRS marketplace by offering a variety of PCS-type, one-way, two-way, data and other services."[159] AMTA suggests that the EA channels should be assigned in three 15-channel blocks and two 10-channels blocks;[160] while PCIA proposes one 5-channel block, two 10-channel blocks, one 15-channel block, and one 20-channel EA block.[161] With regard to Regional licenses, AMTA favors the assignment of two 30-channel blocks; and PCIA proposes one 10-channel block, one 15-channel block and two 20-channel blocks. Based on the comments, we conclude that it would be best to generally provide more channels to both EA and Regional licensees than initially proposed.

(ii) Contiguous Channel Blocks

i. *Proposal*

87. In the *Third Notice* we addressed the matter of whether Phase II licenses should be authorized on contiguous or non-contiguous channel assignments. We noted that when we proposed the original 220-222 MHz band plan in the *220 MHz Notice*,[162] we had explored this issue, and observed that we could authorize 220 MHz channel assignments in a manner similar to the way we authorized channels in the 900 MHz band -- where we adopted a contiguous channel assignment scheme to ``provide increased flexibility to employ spectrum efficient digital systems that may become available in the near future."[163] We indicated, however, that, in the *220 MHz Report and Order*, we had determined that increasing spectrum efficiency was more important than providing for such flexibility, and therefore adopted a non-contiguous channel assignment scheme, which enabled spectrally efficient trunking technology to be more easily implemented.[164]

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[158] Comtech Comments at 5.

[159] Pagenet Comments at 9-10.

[160] AMTA Comments at 15.

[161] PCIA Comments at 9.

[162] *220 MHz Notice*, 4 FCC Rcd at 8597 (para. 27).

[163] *900 MHz Allocation Order*, 2 FCC Rcd at 1835 (para. 74). Digital systems that employ Time Division Multiple Access (TDMA) technology, for example, would likely require channels wider than 5 kHz and thus the aggregation of 5 kHz channels would likely be necessary to enable the use of this technology.

[164] *220 MHz Report and Order*, 6 FCC Rcd at 2358 (para. 16).

We tentatively decided in the *Third Notice* that ``the possible benefits that could be obtained from enabling licensees to employ contiguous channels, *e.g.*, the ability to employ spectrum efficient digital systems, outweigh the potential technical or economic advantages of developing narrowband trunking systems,"[165] and we thus proposed a Phase II band plan consisting entirely of contiguous channel assignments.[166]

ii. *Comments*

88. Commenters are generally opposed to our proposed band plan because of our use of contiguous channel assignments. A number of commenters, for example, express concern that if we adopt the proposed band plan, Phase I licensees that wish to expand on their non-contiguous channels would have to acquire multiple Phase II assignments; and Phase II licensees that acquire contiguous channel blocks would be required to provide co-channel protection to many Phase I licensees in order to implement their systems.[167] SEA, an equipment manufacturer, also expresses concern about the technical disadvantage of employing contiguous channels when implementing ``same-site" systems on narrowband channels.[168] E.F. Johnson, however, does not foresee significant problems with the production of equipment using contiguous, as opposed to interleaved, channels. It notes that there have been problems associated with the use of antenna combiners on interleaved trunked channels, but does not expect this problem to be exacerbated by the use of contiguous channels.[169] PCIA, on the other hand, states that ``combining any number of contiguous channels together can result in significant power loss in the system using the required hybrid combiners" and contends that this problem increases with the number of channels being combined.[170]

89. PCIA and other commenters generally recommend that we maintain the existing band plan, which provides for 20 non-contiguous channel assignments (the current ``trunked" channel assignments) and 10- and 15-channel contiguous assignments (the current ``non-trunked, individual" channels on Channels 171-180 and 186-200).[171] Similarly, AMTA urges us to retain, ``to the maximum extent possible," the existing channel assignment scheme.[172] SEA, while opposed to contiguous channel assignments, proposes a compromise band plan that is derived

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[165] *Third Notice*, 11 FCC Rcd at 222 (para. 65) (footnote omitted).

[166] *Id*.

[167] SEA Comments at 2-3; PCIA Comments at 6-7; Securicor Comments at 4.

[168] SEA Reply Comments at 2.

[169] E.F. Johnson Comments at 5.

[170] PCIA Comments at 7.

[171] PCIA Comments at 8.

[172] AMTA Comments at 14. *See also* Incom's Reply Comments, supporting this proposal. Incom Reply Comments at 4.

from the current twenty 5-channel, non-contiguous 5 kHz channel assignments, and contains an assortment of EA and Regional assignments consisting of 5 kHz, 10 kHz, and 20 kHz channels. [173]

iii. *Decision*

90. Several commenters point out the difficulties that are likely to be encountered by both Phase I licensees and Phase II licensees if we adopt completely inconsistent Phase II and Phase I band plans. We are concerned that a Phase II licensee operating on a contiguous 10-channel block, consisting of Phase I channels assigned on a non-contiguous basis, could be required to provide co-channel protection to 10 or more Phase I licensees operating in its EA and to an even greater number of Phase I licensees in its Region. For example, a Phase II EA licensee authorized on the proposed channel block consisting of Channels 61-70 could have to protect 10 or more Phase I licensees authorized on Phase I trunked channel Group Nos. 1-10.

91. We therefore conclude that adopting a band plan consisting entirely of contiguous channel assignments could inhibit the ability of many Phase II licensees to implement their systems. We therefore find that the best resolution of this issue is to adopt a band plan patterned after the existing channeling scheme -- *i.e.*, a combination of non-contiguous *and* contiguous channel assignments. We also note that in this Order we are adopting partitioning for Phase II EA, Regional and nationwide licensees [174] and are proposing to allow all 220 MHz licensees to disaggregate their spectrum. [175]

[173] SEA proposes four EA assignments (5 kHz each) -- derived from channel Groups 17, 18, 19, and 20; four EA assignments (10 kHz each) -- derived from channel Groups 9 and 10, 11 and 12, 13 and 14, and 15 and 16; two Regional assignments (10 kHz each) derived from channel Groups 1 and 2, and 3 and 4; and one 20 kHz Regional assignment derived from channel Groups 5, 6, 7, and 8. (The channel Groups indicated in this assignment plan are the 5-channel, non-contiguous assignments identified as ``Group Nos. 1, 2, 3,'' *etc*., in Section 90.721 of the Commission's Rules, 47 C.F.R. § 90.721.) SEA Comments at 4.

[174] See para. 308, *infra*.

[175] See para. 321, *infra*.

(iii) Paging on a Primary Basis

i. *Proposal*

92. In the *Third Notice*, we indicated that our current rules permit 220 MHz licensees to operate paging systems only on an ancillary basis to the licensee's primary land mobile operations, and we proposed to allow Phase I and Phase II 220 MHz licensees to provide paging communications on a primary basis.[176] In making this proposal, we noted that in recent years we had allocated or expressed the intention of allocating increasing amounts of spectrum for regional and nationwide paging operations -- *e.g.*, narrowband PCS spectrum -- which will likely be used for advanced paging services.[177] Because of this, we reasoned that removing the current restriction on paging in the 220 MHz band would not have a significant adverse effect on the development of the 5 kHz industry by turning the band into one primarily used for paging services. We tentatively concluded, instead, that allowing paging operations on a primary basis in the 220 MHz band would enable 220 MHz licensees to compete more effectively in the mobile communications marketplace with wireless providers in other bands.[178]

ii. *Comments*

93. SEA is opposed to allowing paging in the 220 MHz band. It argues that there is no shortage of other paging spectrum and that ``[t]he higher potential for this band as originally envisioned by the Commission should not be squandered by allowing it to become just one more band for the provision of paging services."[179] Other commenters generally support removing the restrictions on paging operations in the 220 MHz band.[180] E.F Johnson, while not opposed to paging operations, is concerned that such permitted use of the 220 MHz band may ``dilute the development of narrowband trunked systems."[181] Pronet does not object to our permitting Phase II licensees to provide paging on a primary basis, but opposes allowing Phase I licensees to have this flexibility. Pronet suggests that allowing Phase I licensees to provide paging on a primary basis would ``confer an enormous and unfair advantage on Phase I licensees, while inflicting

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[176] *Third Notice*, 11 FCC Rcd at 231 (para. 85).

[177] Amendment of the Commission's Rules To Establish New Narrowband Personal Communications Services, GEN Docket No. 90-314, First Report and Order, 8 FCC Rcd 7162 (1993) (*Narrowband PCS Order*).

[178] *Id.*

[179] SEA Reply at 6.

[180] AMTA Comments at 18; Comtech Comments at 9 (seeking assurance that paging operations will apply to Phase II *and* Phase I licensees); Overall Wireless Comments at 2; Kelley Comments at 3; PageNet Comments at 12; Metricom Comments at 3.

[181] E.F. Johnson Comments at 6.

substantial competitive harm on operators licensed to provide paging in the 150, 450 and 900 MHz bands."[182]

94. In its reply comments, Comtech asks that we reject Pronet's arguments, contending that the Commission's mandate is to protect competition, not competitors. [183] Metricom, in disagreeing with SEA's position, states that: [184]

> [W]hether or not there is adequate spectrum for paging is irrelevant to the issue of whether paging should be permitted in the 220 MHz band. The real issue is whether licensees should be allowed to provide the services consumers desire. . . . [I]f adequate spectrum exists for paging, and ample paging services are being offered to the public, then there would not be a market for paging services in the 220 MHz band and licensees would have little, if any incentive to offer such services.

In arguing against Pronet's position, Metricom contends that no unique windfall will accrue to Phase I licensees, and that such licensees would receive no more windfall than licensees who provide paging on other spectrum that was not auctioned. [185]

iii. *Decision*

95. Commenters are divided on the issue of whether we should allow 220 MHz licensees to operate paging systems on a primary basis. SEA, for example, is concerned that if we were to permit paging on a primary basis, the 220-222 MHz band could become merely an additional band for the provision of paging services. [186] Other commenters favor paging operations in the band because they believe that it will provide consumers with additional options in meeting their paging needs. Pronet is concerned that it would be unfair to existing paging licensees in other bands to permit existing licensees on the 220 MHz band potentially to provide paging services. [187] In proposing to eliminate the restriction on primary paging operations in the 220 MHz band, we expressed a desire to provide additional spectrum for a rapidly growing communications service, and to enable 220 MHz licensees to compete more effectively in the wireless marketplace. [188] We continue to believe that it is appropriate to allow the marketplace to determine the services

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[182] Pronet Comments at 3. Pronet believes that this will occur because Phase I licensees' spectrum ``was awarded by lottery that they had the good fortune of winning, and because the Commission subsequently decided to expand 220 MHz land mobile service to include paging." Pronet Comments at 4.

[183] Comtech Reply at 7.

[184] Metricom Reply at 3.

[185] *Id*. at 6.

[186] SEA Reply at 5-6.

[187] Pronet Comments at 2-3.

[188] *Third Notice,* 11 FCC Rcd at 231 (para. 87).

offered to consumers, and therefore we will permit Phase I and Phase II licensees to operate paging systems on a primary basis. We believe that if there is sufficient consumer demand for paging services, both Phase I and Phase II licensees should have the opportunity to provide these services. We disagree with Pronet's argument that we should not permit Phase I licensees, in general, to operate paging systems because they acquired their spectrum through lottery at a time when paging was prohibited on a primary basis in the 220 MHz band. We agree with Metricom's assertion that 220 MHz licensees would be receiving no more ``windfall" in this regard than 150 MHz, 450 MHz and 900 MHz paging licensees that, too, acquired spectrum that was not auctioned, and therefore conclude that permitting paging on a primary basis by both Phase I nationwide and non-nationwide licensees is appropriate.

(iv) Aggregation of 5 kHz Channels

i. *Proposal*

96. In the *Third Notice* we addressed the question of whether it was necessary to continue to require that 5 kHz technology be utilized in the 220 MHz band to the *exclusion* of other technologies. We expressed the belief that our use of five kHz channels unnecessarily restricts the array of services that can be provided in the 220 MHz band and prevents other, perhaps equally spectrally efficient, technologies from being employed. We noted, for example, that time-division technology used in cellular and SMR bands may be at least as spectrally efficient as 5 kHz channels.[189] We therefore tentatively concluded that we should remove the required use of 5 kHz channels in the 220 MHz band, and allow licensees to aggregate their authorized frequencies to create wider bandwidth channels. [190] We observed that removing this restriction would, for example, allow a Phase II licensee authorized on one of the proposed 10-channel blocks to create a single 50 kHz block.

97. In drawing this tentative conclusion, we acknowledged that allowing 220 MHz licensees to aggregate their channels would be a departure from our initial decision not to allow 220 MHz licensees to ``group narrowband channels to create a wideband voice channel." [191] We noted, however, that in the *900 MHz Allocation Order*, allocating the 900 MHz private land mobile frequencies, we had decided to adopt a contiguous channel assignment scheme to ``provide increased flexibility to employ spectrum efficient digital systems" [192] and to allow 900

[189] *Id*. at 229 (para. 81).

[190] We also noted that while all of the nationwide Phase I channels were assigned in contiguous channel blocks, most of the non-nationwide Phase I channels were assigned on the 5-channel trunked assignments, which are composed of non-contiguous channels. Thus, only Phase I non-nationwide licensees authorized on the individual channels (*i.e*., Channels 161-170, Channels 171-180, and Channels 186-195) would be able to easily take advantage of this option. *Id*. at 229-30 n.128 (para. 82).

[191] *220 MHz Notice*, 4 FCC Rcd at 8597 n.49 (para. 27).

[192] *900 MHz Allocation Order*, 2 FCC Rcd at 1835 (para. 74).

MHz licensees to ``combine contiguous channels;" [193] and we tentatively concluded that the flexibility we had sought for licensees in the 900 MHz band also should be available to licensees in the 220 MHz band. Enabling licensees to aggregate their 5 kHz channels, we tentatively concluded, would allow them to use their limited amount of spectrum to employ the widest variety of technologies to best meet the communications requirements of consumers.

ii. *Comments*

98. Several commenters disagree with our proposal to allow 220 MHz licensees to aggregate their contiguous channels, arguing that there are many other spectrum bands, such as PCS, cellular, 800 MHz SMR, and 900 MHz SMR, where digital and other technologies can and are being used, but that only in the 220-222 MHz band must 5 kHz, narrowband technology be employed.[194] These commenters, especially manufacturers of 5 kHz equipment, assert that, if we adopt this proposal, we would be abandoning our commitment to the implementation of narrowband technologies and would severely jeopardize their ability to continue to develop and market that technology.[195] Other commenters, however, support the proposal to allow the aggregation of channels, arguing that this type of flexibility will allow 220 MHz licensees to offer a wider variety of communications services and more effectively compete in the wireless marketplace.[196]

iii. *Decision*

99. We find that there is some merit to the arguments of commenters opposed to our proposal to allow licensees to aggregate their channels. There are several other spectrum bands where wider channels -- *e.g.*, 12.5 kHz, 25 kHz, 30 kHz, and 50 kHz channels -- are currently employed, and within which a variety of analog and digital technologies are being used. [197] The 220-222 MHz band, however, is the only spectrum band where users must employ 5 kHz, narrowband technology.

100. In the *220 MHz Allocation Order*, we allocated this spectrum for land mobile use as a means for promoting spectrum efficient technologies, and then adopted a 5 kHz channelization

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[193] *Id*. at 1835 (para. 77). *See* Section 90.645(h) of the Commission's Rules, 47 C.F.R. § 90.645(h). Channels authorized in the 896-901/935-940 MHz bands under Part 90 are assigned in blocks of 10 contiguous 12.5 kHz channels.

[194] *See* SEA Comments at 13; PCIA Comments at 8. *See also* Securicor Comments at 11; E.F. Johnson Comments at 6.

[195] *See* SEA Comments at 9-10; SEA Reply at 5; E.F. Johnson Comments at 6; PCIA Comments at 8.

[196] *See* AMTA Comments at 18; Metricom Comments at 4; Comtech Comments at 6; Pagenet Comments at 11-12. S*ee also* Global Comments at 1 (supporting channel aggregation only for nationwide licensees), and Motorola *Ex Parte* Comments dated March 18, 1996, May 16, 1996, and July 12, 1996 .

[197] These wider channels are found in the 900 MHz and 800 MHz SMR bands, the Cellular Radio band, and the narrowband PCS band. *See* Sections 90.613 (800 and 900 MHz bands), 22.905 (Cellular radio band), and 24.129 (Narrowband PCS band) of the Commission's Rules, 47 C.F.R. §§ 90.613, 22.905, and 24.129.

plan in the *220 MHz Report and Order.* We now conclude that we should continue to support the ongoing development and implementation of narrowband, 5 kHz systems, and reaffirm our commitment to make the 220-222 MHz band a home for spectrally efficient technology. We do not believe, however, that to do this requires that we devote the entire two megahertz of spectrum in this band *exclusively* to narrowband technology. As discussed *supra*, we believe that some distribution of both contiguous and non-contiguous channel assignments in the Phase II band plan is appropriate. In order to allow the 220-222 MHz band to continue to be used to foster the development of narrowband technology, we now conclude that we should adopt a distribution of non-nationwide channel assignments consisting of *more* non-contiguous than contiguous channel assignments.

101. Under such a channel plan, we will allow Phase I and Phase II licensees operating on the 125 non-nationwide channels to aggregate any of their contiguous channels. A licensee authorized on non-contiguous channel assignments may aggregate contiguous channels by either acquiring several such non-contiguous channel assignments or, in the future, by possibly acquiring ``disaggregated" channels.[198] Thus, applicants for Phase II licenses on these channels will be able to seek the type of spectrum authorization that will best meet their needs -- *i.e.*, prospective licensees intending to employ a particular technology or provide a particular service that may require channels greater than 5 kHz will be able to seek one of the available contiguous channel blocks and will be able to aggregate such channels, and use them subject to our spectrum efficiency standard. Applicants who intend to construct systems using narrowband technology would have the option of obtaining *either* a non-contiguous channel assignment or a contiguous channel block. By allowing licensees to aggregate channels, the marketplace will determine the viability of 5 kHz technology, while retaining our commitment to spectrum efficiency. That is, if prospective licensees believe that implementing two-way dispatch systems on narrowband channels will be a successful business venture, then they will likely attempt to acquire the available non-contiguous channel blocks and use their authorized ten or fifteen 5 kHz channels discretely. Conversely, if prospective licensees believe that there is greater potential in operating a spectrally efficient system on contiguous channels, they will likely attempt to acquire contiguous channel authorizations and aggregate their channels.

102. Additionally, we conclude that licensees authorized to operate on the contiguously-assigned public safety/mutual aid and EMRS channels (Channels 161-170 and Channels 181-185, respectively) should not be permitted to aggregate their channels. As explained above, these channels were allocated, in part, to enable public safety entities to communicate with one another in emergencies. To permit licensees to aggregate their channels could result in some licensees employing 5 kHz technology, while others employ non-5 kHz technologies, and this could limit the interoperability we seek to achieve on these channels.

103. Based on the various considerations discussed in the preceding paragraphs, we adopt the following Phase II band plan for non-nationwide channels:

(c) *Features of the Band Plan*

[198] See Sections V and VI, *infra*, for discussion of disaggregation.

NON-NATIONWIDE 220 MHz CHANNEL ALLOCATION PLAN[199]

EA BLOCK	CHANNELS
A: Channel Groups[200] 2, 13	10
B: Channel Groups 3, 16	10
C: Channel Groups 5, 18	10
D: Channel Groups 8, 19	10
E: Channels 171-180	10
TOTAL	**50**

REGIONAL BLOCK	CHANNELS
F: Channel Groups 1, 6, 11	15
G: Channel Groups 4, 9, 14	15
H: Channel Groups 7, 12, 17	15
I: Channel Groups 10, 15, 20	15
J: Channels 186-200	15
TOTAL	**75**

104. This band plan contains a number of features that we believe will, to the extent possible, satisfy the concerns and meet the needs of most, if not all, of the parties in this proceeding. First, we authorize assignments of no less than 10 channels. This addresses the concerns of commenters who believe that more than 5 channels will be needed to enable Phase II licensees to serve their areas of operation adequately. While we believe that 10 channels are the minimum necessary to provide satisfactory service in EAs and Regions, we remain convinced that 5 channels are sufficient for Phase I licensees operating on single stations.

105. Second, we address the concerns of commenters who have observed that, under our original proposal, Phase I licensees authorized on the 5-channel, non-contiguous trunked assignments would have to acquire at least five separate Phase II authorizations in order to expand geographically on their channels. The reason that Phase I licensees would have faced this problem under our proposed band plan is that, for example, a licensee authorized on trunked channel Group No. 1 -- which includes Channels 1, 31, 61, 91, and 121 -- would have to have

[199] Assignments A, B, C, D, F, G, H and I are composed of channels assigned in a non-contiguous manner. Assignments E and J are composed of contiguously assigned channels.

[200] The Channel Groups indicated in the allocation plan are the 5-channel, non-contiguous assignments identified as ``Group Nos. 1, 2, 3,'' *etc*., in Section 90.721 of the Commission's Rules, 47 C.F.R. § 90.721.

obtained Phase II authorizations on Channel Blocks 1-10, 31-50, 61-70, 91-100, and 121-125 in order to expand on its channels. However, under the band plan we are adopting in this Order, the EA and Regional assignments derived from the 5-channel, non-contiguous Phase I assignments are composed of groupings of two or three of these assignments (*e.g.*, EA Assignments A, B, C, and D -- each of which are composed of two 5-channel non-contiguous Phase I assignments; and Regional Assignments F, G, H, and I -- each of which are composed of three 5-channel non-contiguous Phase I assignments). Thus, Phase I licensees authorized on Group Nos. 1-20 will be able to expand on all of their channels by obtaining authorization on a single Phase II assignment (*e.g.*, a Phase I licensee authorized on Group No. 1 would, by acquiring Assignment F, be able to expand on all five of its existing channels).

106. Third, by authorizing assignments derived from the Phase I trunked groups, we address commenters' concerns about the need of Phase II licensees to provide co-channel protection to many Phase I licensees. Under our proposed band plan, a Phase II licensee authorized on a contiguous 10- or 20-channel block derived from the Phase I trunked channels (*e.g.*, the proposed EA block consisting of Channels 61-70, or the proposed Regional block consisting of Channels 31-50) would have had to potentially provide protection to a large number of Phase I licensees in their particular area of operation (*e.g.*, a Phase II licensee authorized on the EA block consisting of Channels 61-70 would have had to protect Phase I licensees authorized on channel Groups Nos. 1 through 10, if such licensees were operating in its EA or in an adjoining EA; and the Phase II licensee authorized on the Regional block consisting of Channels 31-50 would have had to protect Phase I licensees authorized on *all twenty* of the trunked channel groups, if such licensees were operating in its Region or in an adjoining Region). Under the plan we are adopting, however, Phase II licensees will potentially have to protect far fewer Phase I licensees -- *e.g.*, EA licensees will only have to protect Phase I licensees in their EA, or in an adjoining EA, operating on the two channel groups that comprise their 10-channel system; and Regional licensees will only have to protect Phase I licensees in their Region, or in an adjoining Region, operating on the three channel groups that comprise their 15-channel system.

107. Fourth, we continue to allocate the 100 non-contiguous Phase I channels in the form of 5 kHz, non-contiguous channel assignments (Assignments A-D, and F-I). This will provide a number of assignments to those licensees who wish to operate 5 kHz, narrowband trunked systems and prefer to operate on channels spaced apart from each other. Licensees authorized on one of the two channel blocks consisting of contiguous channels (Assignments E and J), however, will not be precluded from operating on the individual 5 kHz channels that comprise these blocks (*e.g.*, licensees authorized on Assignment J could operate on 15 discrete 5 kHz channels instead of a single 75 kHz block), and will thus have the option of employing *either* narrowband technology or aggregating their channels to employ other technologies or to provide services that may be more easily accommodated on wider channels, consistent with our spectrum efficiency standard.

108. Fifth, our decision to continue to allocate the 100 non-contiguous Phase I channels in the form of 5 kHz, non-contiguous Phase II channel assignments largely addresses the concerns raised by SEA and PCIA regarding possible technical difficulties associated with the construction of base stations on contiguous channel blocks. We *ar*e allocating two Phase II assignments on contiguous channels (Assignments E and J), but the channels associated with these assignments were assigned contiguously in the *220 MHz Report and Order* --those concerns

notwithstanding.[201] Furthermore, PCIA's concern that combining up to 20 contiguous channels could result in significant power loss is alleviated to some extent by our decision to employ a maximum of only 10 and 15 contiguous channels, respectively, for Assignments E and J.

109. Finally, we conclude that our decision to license Phase II spectrum in this manner is consistent with the objectives identified in Section 309(j)(4)(C) of the Act. That is, the bandplan -- which contains both EA and Regional licenses and includes both contiguous and non-contiguous assignments -- coupled with our decision to permit paging operations on a primary basis, will enable both large and small entities to provide a wide variety of communications services to the public and promote competition in the CMRS marketplace.

(5) Spectrum Efficiency Standard

(a) *Proposal*

110. In the *Third Notice*, we tentatively concluded that, because we had sought to encourage the development of spectrally efficient technologies at the time we initially reallocated the 220-222 MHz band, we should require licensees choosing to aggregate channels to maintain a degree of spectrum efficiency at least equivalent to that obtained through 5 kHz channelization. We asked, alternatively, whether our proposal to license through competitive bidding would provide sufficient incentives for licensees to use their spectrum efficiently, thus obviating the need for a specific spectrum efficiency standard.[202]

(b) *Comments*

111. Some equipment manufacturers favor the adoption of a spectrum efficiency standard.[203] For example, SEA states that, because we have proposed construction requirements for Phase II 220 MHz licensees and have adopted such deadlines for narrowband PCS, ``it would appear that the Commission believes that competitive bidding does not provide sufficient incentives for the timely build-out of systems."[204] SEA concludes that if the Commission decides to permit channel aggregation, then ``efficiency standards will be needed to encourage spectrum efficient use," and thus proposes that we adopt a standard that would require one voice channel

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[201] *In the 220 MHz Notice*, we noted that the use of contiguous channels in the 220 MHz band would not preclude the use of trunking technology. *See 220 MHz Notice*, 4 FCC Rcd at 8597 (para. 27).

[202] *Third Notice*, 11 FCC Rcd at 230 (para. 83).

[203] Motorola did not raise the issue of spectrum efficiency standards, but did support our proposal to allow the aggregation of contiguous 5 kHz channels. Motorola *Ex Parte* Comments, March 18, 1996; May 16, 1996; and June 12, 1996.

[204] SEA Comments at 16-17. SEA also notes that ``[c]ompetitive bidding encourages profitable use of spectrum, but, given the costs of modern efficient technologies, the most profitable use of the spectrum is not always the most efficient use." *Id*. at n. 27.

per 5 kHz (for voice communications) and a 4,800 bps data rate (for data communications). [205] Securicor, in its reply comments, asks that, if we permit ``wide-band systems'' in the 220 MHz band, we should avoid taking ``a step backward by not requiring the deployment of spectrally efficient technology.''[206] Securicor therefore proposes that we provide ``one high-grade voice channel with performance equaling that of a toll quality telephone circuit and a data rate of 14.4 kbps for every 5 kHz of spectrum aggregated.'' [207]

112. Other commenters, however, argue that an efficiency standard is not necessary or appropriate. For example, Comtech believes that ``competitive bidding will ensure that spectrum is used as intensively as possible'' and that ``licensees will have every incentive to derive as much revenue as possible from their spectrum, to offset the cost of securing the spectrum.'' [208] Pagenet notes that ``if the Commission were to artificially limit the ability of the 220 MHz license [sic] to offer services, [it] will place 220 MHz licensees at a disadvantage in the marketplace because the other CMRS licensee [sic] are not subject to narrowband channelization spectrum efficiency requirements.''[209] Pagenet further observes that if the Commission were to require licensees to meet a spectrum efficiency standard, it would be limiting the number of service offerings that could be provided in the band. Metricom contends that competitive bidding and the marketplace will ``ensure that licensees utilize their spectrum in a technologically efficient manner. [Whereas,] [a]n arbitrary spectral efficiency parameter . . . will only hinder the ultimate development of the band.'' [210]

(c) *Decision*

113. One of our principal goals in establishing the 220-222 MHz band was to encourage the development of spectrally efficient technologies. Some commenters believe that a spectrum efficiency standard should be adopted for those licensees aggregating contiguous channels to ensure that spectrum in the band continues to be used efficiently. Other commenters, however, believe that licensees acquiring 220 MHz spectrum through competitive bidding will have sufficient incentives to use that spectrum as efficiently as possible. Still others point out that a spectrum efficiency standard could preclude the provision of certain communications services.

114. We conclude that a spectrum efficiency standard should be adopted for the 220-222 MHz band, and applied to licensees aggregating contiguous 5 kHz channels. In adopting this requirement, we note that we do not disagree with commenters that suggest that licensees

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[205] *Id*. at 17.

[206] Securicor Reply at 5.

[207] *Id*. at 6.

[208] Comtech Comments at 9.

[209] Pagenet Comments at 14.

[210] Metricom Comments at 4.

acquiring 220 MHz spectrum through competitive bidding will likely have the incentive to use their spectrum efficiently. We believe, however, that our adoption of a mandatory spectrum efficiency standard at this time is an appropriate and effective means of ensuring that licensees aggregating contiguous channels will operate in an efficient manner.

115. Nor do we find it necessary to resolve the claims of those parties that assert that our adoption of a standard could prevent certain types of communications service from being provided in the 220-222 MHz band. In response to such claims, we must emphasize that our purpose in adopting a spectrum efficiency standard is not to prevent the offering of new and innovative services in the band. Rather, we believe that by adopting a spectrum efficiency standard, we will encourage the development of spectrally efficient technologies in any number of other wireless communications services that may eventually be provided in the band. Such an objective is in keeping with our adoption of 5 kHz channelization for the band in the *220 MHz Report and Order* in order to stimulate the development of spectrally efficient technologies in the land mobile radio services.

116. We therefore conclude that Phase I and Phase II licensees combining contiguous 5 kHz channels to operate on channels wider than 5 kHz will be required to meet the following spectrum efficiency standard: For voice communications, a licensee must employ equipment that provides at least one voice channel per 5 kHz of channel bandwidth. For data communications, a licensee must employ equipment that operates at a data rate of at least 4,800 bits per second per 5 kHz of channel bandwidth.

117. We will implement this decision through our type acceptance process. Thus, upon the effective date of the rules adopted in this proceeding, a request by any equipment manufacturer or other party for Part 90 type acceptance of transmitters designed to operate in frequencies in the 220-222 MHz band and not designed to operate on channel bandwidths of 5 kHz or less (as currently required by our rules), must demonstrate that the equipment meets the spectrum efficiency standard we have adopted in this Order.

118. We desire to encourage new and innovative efficient technologies to benefit users of this band and the public. Therefore, as we did in our recently adopted *Refarming Reconsideration Order*,[211] we will provide manufacturers with additional flexibility to design spectrally efficient transmitters. Manufacturers may obtain type acceptance for equipment that does not meet the voice or data efficiency standard if: (1) the manufacturer submits a technical analysis with its application for type acceptance demonstrating that the equipment will provide more spectral efficiency than that which would be provided by use of the voice or data efficiency standard; and (2) this technical analysis is deemed to be satisfactory by the Commission's

[211] Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Radio Services, PR Docket No. 92-235, Amendment of the Commission's Rules Concerning Maritime Communications, PR Docket No. 92-257, Memorandum Opinion and Order, 11 FCC Rcd 17676 (1996) (*Refarming Reconsideration Order*).

Equipment Authorization Division.[212] Licensees may employ equipment that does not meet the spectrum efficiency standard only if such equipment has been type accepted in this manner.

119. Finally, we believe that the spectrum efficiency standard should only remain in effect through December 31, 2001. This, we believe, will provide a fair and appropriate time period for spectrally efficient technologies to develop in the 220-222 MHz band, and will enable other innovative technologies and services to eventually be introduced into the band as well. We believe that this decision also balances our goal of stimulating the development of spectrally efficient technology with our desire to rely on market forces to spur the production of efficient technology, and to grant licensees flexibility to determine the technology that best suits their needs. We agree with commenters that our decision to use competitive bidding for Phase II licenses will encourage efficient use of the spectrum. We want to ensure, however, the availability of spectrally efficient equipment in this band. We are also confident that, by the beginning of 2002, the state-of-the-art in wireless equipment will have exceeded our standard, and there will therefore no longer be a need to mandate a standard for the 220-222 MHz band.

(6) Emission Mask

(a) *Proposal*

120. In the *Third Notice*, we indicated that, on channel assignments composed of contiguous channels, where licensees may aggregate their channels, licensees would no longer be required to adhere to the existing channel emission masks at the edge of each of their authorized five kHz channels. To prevent adjacent channel interference to licensees operating on channels outside their channel block, however, we proposed that licensees authorized on contiguous channel assignments be required to conform to the mask at the outer edge of their channel blocks.[213] We also noted that allowing licensees to refrain from complying with the emission masks of each of the ``inside" channels in their block would result in licensees transmitting stronger out-of-band signals than are currently permitted by our rules. We tentatively concluded, however, that, because licensees constructing base stations must adhere to the required co-channel separation criteria with respect to all co-channel licensees in their area, the increased strength of out-of-band signals would not result in any increased likelihood for harmful interference to co-channel licensees.[214]

(b) *Comments*

121. SEA favors requiring licensees to conform with the emission mask at block edges ``to ensure appropriate protection to adjacent channel neighbors," and agrees that ``as long as the

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[212] We recognize that manufacturers may be reluctant to engage in the research and development necessary for new equipment without knowing whether proposed equipment meeting specified standards would be eligible for this option. Accordingly, upon specific request, the Equipment Authorization Division will advise applicants who desire to develop equipment for this band as to the acceptability of their technical analysis.

[213] *Third Notice*, 11 FCC Rcd at 230 (para. 84).

[214] *Id*.

ERP/HAAT and geographic separations are maintained as specified in the current rules, the increased signal strength between channels will not result in an increased likelihood of harmful interference to co-channel licensees."[215] Metricom agrees with the proposal, and also proposes eliminating the frequency stability requirements for all inside channels, indicating that this ``will have no adverse impact on adjacent channel licensees so long as the emission mask requirements are met at the 'outside' channels."[216]

(c) *Decision*

122. We adopt our proposal to eliminate the emission mask at the edge of the ``inside" channels for Phase I and Phase II licensees authorized on contiguous channel assignments. Such licensees will only have to comply with the emission masks at the outer edge of their channel blocks. We also adopt Metricom's proposal to eliminate the frequency stability requirements for the inside channels of licensees aggregating their channels. Finally, with regard to the issue of whether allowing licensees to refrain from complying with the emission masks of each of the ``inside" channels in their block would result in licensees transmitting stronger out-of-band signals and thus potentially causing interference to co-channel licensees, we conclude that because licensees constructing base stations must adhere to the required co-channel separation criteria with respect to all co-channel licensees in their area, the increased strength of out-of-band signals will not result in any increased likelihood for harmful interference to co-channel licensees.

d. *Procedures for Assignment of Non-Nationwide Channels*

(1) In General

(a) *Proposal*

123. We have decided in this Order that the 125 non-nationwide channels should be available on an equal basis to licensees using the spectrum for subscriber-based services and licensees using the spectrum to meet their internal communications needs. In the *Third Notice*, we indicated that we would not be able to determine in advance of authorization which of these types of licensees will acquire the spectrum, and thus we would not be able to conclude with absolute certainty the principal use of this spectrum.[217] We also tentatively concluded that the principal use of the Phase II non-nationwide spectrum on the 125 channels is likely to be for the transmission or reception of communications signals to subscribers for compensation, based upon two factors: (1) most Phase I non-nationwide applicants appear to intend to use their spectrum for for-profit services; and (2) we proposed to continue to allow non-nationwide 220 MHz licensees using spectrum for internal communications to lease excess capacity to provide service

[215] SEA Comments at 15-16 (emphasis omitted).

[216] Metricom Comments at 5.

[217] *Third Notice*, 11 FCC Rcd at 224 (para. 70).

to subscribers.[218] We further tentatively concluded that, in accordance with Section 309(j)(2)(A) of the Communications Act, mutually exclusive applications for initial licensing of these channels should be assigned through competitive bidding, and we sought comment on this decision. [219]

(b) *Decision*

124. APCO raises a concern about our proposal to assign mutually exclusive applications for the 125 channels through competitive bidding. We address the issue raised by APCO in the following Section (*infra* at para. 128). APCO's concern notwithstanding, we conclude that, based on our analysis in the *Third Notice* that the principal use of the spectrum is likely to be for the transmission or reception of communications signals to subscribers for compensation, we should assign mutually exclusive applications for licenses on the 125 channels through competitive bidding. In reaching this conclusion, we find that assigning this spectrum through competitive bidding will promote Section I of the Communications Act and the objectives described in Section 309(j)(3) of the Communications Act, as discussed in the *Third Notice.* We also adopt our proposal to continue to allow non-nationwide 220 MHz licensees using their spectrum for internal communications to lease excess capacity of their systems, and thereby provide service to subscribers. However, to the extent such a licensee, in leasing excess capacity, meets our definition of a Commercial Mobile Radio Service provider, it will be subject to regulation as a CMRS provider.

(2) Public Safety and EMRS Entities

(a) *Proposal*

125. In the *Third Notice* we tentatively concluded that we should continue to authorize the 10 Public Safety and five EMRS channels on a first-come, first-served basis -- with stations authorized at a single location, and protected in accordance with our 120-km co-channel separation criteria. We also concluded that, because these channels will not be used principally for the provision of subscriber-based services for compensation, in accordance with Section 309(j) of the Communications Act, they should be assigned through random selection procedures. [220]

126. We noted further that our current rules permit Public Safety entities, including those eligible in the EMRS, to apply for *all* of the non-nationwide 220 MHz channels, including the 125 channels. We therefore tentatively concluded that, because we believed that the principal use of the 125 non-nationwide channels was likely to be for the provision of subscriber-based service for compensation and therefore to be assigned through competitive bidding, Public Safety and EMRS entities seeking these channels would also be required to obtain them through competitive bidding. We also noted, however, that because we had only received three applications from

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[218] We observed that the *Competitive Bidding Second Report and Order* provides guidance for determining the likely principal use of a service. *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2353-54 (paras. 30-36).

[219] *Third Notice*, 11 FCC Rcd at 225 (para. 71).

[220] *Id.* at 225 (para. 72).

Public Safety entities for authorization on the Public Safety channels in Phase I, we believed that Public Safety users would be adequately accommodated by our continued allocation of the 10 channels reserved for their sole use. [221]

(b) *Comments*

127. APCO asserts that the fact that only three applications were filed for the Public Safety channels in Phase I ``is not an accurate reflection of actual pubic safety interest in or demand for these frequencies."[222] APCO argues further that, because 10 channels designated for Public Safety use are not enough for many large, state-wide mobile data communications networks, we should ``provide realistic opportunity for public safety to obtain more than 10 channels."[223] APCO further notes that ``if subject to competitive bidding, the channels would be lost forever to commercial interests since state and local government agencies are in no position to compete in spectrum auctions."[224] APCO concludes, therefore that we should refrain from implementing competitive bidding for all of the remaining 125 non-nationwide channels. [225]

(c) *Decision*

128. In the 2*20 MHz Report and Order*, we decided to allocate 10 channels solely for use by Public Safety eligibles, and in this Order we have decided to retain, but not expand this allocation. We made this decision because while there appears to be some need on the part of public safety entities for use of 220 MHz channels, we have no way to judge, at this time, the actual level of that demand. While APCO may be correct in its assertion that the existing applications for the 220 MHz Public Safety channels do not accurately represent the real demand for these frequencies, we have no other evidence of demand for these channels at this time. In order to ensure that Public Safety entities have access to the spectrum resources they need to fulfill their missions, however, the Commission is currently examining the operational, technical, and spectrum needs of the public safety community through the year 2010. [226] This proceeding will draw extensively from the work of the Public Safety Wireless Advisory Committee, which has released its Final Report. That report noted the existing use of the 220 MHz band for Public Safety, but did not recommend that additional channels from the 220 MHz band be made available for Public Safety use. The concerns that APCO has raised about the possible need for additional spectrum by public safety entities will be fully addressed in the public safety proceeding. We

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[221] *Id*. at 225 (para. 73).

[222] APCO Comments at 2.

[223] *Id*. at 3.

[224] *Id*. at 2.

[225] *Id*. at 3.

[226] *Public Safety NPRM*, 11 FCC Rcd 12460.

therefore conclude that we should not assign licenses for any of the 125 non-nationwide channels by any means other than competitive bidding.

129. We also conclude that Public Safety Channels 166-170 and the five EMRS channels should be assigned on first-come, first-served basis -- with stations authorized at a single location, and protected in accordance with our existing co-channel separation criteria. [227] If any mutually exclusive applications are filed on the same day, we will choose from among these applications based on random selection procedures. Under Section 309(i) of the Act, the Commission has the authority to use random selection procedures for awarding licenses from among mutually exclusive applications if the Commission has determined that the use of the spectrum is not consistent with Section 309(j)(2)(A). [228] Section 309(j)(2)(A) states that competitive bidding may be used if the principal use of the spectrum is reasonably likely to involve a subscriber-based service. Because the Public Safety and EMRS channels are not reasonably likely to be used for subscriber-based services, we find that these channels would not be auctionable under Section 309(j)(2)(A). Therefore, the Commission would have the authority to award licenses from among mutually exclusive applications based on random selection procedures. Channels 161-165 will be available on a non-exclusive, *i.e.*, shared basis and, as such, will not be assigned through random selection procedures. Thus, we will grant all applications for these channels that comply with our Rules. After the effective date of the rules adopted in this proceeding, we will issue a Public Notice announcing the acceptance of applications for authorizations on the 10 public safety channels (Channels 161-165 and Channels 166-170) and the five EMRS channels.

(3) Federal Government Users

(a) *Proposal*

130. In the *Third Notice*, we indicated that our current rules permit Federal Government entities to be authorized on any of the 140 Phase I non-nationwide channels on a co-equal basis with non-Government users. We also observed that, because we received *no* applications from Federal Government entities for non-nationwide 220 MHz spectrum during Phase I, we anticipated that demand for 220 MHz spectrum by Government entities would be satisfactorily met through their future assignment on the 10 Public Safety and 5 EMRS channels. [229] In addition, we suggested that the assignment of these channels to Federal Government agencies would be of particular interest to those agencies responsible for public safety and emergency medical services because it would enable them to communicate with their counterparts at the State and local level.

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[227] *See* Section 90.723(d) of the Commission's Rules, 47 C.F.R. § 90.723(d). Also, as indicated in the *EMRS Report and Order*, to ensure that use of 220 MHz frequencies be compatible with existing regional and local emergency medical plans, we require that applications for EMRS channels be subject to approval by appropriate regional and local emergency planning authorities. If there are no regional and local plans in an applicant's area of operation, an applicant must make an affirmative statement that no such plans exist. *See EMRS Report and Order*, 8 FCC Rcd at 1459 (para. 29).

[228] Communications Act § 309(i), 47 U.S.C. § 309(i).

[229] *Third Notice*, 11 FCC Rcd at 225-26 (para. 74).

We also concluded that mutually exclusive applications for the channels available to both Government and non-Government entities should be assigned through a single unified lottery. [230]

(b) *Comments*

131. The National Telecommunications and Information Administration (NTIA), in its reply comments, relinquished Government rights to the 125 non-nationwide channels. NTIA indicated that in removing the Federal Government's co-primary status with respect to these channels, it ``seeks to increase potentially this spectrum's value at auction and to promote the availability of this radio spectrum for commercial services." [231]

(c) *Decision*

132. We are confident that future demand by Federal Government entities for 220 MHz spectrum will be satisfied by their authorization on the 10 Public Safety and 5 EMRS channels. [232] In addition, we believe that Federal Government use of these channels will be beneficial because it will enable Federal Government agencies involved in public safety and emergency medical services to communicate with State and local agencies with similar responsibilities in times of disasters or emergencies. We therefore conclude that Federal Government entities may only apply for the 10 Public Safety and five EMRS channels, and that any mutually exclusive applications for Channels 166-170 and the EMRS channels among Government and non-Government entities will be assigned through a single lottery. [233] Channels 161-165 will be available to both non-Government public safety eligibles and Government entities on a non-exclusive, *i.e.*, shared basis and therefore will not be assigned through random selection procedures. After the effective date of the rules adopted in this proceeding, we will issue a Public Notice announcing the acceptance of applications for authorizations on all public safety and EMRS channels by Government, as well as eligible non-Government entities.

(4) License Term

133. The license term for Phase I, non-nationwide 220 MHz licensees is five years. In our *CMRS Third Report and Order*, we decided that all Part 90 licensees reclassified as CMRS carriers would be granted a 10-year license term and be afforded renewal expectancy after their

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[230] *Id*. at 226 (para. 74). We have noted that, in the *220 MHz Report and Order*, we decided that mutually exclusive applications for 220 MHz channels involving Government and non-Government applicants would be resolved in a ``single, unified lottery . . . ." *220 MHz Report and Order*, 6 FCC Rcd at 2365 (para. 62).

[231] Letter from L. Irving, Assistant Secretary for Communications, U.S. Department of Commerce, to R. Hundt, Chairman, Federal Communications Commission (Apr. 15, 1996).

[232] According to Section 90.717 of the Commission's Rules, Federal Government entities may also be authorized on the two 5-channel *nationwide* Government assignments (Channels 111-115 and 116-120) that were made available in Phase I, and continue to be available in Phase II. 47 C.F.R. § 90.717.

[233] *See 220 MHz Report and Order*, 6 FCC Rcd at 2365 (para. 62).

current license term expires if they met certain prescribed conditions. [234] In the *Third Notice* we proposed to grant 10-year authorizations to all non-nationwide Phase II licensees -- *i.e.*, EA and Regional licensees and Public Safety and EMRS licensees. We indicated that 10-year authorizations would encourage investment by EA and Regional licensees, and would help to minimize the administrative burden on Public Safety and EMRS licensees. [235] AMTA and Pagemart support our proposal. [236] Pagemart states that the use of 10-year license terms would ``bring 220 MHz licensees in line with existing CMRS licensees and minimize administrative burden on the Commission and . . . licensees." [237] We conclude that we should grant 10-year authorizations to all Phase II, non-nationwide licensees.

C. TECHNICAL AND OPERATIONAL RULES

1. Fixed Operations

a. *Proposal*

134. Our rules for the 220 MHz service permit fixed operations only on an ancillary basis to a licensee's primary land mobile operations. [238] We indicated in the *Third Notice* that we had imposed this restriction in the *220 MHz Report and Order* because we wanted to encourage manufacturers to invest in the development of narrowband land mobile technologies. [239] We tentatively concluded, however, that this restriction on the use of fixed communications in the 220 MHz band is no longer appropriate because, to compete effectively in the future mobile communications marketplace, 220 MHz licensees will have to be able to provide a wide array of communications services to the public.

135. We therefore proposed to modify our current rules, that only allow fixed operations on an ancillary basis to primary land mobile communications, in order to permit such operations on a primary basis for 220 MHz licensees. We proposed that the removal of this prohibition should apply to both nationwide and non-nationwide, non-Government and Government, Phase I and Phase II licensees, and to licensees offering service to subscribers as well as licensees using spectrum for internal communications. [240]

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[234] *CMRS Third Report and Order*, 9 FCC Rcd at 8157 (para. 386).

[235] *Third Notice*, 11 FCC Rcd at 226 (para. 75).

[236] AMTA Comments at 16; Pagemart Comments at 4.

[237] Pagemart Comments at 4.

[238] Sections 90.731 and 90.733 of the Commission's Rules, 47 C.F.R. §§ 90.731, 90.733.

[239] *Third Notice*, 11 FCC Rcd at 226-27 (para. 76) (citing *220 MHz Report and Order*, 6 FCC Rcd at 2368 (para. 88)).

[240] *Third Notice*, 11 FCC Rcd at 227 (para. 77).

b. *Comments*

136. No commenters are opposed to allowing 220 MHz licensees to operate fixed stations on a primary basis. In embracing our proposal, AMTA indicates its support for the removal of ``certain technical and operational limitations that may no longer serve the public interest" and states that ``it is imperative that 220 MHz licensees have technical, operational and geographic flexibility to allow them to compete effectively." [241] E.F. Johnson notes that using its technology for fixed applications will ``increase its utility and offer more options for communications customers."[242] E.F. Johnson also indicates that its equipment ``can support fixed, as well as mobile transmissions."[243]

c. *Decision*

137. We recently decided to permit 220 MHz licensees classified as CMRS providers to offer fixed services. This decision was part of a broader decision to grant all CMRS licensees the flexibility to offer fixed services.[244] Those 220 MHz licensees not classified as CMRS providers -- *i.e.*, 220 MHz licensees not providing interconnected service or subscriber-based service for profit -- were not covered in that rulemaking. We now conclude that all 220 MHz nationwide and non-nationwide Phase I and Phase II, Government and non-Government licensees, including non-CMRS providers, should be permitted to operate fixed stations and provide fixed communications on a primary basis, *i.e.*, not ancillary to primary land mobile operations. As we stated in the *Third Notice*, we believe that lifting the restriction on primary fixed use in the 220 MHz service will allow 220 MHz licensees to compete more effectively in the wireless communications marketplace and also will broaden the array of services available to consumers. Furthermore, by permitting fixed as well as mobile operations in the 220 MHz service, we will also provide for additional applications of narrowband technology, which will serve our goal of continuing to promote the development and implementation of that technology. [245]

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[241] AMTA Comments at 12.

[242] E.F. Johnson Comments at 5.

[243] *Id*. *See also* Comtech Comments at 7; Metricom Comments at 3; Pagemart Comments at 4; Kelley Comments at 3; Overall Wireless Comments at 2.

[244] *See* Amendment of the Commission's Rules to Permit Flexible Offerings in the Commercial Mobile Radio Services, WT Docket No. 96-6, First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 8965, 8967 (para. 2) (1996).

[245] As stated above, however, the Commission makes no warranties about the use of this spectrum for particular services. Applicants should be aware that a Commission auction represents an opportunity to become a Commission licensee in this service, subject to certain conditions and regulations. A Commission auction does not constitute an endorsement by the Commission of any particular services, technologies, or products, nor does a Commission license constitute a guarantee of business success. Applicants should perform their individual due diligence before proceeding as they would with any new business venture. See para. 19, *supra*.

138. Phase II licensees and Phase I nationwide licensees will be authorized to locate fixed stations transmitting on frequencies in the 220-221 MHz and 221-222 MHz bands anywhere within their area of operation -- subject to compliance with prescribed environmental, air safety and international regulations outlined in para. 80, *supra* -- so long as: (1) transmissions from fixed stations on frequencies in the 220-221 MHz band meet all relevant technical rules of Subpart T required for land mobile base stations (*e.g.*, Sections 90.723 and 90.729); (2) for EA and Regional licensees, the co-channel protection criteria prescribed in Section IV.C.6, *infra*, and the field strength limits prescribed in Section IV.C.7, *infra*, are met for all fixed stations transmitting on frequencies in the 220-221 MHz band; and (3) for Phase II licensees and Phase I nationwide licensees, transmissions on frequencies in the 221-222 MHz band do not exceed 50 watts ERP and are not from antennas that are more than 7 meters above ground, except that transmissions from antennas that are more than 7 meters above ground will be permitted if the effective radiated power from such transmissions is reduced below 50 watts ERP in accordance with the formula provided in Section IV.C.3.b, *infra*. This antenna height and power limitation is consistent with our decision in that section, where we require licensees operating *paging* base stations transmitting on 221-222 MHz frequencies to comply with these power and antenna height restrictions. Applying these restrictions to *all* fixed stations transmitting on 221-222 MHz frequencies is appropriate and necessary to ensure that transmissions from such stations do not cause adjacent channel interference.

139. Phase I, non-nationwide licensees are not authorized to operate within a particular geographic area, but instead are authorized to construct a single land mobile base station for base/mobile operations. We conclude that such licensees should be permitted to operate fixed stations, but that such stations, if transmitting on frequencies in the 220-221 MHz band, must: (1) be located only at the coordinates of the licensee's authorized base station; (2) meet all relevant technical rules of Subpart T required for land mobile base station operations (*e.g.*, Sections 90.723 and 90.729); and (3) operate at the effective radiated power (ERP) and the antenna height-above-average-terrain (HAAT) prescribed in the licensee's land mobile base station authorization.[246] Consistent with our decision above with regard to the transmissions from Phase II and nationwide Phase I fixed stations operating on frequencies in the 221-222 MHz band, we will require that transmissions from fixed stations operated by Phase I, non-nationwide licensees on frequencies in the 221-222 MHz band not exceed 50 watts ERP, nor be from antennas that are more than 7 meters above ground, except that transmissions from antennas that are more than 7 meters above ground will be permitted if the effective radiated power from such transmissions is reduced below 50 watts ERP in accordance with the formula provided in Section IV.C.3.b, *infra*. Also, Phase I non-nationwide licensees will be required to comply with the prescribed environmental, air safety, and international regulations outlined in para. 80, *supra*, for fixed stations transmitting on frequencies in the 220-221 MHz and 221-222 MHz bands. Phase I, non-nationwide licensees will be permitted to begin primary fixed operations *only* after meeting the requirement that they construct their land mobile base station (for base/mobile operations) and place it in operation or commence service. Phase I, nationwide licensees will be permitted to

[246] Licensees shall be required to operate at their initially authorized ERP and HAAT, and will not be permitted to seek modification of their authorization to operate at a higher ERP or HAAT. Licensees operating at power levels lower than their initially authorized ERP shall be required to seek modification of their authorization to reflect the lower ERP.

begin primary fixed operations only after meeting their two-year benchmark to construct the initial phase of their nationwide land mobile system, as prescribed in Section 90.725(a) of our Rules. [247]

2. Secondary, Fixed Operations

a. *Proposal*

140. In the *Third Notice* we proposed to allow 220 MHz licensees to obtain secondary authorizations to operate fixed facilities on a non-interference basis to licensees authorized to operate on a primary basis. The issue of secondary, fixed 220 MHz operations had been raised by Fairfield Industries, Inc. (Fairfield), which requested that individuals involved in geophysical telemetry be permitted to operate temporary, fixed 220 MHz facilities, on a secondary basis without the requirement that such operation be on an ancillary basis to the licensee's primary mobile operations. [248]

141. We found merit in Fairfield's request and believed that it would be in the public interest to allow the type of operation they proposed, but we concluded that rather than limiting secondary, fixed use of 220 MHz spectrum only to licensees employing temporary facilities for geophysical telemetry operations, even greater use of the spectrum could be realized by allowing any and all types of secondary, fixed operations. [249] In proposing to expand this permissible use of the spectrum, however, we also believed that certain additional restrictions on this type of operation were appropriate. We therefore proposed that secondary, fixed operation be limited to a maximum of two watts ERP for licensees operating within 60 kilometers of the center of any of the urban areas listed in Section 90.741 of the Commission's Rules, [250] and a maximum of five watts ERP for licensees operating beyond 60 kilometers of these areas. We also proposed to accept applications for authorization of secondary, fixed use of the 220 MHz band, without the requirement of frequency coordination, upon adoption of final rules in this proceeding. We requested comment on these proposals, including any suggested changes to the technical restrictions proposed, and any comment as to whether we should further restrict secondary, fixed use of the 220 MHz band to operations at strictly temporary locations, as provided for under Section 90.137 of the Commission's Rules. [251]

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[247] Section 90.725(a) of the Commission's Rules, 47 C.F.R. § 90.725(a).

[248] Fairfield Industries, Inc., Petition for Rulemaking, RM-8506 (filed June 8, 1994). *See* Public Notice, Report No. 2026 (released Aug. 16, 1994). No comments were filed with the Commission regarding the Fairfield petition. Our current rules allow 220 MHz licensees to provide operational-fixed facilities for ancillary, signalling and data transmission, subject to certain requirements, *e.g.*, that such ancillary operations be on a secondary, non-interference basis to the primary mobile operation of any other licensee. Section 90.731 of the Commission's Rules, 47 C.F.R. § 90.731.

[249] *Third Notice*, 11 FCC Rcd at 228 (para. 79).

[250] Section 90.741 of the Commission's Rules identifies the coordinates for the center of each of the listed areas. 47 C.F.R. § 90.741.

[251] *Third Notice*, 11 FCC Rcd at 228 (para. 79). Section 90.137 of the Commission's Rules provides, among other things, that temporary operation be limited to a period of not more than one year. 47 C.F.R. § 90.137.

b. *Comments*

142. A number of commenters oppose permitting use of the 220 MHz band for secondary, fixed operations. For example, Johnson ``questions the wisdom of secondary, fixed systems where there are primary operations," arguing that secondary, fixed transmitters ``can only serve to degrade the quality of service by the primary licensees on the service." Johnson is concerned that ``even the relatively low power of transmitters proposed for secondary use -- 2 and 5 watts -- are sufficient to cause interference to other licensees." Johnson therefore suggests that ``entities wishing to use secondary fixed operations enter into an agreement with the primary licensee for the use of the channels in the affected area. In that fashion, the primary licensees can be aware of the use of secondary, fixed units." [252] Comtech questions why an applicant ``would bid on spectrum knowing that there would be potential users, even secondary users on its channels" and believes that secondary users should ``arrange to employ spectrum through the auction winner in the area where operations are desired." [253] AMTA, in its reply comments, points out that ``while secondary operations are authorized only on a non-interference basis, location and resolution of interference problems can be costly and time-consuming, as well as administratively burdensome to the Commission." AMTA therefore agrees with Comtech and Johnson that ``entities wishing to offer secondary fixed services be required to enter into an agreement with any primary licensees potentially affected by secondary operations." [254] Fairfield, on the other hand, argues that there is ``virtually no risk of interference to primary users because oil and gas exploration occurs in remote, uninhabitable areas" and because ``transmitters operate at very low power levels of less than two watts and with duty cycles measured in seconds." [255] Fairfield also points out that ``geophysical telemetry operations are self-policing: seismic data collection relies on extremely sensitive equipment; hence, before any data can be collected, telemetry crews must monitor the spectrum carefully and avoid any channel on which they detect the slightest signal." [256] Fairfield, in its reply comments, contends that commenters' concerns of interference for systems using 220 MHz spectrum for seismic telemetry operations are therefore ``groundless," and that those who believe their rights would be infringed by the existence of secondary users in the band cannot ``claim a necessary right to use the spectrum free and clear of all other uses no matter how innocuous."[257]

c. *Decision*

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[252] Johnson Comments at 6.

[253] Comtech Comments at 8.

[254] AMTA Reply at 4.

[255] Fairfield Comments at 2-3.

[256] Fairfield Reply at 2.

[257] *Id.* at 2-3.

143. We have decided in this Order to permit all Phase I and Phase II 220 MHz licensees to perform fixed operations on a co-primary basis with mobile operations. The issue at hand is whether to allow individuals to obtain *secondary* authorizations to operate fixed stations on a non-interference basis to both Phase I and Phase II licensees authorized on a primary basis. We agree with commenters that, under the rules we are adopting for Phase II licensing, which will require licensees to obtain authorizations through competitive bidding, it generally would not be appropriate to allow individuals to obtain unlimited secondary authorizations to operate fixed facilities, even on a non-interference basis.[258] According to Fairfield, however, the type of secondary use it proposes -- *i.e.*, the use of the 220-222 MHz band for geophysical telemetry operations -- would occur only in remote, uninhabited areas and at relatively low power levels. We believe that operations of the type envisioned by Fairfield are not likely to present a risk of interference to primary 220 MHz stations. We therefore conclude that individuals using 220-222 MHz spectrum for geophysical telemetry operations should be permitted to obtain secondary authorizations to operate fixed facilities on a non-interference basis to primary licensees. We will, however, require secondary licensees to notify any co-channel primary 220 MHz licensees authorized in the area of their operation of the location of such secondary facilities. Specifically, we will require secondary licensees to provide this notification: (1) to any co-channel licensees operating on a single-station basis (*i.e.*, non-nationwide Phase I licensees) with an authorized base station, or fixed station transmitting on base station transmit frequencies, within 45 km of the secondary licensee's stations; (2) to any co-channel, Phase II EA or Regional licensee authorized to operate in the EA or Region in which the secondary licensee's stations are located; and (3) to any co-channel Phase I or Phase II nationwide licensees. Additionally, while are confident that there is little risk of interference to primary licensees from secondary licensees performing geophysical telemetry operations, we believe that it is appropriate to restrict such operations on the public safety/mutual aid channels, the EMRS channels, and the Federal Government channels. Operations on these channels will likely involve safety-of-life or emergency communications and we would not want to risk even the slightest possibility of interference to such communications. Secondary, fixed operations will therefore be permitted on all 220 MHz channels except Channels 111-120, 161-170, and 181-185.

144. In the *Third Notice* we asked for comment about restricting secondary, fixed use of the 220 MHz band to operations at strictly temporary locations, as permitted under Section 90.137 of the Commission's Rules. We believe that temporary authorizations would be well suited to the type of operations to be performed by licensees such as Fairfield. Therefore, we will require licensees obtaining secondary authorizations for fixed facilities for geophysical telemetry operations to obtain temporary authorizations under the provisions of Section 90.137 of the Commission's Rules.[259] Under this rule, licensees operating stations at the same location for more than one year will be required to obtain separate authorization for such stations. We will, however, modify Section 90.137(a)(3) to enable licensees to operate more than 180 days without

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[258] *See* Comtech Comments at 8; AMTA Reply at 4.

[259] Section 90.137 of the Commission's Rules provides, among other things, that licensees operating stations at the same location for more than one year must obtain separate authorization for such stations, and that applicants seeking authority to operate more than 180 days must submit evidence of frequency coordination. 47 C.F.R. §§ 90.137(a)(3), 90.137(b).

the requirement that they obtain frequency coordination. We will begin to accept applications for such temporary authorizations on the effective date of the rules adopted in this proceeding.

145. Although we proposed to restrict the power transmitted by secondary licensees in order to limit the degree of interference they could cause, commenters raised concerns about the potential for interference from secondary, fixed stations operating at the power levels proposed (*e.g.*, two or five watts ERP). Fairfield indicated in its Petition for Rulemaking, however, that its system is capable of operating at lower power levels (*i.e.*, one watt ERP), and that its antennas are generally located only six feet above ground. We will therefore limit the output power of stations operated by secondary licensees to a maximum of one watt ERP, and restrict antenna height to no more than two meters (6.6 feet) above ground.

146. Additionally, under Section 90.731 of our existing rules, Phase I licensees are permitted to construct and operate operational-fixed stations, *i.e.*, stations that are used only for a licensee's internal communications, to provide fixed signalling and data transmissions on an ancillary basis to its primary land mobile operations, and on a secondary, non-interference basis to the primary mobile operations of other licensees.[260] The operation of such facilities will now be permitted on a primary basis (*i.e.*, not ancillary to a licensee's primary land mobile operations and not secondary to the primary mobile operations of other licensees). Thus, Phase I licensees that intend to employ operational-fixed stations to provide fixed signalling and data transmissions must now comply with the technical and operational provisions described in paragraphs 138-139, *supra*, for general fixed operations rather than the technical and operational provisions currently contained in Section 90.731.

3. Paging Operations

a. *General Operations*

147. We have decided in this Order to permit Phase I and Phase II licensees to operate paging systems on a primary basis -- *i.e.*, not ancillary to primary land mobile operations.[261] Phase II licensees and Phase I nationwide licensees will thus be authorized to locate paging base stations anywhere within their area of operation -- subject to compliance with prescribed environmental, air safety and international regulations, as outlined in para. 80, *supra* -- so long as transmissions from base stations transmitting on frequencies in the 220-221 MHz band meet all relevant technical rules of Subpart T for land mobile base station operations (*e.g.*, Sections 90.723 and 90.729), and for EA and Regional licensees, the co-channel protection criteria prescribed in Section IV.C.6, *infra*, and the field strength limits prescribed in Section IV.C.7, *infra*, are met for all such base stations.

148. Phase I non-nationwide licensees, which are not authorized to operate within a particular geographic area, but instead are authorized to construct a single land mobile base station for base and mobile operations, must locate paging base stations transmitting on 220-221

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[260] *See* Section 90.731 of the Commission's Rules. 47 C.F.R. § 90.731.

[261] See para. 95, *supra*.

MHz frequencies *only* at the coordinates of their authorized land mobile base station. Furthermore, such licensees must operate their paging base stations transmitting on 220-221 MHz frequencies: (1) under all relevant technical rules of Subpart T for land mobile base station operations (*e.g.*, Sections 90.723 and 90.729); and (2) at the effective radiated power (ERP) and the antenna height-above-average-terrain (HAAT) prescribed in their land mobile base station authorization.[262] Phase I, non-nationwide licensees will be permitted to begin primary paging operations *only* after meeting the requirement that they construct their land mobile base station (for base and mobile operation) and place it in operation, or commence service. Phase I, nationwide licensees will be permitted to begin primary paging operations only after meeting their two-year benchmark to construct the initial phase of their nationwide land mobile system, as prescribed in Section 90.725(a) of the Commission's Rules. [263]

b. *Two-Way Operations*

149. In the *Third Notice*, we proposed to permit 220 MHz licensees to operate paging systems on a primary basis, but did not discuss whether 220 MHz licensees could use their mobile channels to transmit return messages from pagers. Various commenters, however, addressed this issue. Pronet, for example, asks that we allow two-way paging because restricting licensees to one-way paging operations would force half of all 220 MHz spectrum used for paging operations to ``lie dormant."[264] We agree that to restrict 220 MHz licensees to one-way paging systems would not be an efficient use of the spectrum. For this reason, and because we believe that it is appropriate to provide 220 MHz licensees operating paging systems with the flexibility to employ the type of paging systems that best meets the needs of their customers, we will permit both one-way and two-way paging operations.

150. SEA suggests that, if we permit two-way paging, we should continue to limit maximum power on the mobile frequencies to 50 watts ERP, and that we should not allow licensees to construct base stations on the mobile frequencies at heights greater than 7 meters above ground. SEA believes that operation of base stations above this height could cause interference to adjacent channel licensees, and that, in general, ``[t]o permit paging on the mobile transmit frequencies would result in serious interference problems for Phase I and Phase II half-duplex systems."[265] Metricom, in its reply comments, believes that SEA's proposed limit on mobile station power and base antenna height should not be applied to nationwide 220 MHz systems.[266]

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[262] Licensees shall be required to operate at their initially authorized ERP and HAAT, and will not be permitted to seek modification of their authorization to operate at a higher ERP or HAAT. Licensees operating at power levels lower than their initially authorized ERP shall be required to seek modification of their authorization to reflect the lower ERP.

[263] Section 90.725(a) of the Commission's Rules, 47 C.F.R. § 90.725(a).

[264] Pronet Reply at 3-4.

[265] SEA Comments at 18.

[266] Metricom Reply at 5-6.

151. We agree with SEA that restrictions on the use of the mobile channels by licensees operating two-way paging systems is appropriate. When we adopted the 50-watt effective radiated power (ERP) limitation for mobile and portable units operating in the 220 MHz band, we did not envision the use of the mobile channels for ``base stations'' situated at high elevations. To permit such operations without restriction could, as SEA suggests, result in interference to nearby, adjacent channel 220 MHz licensees. We will therefore limit mobile and portable ERP to 50 watts for licensees operating two-way paging systems, and will modify Section 90.729(b) of our rules to require licensees constructing base stations on the mobile channels, *i.e*., channels in the 221-222 MHz band, to operate such stations at heights no greater than 7 meters above ground -- except that transmissions from antennas that are more than 7 meters above ground will be permitted if the effective radiated power of such transmissions is reduced below 50 watts ERP by $20 \log_{10}(h/7)$ dB, where h is the height of the antenna above ground, in meters. [267] This antenna height and power limitation is necessary to ensure that transmissions from paging base stations operating in the 221-222 MHz band do not cause adjacent channel interference. Metricom suggests that such a limitation only apply to non-nationwide licensees. We conclude, however, that the adjacent channel interference that could result from licensees operating at high elevations could be caused by nationwide as well as non-nationwide licensees. We shall therefore apply the height limitation to all 220 MHz licensees. Finally, we will require Phase I non-nationwide licensees to comply with the prescribed environmental, air safety, and international regulations outlined in para. 80, *supra*. for paging base stations transmitting on frequencies in the 221-222 MHz and 220-221 MHz bands.

4. Other Technical Considerations

152. In developing our proposed band plan, we noted in the *Third Notice* that, due to circumstances unique to the 220-222 MHz band, we currently require licensees operating base stations in the upper 40 channel assignments (*i.e*., Channels 161-200) to reduce power when located within certain distances of base station receivers of licensees operating on the adjoining Channels 1-40, and we also limit the base station transmitter power for stations authorized on Channels 196-200 to 2 watts. [268] We proposed that Phase II EA and Regional licensees on these channel blocks coordinate among themselves to locate their base stations to avoid interference, and proposed to allow licensees operating on Channels 196-200 to operate at power levels greater than 2 watts if such licensees obtain the concurrence of all Phase I and Phase II licensees operating in their area. [269] There were no comments on this issue.

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[267] Using this power reduction formula, licensees operating at antenna heights greater that 7 meters above ground will provide a signal equivalent to that produced by a 50 watt ERP transmission *at* 7 meters above ground. This formula was utilized in our Report and Order for LMS systems and adoption of the formula herein is consistent with its use in that proceeding. *See* Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, Report and Order, 10 FCC Rcd 4695, 4715-16 (para. 36) (1995).

[268] *Third Notice*, 11 FCC Rcd at 223 (para. 67).

[269] *Id*. at 223-24 (para. 68).

153. We will require Phase II licensees authorized on Channels 161-200 and Channels 1-40 to coordinate among themselves to locate their base stations, and fixed stations operating on base station frequencies, to avoid interference and to cooperate to resolve any interference problems that may arise.[270] We will also require Phase II licensees authorized on Channels 161-200 to comply with the power limitations prescribed in the Table in Section 90.723(d) of the Commission's Rules, with respect to any authorized base stations, or fixed stations operating on base station transmit frequencies, of Phase I licensees operating on Channels 1-40. We will also require the six Regional licensees operating on Assignment J (Channels 186-200) to operate their authorized base stations or fixed stations transmitting on base station Channels 196-200 at power levels no greater than 2 watts ERP and at antenna heights no greater than six meters (20 feet). Licensees, however, may operate at power levels greater than 2 watts ERP or at antenna heights greater than six meters if: (1) they obtain the concurrence of all Phase I and Phase II licensees operating authorized base or fixed stations on Channels 1-40 within 6 km of their authorized base or fixed stations; and (2) their authorized base or fixed stations are not located in the United States/Mexico or United States/Canada border areas.[271]

5. Construction Requirements

a. *Nationwide Licensees*

(1) Proposal

154. In the *Third Notice* we observed that, in adopting our original rules for the 220 MHz service, we adopted construction requirements for nationwide licensees that were a reflection of the traditional design of private land mobile radio systems (*i.e.*, the construction and operation of single, high powered base stations providing signal coverage over an extended area). Specifically, we required nationwide 220 MHz licensees to construct base stations in at least 70 different geographic areas over an extended period of time.[272] We also noted, however, that, since the adoption of those rules in 1991, we have implemented other communications services, such as broadband and narrowband PCS, where other types of system design are used. In these services, we adopted construction requirements for authorizations based not on the construction of individual base stations, but on requiring licensees to provide a minimum ``coverage" within their authorized area of operation.[273]

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[270] *See, e.g.*, Section 90.173(b) of the Commission's Rules, 47 C.F.R. § 90.173(b).

[271] As indicated in Section 90.715(c) of the Commission's Rules, 47 C.F.R. § 90.715(c), the U.S./Mexico border area for U.S. licensees is 120 km (74.6 miles) from the U.S./Mexico border. The U.S./Canada border area for U.S. licensees has not yet been determined.

[272] Section 90.725 of the Commission's Rules, 47 C.F.R. § 90.725. The rules provide that licensees granted commercial nationwide authorizations must meet construction benchmarks two, four, six, and ten years after initial license grant, and licensees granted non-commercial nationwide authorizations must construct and operate base stations in a minimum of 70 markets within five years of initial license grant.

[273] *Third Notice*, 11 FCC Rcd at 232 (para. 88).

155. In light of the operational flexibility that we proposed to provide for 220 MHz licensees in the *Third Notice*, we decided to propose the adoption of the same type of broad coverage requirements for the Phase II nationwide 220 MHz service as we adopted for these other wireless services. Specifically, we proposed that Phase II nationwide 220 MHz licensees be required to construct base stations that provide coverage to a composite area of 750,000 square kilometers or serve 37.5 percent of the United States population within five years of initial license grant, and to provide coverage to 1,500,000 square kilometers or 75 percent of the population within 10 years of grant.[274] Our proposal was based on the construction requirement for nationwide narrowband PCS licensees.[275]

156. Because we recognized that certain types of service offerings we proposed to allow for 220 MHz licensees -- *e.g.*, fixed, point-to-point operations -- might not lend themselves to compliance with the strict construction requirement we proposed,[276] we proposed to permit nationwide 220 MHz licensees to meet their construction requirement alternatively by submitting a showing demonstrating the provision of appropriate levels of ``substantial service"[277] to the public at the prescribed five-year and 10-year construction benchmarks.[278] In addition, we asked commenters planning to construct systems that would lend themselves to a demonstration of substantial service, to indicate the types of ``build-outs" that would be appropriate for their particular systems and the period of time that should be required to achieve such build-outs. Finally, consistent with our rules for the PCS services,[279] we proposed that licensees be required to submit maps and other supporting documents to demonstrate compliance with the five-year and 10-year benchmarks, and we proposed that failure on the part of a nationwide licensee to meet either its five-year or 10-year construction requirement would result in forfeiture of its nationwide authorization.

(2) Comments

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[274] *Id*. at 232 (para. 89).

[275] Section 24.103(a) of the Commission's Rules, 47 C.F.R. § 24.103(a).

[276] Fixed, point-to-point systems, for example, provide service in a linear manner, and thus a coverage ``area" calculation is not applicable.

[277] A ``substantial service" construction requirement is used for licensees in the broadband PCS and 900 MHz SMR services. *See* Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands to the Specialized Mobile Radio Pool, PR Docket No. 89-553, Implementation of Section 309(j) of the Communications Act--Competitive Bidding, PP Docket No. 93-253, and Implementation of Sections 3(n) and 322 of the Communications Act, GN Docket No. 93-252, Second Report and Order and Second Further Notice of Proposed Rulemaking, 10 FCC Rcd 6884, 6887 (para. 4) (1995) *(900 MHz Second Report and Order*). For the broadband PCS rules, see Section 24.203(b) of the Commission's Rules, 47 C.F.R. § 24.203(b).

[278] *Third Notice*, 11 FCC Rcd at 233 (para. 90).

[279] Sections 24.103(f) and (h) and 24.203(b) and (c) of the Commission's Rules, 47 C.F.R. §§ 24.103(f), (h); 24.203(b), (c).

157. Commenting on our proposal to require licensees to meet their construction benchmarks to retain their authorizations, E.F. Johnson states that ``if licensees fail to meet the construction requirements, licenses should be revoked and issued to new entities that will make productive use of the spectrum."[280] Comtech seeks assurance that the existing construction requirements will remain in effect for all Phase I licensees.[281] Metricom addresses the question of how licensees operating fixed systems would meet the ``substantial service to the public" standard. Metricom suggests that we adopt separate construction standards for such licensees, and proposes a standard that ``considers the potential areas and population capable of being served by a fixed system, based on the equipment placed into service by the licensee."[282] Metricom also recommends that we ``freely consider waivers of any construction benchmarks [we] may establish for fixed systems in those instances where the applicant can reasonably justify that a waiver would be in the public interest."[283]

(3) Decision

158. We will require Phase II licensees implementing nationwide land mobile or paging systems to meet our proposed construction requirement, which is to construct base stations that provide coverage to a composite area of at least 750,000 square kilometers or serve at least 37.5 percent of the United States population within five years of initial license grant, and to provide coverage to at least 1,500,000 square kilometers or at least 75 percent of the population within 10 years of grant. We will allow Phase II licensees implementing fixed operations as part of their nationwide system to meet a ``substantial service" construction requirement as an alternative to meeting the five-year or 10-year construction requirements. We shall not adopt a particular measure of ``substantial service" for such licensees, as Metricom suggests, but will consider such showings on a case-by-case basis. Licensees, in meeting either the standard construction requirement as described *supra*, or the substantial service requirement, will have to submit maps and other supporting documents to demonstrate compliance with their five-year and 10-year benchmarks. Failure on the part of a licensee to meet either its five-year or 10-year construction requirement will result in automatic cancellation of its nationwide authorization. Thus, a nationwide licensee failing to meet its construction requirement will not have its authorization converted to individual site-by-site authorizations for already constructed stations. In addition, we will not require nationwide licensees to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations. This decision is consistent with our decision in paragraph 165, *infra*, to not require EA and Regional licensees to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations.

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[280] E.F. Johnson Comments at 7.

[281] Comtech Comments at 12.

[282] Metricom Comments at 6 (emphasis omitted).

[283] *Id*. at 7.

159. As noted above, Phase I, nationwide licensees will be permitted to begin operating primary, fixed or paging operations *only* after meeting their two-year benchmark to construct the initial phase of their nationwide land mobile system, as prescribed in Section 90.725(a)(1) of the Commission's Rules.[284] In addition, licensees who wish to begin primary fixed or paging operations instead of or in addition to their land mobile operations after meeting their two-year benchmark will be required to meet the following requirements before beginning such primary fixed or paging operations:

- They must provide a schedule for the construction of the primary fixed or paging operations they intend to deploy instead of or in addition to their land mobile operations during the remainder of their initial 10-year licensing period. [285]

- They must certify that the financial showings and all other certifications they had provided in demonstrating their ability to construct and operate their nationwide land mobile system, as prescribed in the relevant provisions of Section 90.713 relating to entry criteria, remain applicable to any planned, primary fixed or paging operations they intend to deploy instead of or in addition to their land mobile operations.

- In lieu of such a certification, they must revise their financial showings and provide all other relevant certifications, as required under Section 90.713, to demonstrate their ability to construct and operate a nationwide system consisting of primary fixed or paging operations instead of or in addition to their land mobile operations.

All provisions of Section 90.725 relevant to nationwide, commercial licensees will apply to Phase I nationwide licensees operating primary paging systems instead of or in addition to their primary land mobile system. For example, licensees will be required to meet all subsequent construction benchmarks of Section 90.725(a) (*e.g.*, constructing base stations and placing them in operation in 70 geographic areas over a 10-year period in accordance with Section 90.725(a)(4)), [286] licensees will be required to provide system progress reports in accordance with Sections 90.725(d) and (e), and licensees will be subject to the conditions of Sections 90.725(b), (c), and (g). All provisions of Section 90.725 relevant to nationwide, commercial licensees will similarly apply to Phase I nationwide licensees operating primary fixed stations instead of or in addition to their primary land mobile or paging base stations, except that rather than being required to construct base stations (for base and mobile operation) and place them in operation to meet the four-, six- and 10-year construction benchmarks of Section 90.725(a), a licensee operating fixed stations instead of land mobile or paging base stations in any of the geographic areas identified in Section 90.725(a) will be allowed to demonstrate how it is providing substantial service to the public, as defined *supra* for Phase II licensees, in those geographic areas at the prescribed benchmarks.

b. *EA and Regional Licensees*

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[284] 47 C.F.R. § 90.725(a)(1).

[285] *See* Section 90.713(a)(3) of the Commission's Rules, 47 C.F.R. § 90.713(a)(3).

[286] *See also* Section 90.713(a)(1) of the Commission's Rules, 47 C.F.R. § 90.713(a)(1).

(1) Proposal

160. We proposed a similar construction requirement for EA and Regional licensees as we proposed for nationwide, Phase II licensees. We patterned this construction requirement after our construction requirement for 900 MHz SMR (MTA) licensees, and thus proposed that EA and Regional licensees be required to construct base stations to provide coverage to one-third of the population of their EA or Region within five years of initial authorization and two-thirds of the population of their EA or Region within 10 years. In the *Third Notice*, we proposed construction requirements for EA and Regional licensees in the 220 MHz service that paralleled the three- and five-year construction requirements for the 900 MHz SMR service, but proposed that Phase II 220 MHz licensees meet these requirements at five- and 10-year intervals. We also proposed to allow EA and Regional licensees, as an alternative to meeting this standard construction requirements, to submit showings demonstrating the provision of appropriate levels of substantial service to the public at their interim and final construction benchmarks. [287]

161. In proposing these coverage requirements, we acknowledged that Phase II licensees will have to provide co-channel protection to incumbent licensees and that this could inhibit their ability to meet the requirements. We tentatively concluded, however, that Phase II 220 MHz licensees should have to meet their construction requirements, even if some or all of their channels are authorized to co-channel Phase I licensees in their area. Finally, consistent with our proposals for the nationwide 220 MHz service, we proposed that EA and Regional licensees be required to submit maps and other supporting documents to demonstrate compliance with their interim and final construction benchmarks, and that failure on the part of a licensee to meet either its interim or final construction requirement will result in forfeiture of its authorization. [288]

(2) Comments

162. AMTA supports our proposed construction requirements for EA and Regional licensees ``given the geographic size of these authorizations in comparison with other wireless services, and the fact that these frequencies likely will be `encumbered' by Phase I licensees in major markets."[289] Comtech notes that under our current rules, licensees must construct all of their channels at their authorized base station location to meet their construction requirement. Comtech is concerned that, because Phase II licenses must protect multiple Phase I licensees under our contiguous channel assignment configuration, ``Phase II licensees will likely be unable to construct all of their channels at a single site." [290] It therefore suggests that Phase II licensees be permitted to ``construct any subset of their authorized channels in their licensed service area, so as

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[287] *Third Notice*, 11 FCC Rcd at 235 (para. 94).

[288] *Id*. at 236 (para. 96).

[289] AMTA Comments at 16.

[290] Comtech Comments at 6.

to provide substantial service [in accordance with Section 22.940] to the required population or coverage area."[291]

(3) Decision

163. We will require EA and Regional licensees implementing land mobile or paging systems to construct base stations to provide coverage to at least one-third of the population of their EA or Region within five years of initial authorization and at least two-thirds of the population of their EA or Region within 10 years of initial authorization. We will allow certain EA and Regional licensees to meet the ``substantial service" construction requirement, as described *supra* for nationwide licensees, as an alternative to meeting the standard construction requirement. The option of providing a showing of substantial service will be available to those EA and Regional licensees that are offering fixed services as part of their EA or Regional system *and* to those licensees who, because of the existence of one or more incumbent co-channel licensees in their EA or Region, can only provide service to populations *outside* of the areas served by these incumbents. As we indicated in our *900 MHz SMR Third Order* with regard to our use of a coverage requirement for 900 MHz MTA licensees, our standard construction requirement for EA and Regional licensees is not intended to act as a deterrent to individuals seeking EA or Regional licenses. By providing the ``substantial service" option, we afford sufficient flexibility to enable EA and Regional licensees who are providing new, *e.g.*, fixed services -- or are capable of only serving what are now unserved populations -- to satisfy a construction requirement.[292] We also clarify that, as we indicated in the *900 MHz SMR Third Order on Reconsideration* with respect to 900 MHz MTA licensees, EA and Regional 220 MHz licensees will not be permitted to count the resale of the services of other providers in their EA or Region, *e.g.*, incumbent 220 MHz licensees, to meet the construction requirement.[293] Licensees will be required to demonstrate the provision of appropriate levels of substantial service to the public at their five- and 10-year construction benchmarks. We will not adopt a particular measure of ``substantial service" for these licensees, but will consider their showings on a case-by-case basis.

164. We also require licensees, in meeting either the standard construction requirement or the substantial service requirement, to submit maps and other supporting documents to demonstrate compliance with the benchmarks. Failure on the part of a licensee to meet its construction requirement at either of its benchmarks will result in automatic cancellation of its authorization. Thus, an EA or Regional licensee failing to meet its construction requirement will lose its authorization; it will not be converted to individual, site-by-site authorizations for already constructed stations. As we have previously noted, Phase I, non-nationwide licensees will be

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[291] *Id*. at 7.

[292] *See* Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool, PR Docket No. 89-553, and Implementation of Sections 3(n) and 322 of the Communications Act, Third Order on Reconsideration, GN Docket No. 93-252, 11 FCC Rcd 1170 (para. 2) (1995) (*900 MHz SMR Third Order on Reconsideration*).

[293] *Id.* at paras. 3-4.

permitted to begin operating primary, fixed or paging operations *only* after meeting the requirement that they construct their land mobile base station (for base and mobile operations) and place it in operation or commence service.

165. Finally, Comtech is concerned that Phase II licensees will have difficulty meeting our construction requirements due to the fact that under our proposed band plan, which was composed entirely of contiguous channel assignments, they would have been required to protect multiple Phase I licensees. While our adopted band plan, as we have discussed, reduces the number of Phase I licensees a Phase II licensee must protect, we agree with Comtech that Phase II licensees should not be required, in implementing their systems, to construct and place in operation all of their authorized channels at all base station locations. Such a requirement would not provide EA and Regional licensees with flexibility to construct their base stations in a manner that best serves their technical and operational requirements; the requirement thus could have an adverse effect on the ability of these licensees to meet the needs of their customers. We will therefore not require EA and Regional licensees to construct and place in operation, or commence service on, all of their authorized channels at all of their base stations or fixed stations.

c. *Licensees on Public Safety and EMRS Channels*

166. Because we tentatively concluded in the *Third Notice* that the Public Safety and EMRS channels should continue to be authorized on a single-station basis, we proposed to continue to require Phase II licensees operating on these channels to meet the existing 12-month construction requirement for non-nationwide 220 MHz licensees. [294] There are no comments on this issue, and we adopt our proposal to require Phase II licensees operating on the Public Safety and EMRS channels to construct their authorized base station and place it in operation within 12 months of initial authorization. Failure to meet this requirement will result in automatic cancellation of the licensee's authorization.

d. *General Construction Requirements Policy*

167. In the *Third Notice*, we sought comment on our specific construction requirement proposals for 220 MHz licensees. We did not, however, directly request comment on whether construction requirements of any type were in fact necessary and appropriate, and no party argues here that such requirements are unnecessary or counter-productive. Based on the record in this instant proceeding, and in light of the policy considerations we have expressed in our *Wireless Communications Service Report and Order*[295] we have concluded that it is appropriate at this time to establish construction requirements for the 220 MHz service.

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[294] *Third Notice*, 11 FCC Rcd at 236 (para. 97).

[295] *See* Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service, GN Docket No. 96-228, Report and Order, FCC 97-50, (released Feb. 19, 1997) (*Wireless Communications Service Report and Order*). *See also* Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service, GN Docket No. 96-228, Notice of Proposed Rule Making, FCC 96-441 (released Nov. 12, 1996) (*Wireless Communications Service Notice*).

168. We note, however, that in the *Wireless Communications Service Notice* we had asked for comment on whether any construction requirements are required or appropriate for that new wireless service.[296] We stated there that while Section 309(j) of the Communications Act requires ``safeguards" and ``performance requirements," with the aim of preventing uneconomic spectrum warehousing and promoting service to rural areas, we have never concluded that traditional construction requirements are the only way to satisfy the requirements of Section 309(j). We stated further that construction requirements in some cases may be unnecessary, ineffective, and potentially harmful, and that there may be better approaches to satisfying the objectives of Section 309(j). In the *Wireless Communications Service Report and Order*, we adopted a requirement that a licensee provide substantial service to its area within 10 years of initial authorization. In light of our decision in the *Wireless Communications Service Report and Order* to adopt liberal construction requirements,[297] we may choose to reassess the nature of construction requirements in the 220 MHz band at some time in the future.

[296] *See Wireless Communications Service Notice* at paras. 56-61.

[297] *See Wireless Communications Service Report and Order* at para. 112.

6. Protection of Phase I Licensees

a. *Proposal*

169. In the *Third Notice* we considered whether to establish a minimum co-channel separation between Phase I and Phase II stations to ensure that EA and Regional licensees, in constructing their facilities, do not cause interference to co-channel Phase I licensees. Specifically, we proposed that EA and Regional licensees ordinarily not be permitted to construct their stations less than 120 kilometers from constructed and operating Phase I, co-channel stations.[298] In order to accommodate EA and Regional licensees that may choose to employ low-power stations, we indicated that we would allow, as currently provided in the rules with regard to Phase I licensees, Phase II licensees to operate less than 120 kilometers from co-channel stations if they provide the Commission with a technical analysis demonstrating at least 10 dB protection to the 38 dBuV/m contour[299] of the existing licensee's station.[300] We also proposed that a Phase II licensee be allowed to construct and operate stations less than 120 kilometers from an existing co-channel station or with less than 10 dB protection to an existing co-channel station's 38 dBuV/m contour if the Phase II licensee obtains the consent of the affected co-channel licensee.[301]

b. *Comments*

170. Those commenters expressing views on this subject are opposed to our proposal. For example, E.F. Johnson contends that ``it is apparent, without further study, that the Commission's presumptions concerning co-channel protection [are] inaccurate. 220-222 MHz systems propagate much further than the Commission anticipated. While the Commission plainly cannot change the 120 km separation requirement between Phase I licensees, it should modify the co-channel separation standard for Phase II licensees."[302] E.F. Johnson recommends that Phase II licensees be required to protect a Phase I licensee's 28 dBu contour. E.F. Johnson argues that

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[298] *See* Section 90.723(f) of the Commission's Rules, 47 C.F.R. § 90.723(f).

[299] *Id.* We proposed that this 10 dB of protection must be demonstrated by showing that the predicted signal from an EA or Regional licensee's station(s) does not exceed 28 dBuV/m at the predicted 38 dBuV/m contour of the Phase I licensee's station(s). The predicted signal from the EA or Regional licensee's station would be calculated using the F(50,10) field strength chart for Channels 7-13 in Section 73.699 of the Commission's Rules (Figure 10a), with a 9 dB correction factor for antenna height differential. The predicted signal(s) from the Phase I licensee's station would be calculated using the F(50,50) field strength chart for Channels 7-13 in Section 73.699 of the Commission's Rules (Figure 10), with a 9 dB correction factor for antenna height differential. We also proposed to modify Section 90.723(f) to identify use of these field strength charts as the appropriate method for calculating the prescribed 10 dB protection a Phase I licensee must provide to another co-channel Phase I licensee.

[300] *Third Notice*, 11 FCC Rcd at 237 (para. 99).

[301] *Id.*

[302] E.F. Johnson Comments at 7.

``[t]his coverage area more accurately signifies where a reliable signal may be received by a mobile unit affiliated with a licensee."[303]

171. AMTA advocates that a Phase II licensee not ``exceed 28 dBu at the Phase I licensee's 28 dBu contour."[304] Incom, in its comments, indicates that its customers ``are routinely receiving reliable service at the 32 dBuV/m contour . . . ," and concludes that ``the Commission must modify [its rules] to provide for 10 dB protection to the 32 dBuV/m contour, as opposed to the 38 dBuV/m contour."[305] Incom states that in the cellular radio service, we initially adopted rules limiting a cellular station's ``protected service area" to a 39 dBu contour, but later ``adopted a 32 dBu standard,"[306] and that we originally established a 15-mile protected service area in the MMDS and ITFS services, but then increased it to 35 miles. [307] Incom argues that we should similarly acknowledge that we were equally incorrect in originally establishing the 38 dBu service contour for the 220 MHz service -- and that we should now recognize our error and change the 220 MHz service contour to 32 dBu.[308] Finally, Incom, in its reply comments, states that the 1993 Budget Act ``obligates the Commission to make rules that eliminate inconsistencies between similar mobile services."[309] Incom argues that ``[o]ne conceivable reason for this dissimilar treatment is that the cellular industry is a more powerful lobbying group than the 220-222 MHz industry. Another conceivable reason is that the Commission is attempting to create value for auction bidders by selling off areas already receiving reliable service from incumbents, which is an

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[303] *Id*. E.F. Johnson, in its Comments, indicated that its recommendation is ``tentative," pending the outcome of what it understood to be AMTA's subsequent evaluation of ``the protection needed between co-channel 220 MHz licensees."

[304] AMTA Reply at 2-3. *See also* SMR Reply at 8; U.S. Mobilcomm Reply at 1; Securicor Reply at 5, all endorsing AMTA's position, and Comtech Comments at 14-15 (recommending that ``the Commission insure that Phase II licensees do not exceed 28 dBuV/m at the Phase I licensee's 28 dBuV/m contour.").

[305] Incom Comments at 5. In its Reply Comments at 2, Incom supports AMTA's position.

[306] *Id*. at 4-5. We have always considered a cellular licensee's ``protected service area" to be its Cellular Geographic Service Area (CGSA). Prior to 1992, the CGSA was an arbitrary line drawn by a cellular applicant on a map, and had no connection to any particular field strength. The 39 dBuV/m contour, prior to 1992, was used to determine if a licensee was providing ``reliable service" over at least 75% of the area or population within its arbitrarily drawn CGSA and to evaluate *de minimis* extensions. Since the adoption of the Second Report and Order in CC Docket No. 90-6, a formula-based calculation of the ``service area boundary" has been used to determine the licensee's CGSA. The service area boundary, as calculated using the formula, closely approximates the results one would obtain using the Carey propagation curves to predict the distance of the median 32 dBu contour. Thus, there is no direct connection between our use of the 39 dBuV/m contour prior to 1992, and the determination of cellular ``protected service areas," as Incom appears to suggest. *See* Amendment of Part 22 of the Commission's Rules to Provide for Filing and Processing of Applications for Unserved Areas in the Cellular Service and to Modify Other Cellular Rules, CC Docket No. 90-6, Second Report and Order, 7 FCC Rcd 2449 (1992) (*Cellular Unserved Second Report and Order*).

[307] Incom Comments at 5.

[308] *See id*. at 4-5, 7-8.

[309] Incom Reply Comments at 3.

abdication of the Commission's spectrum management responsibility and a tremendous disservice to the public. Neither of these reasons would withstand judicial review." [310]

172. Roamer One asserts that the Commission should provide 10 dB protection to a Phase I licensee's 28 dBu contour, arguing that ``[its] experience -- as is that of the entire 220-222 MHz industry -- is that the typical 220-222 MHz system provides reliable service for roughly 40 miles . . . ."[311] Finally, Kelley believes that by ``under estimat[ing] [sic] the excellent propagation characteristics of narrowband single sideband signals at 220 MHz, [the Commission's proposal] will set the stage for a cacophony of interfering signals near the weak signal but still useable border area of every co-channel Phase I and Phase II station, seriously degrading overall service to the public."[312] Therefore, Kelley recommends that we adopt an easy to use distance-based protection criteria, and suggests that a 130 km standard be employed, with an additional correction factor of 5 or 10 km for mountaintop stations. [313]

c. *Decision*

173. We continue to believe that EA and Regional licensees should be required to locate their base stations at least 120 km from the base stations of co-channel Phase I licensees, [314] except that such licensees should be permitted to locate their base stations less than 120 km from the base stations of co-channel Phase I licensees if they provide 10 dB protection to the predicted 38 dBuV/m service contour of the base stations of co-channel Phase I licensees. Phase II licensees may meet this requirement, as currently provided in our rules, [315] by submitting a technical analysis demonstrating that the predicted 28 dBuV/m interfering contour of their base station does not overlap the predicted 38 dBuV/m service contour of the Phase I licensee's base station. [316] Such submissions shall be considered on a case-by-case basis. Also, as proposed, a Phase II licensee

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[310] *Id.* at 3 n.3.

[311] Roamer Comments at 5, 6 (emphasis omitted).

[312] Kelley Comments at 5.

[313] *Id*.

[314] The term ``base stations" in this Section and the following Section (addressing the issue of field strength limits at EA and Regional borders), refers to land mobile base stations, paging base stations, or fixed stations operating on the 220 MHz base station frequencies (*i.e.*, frequencies in the 220-221 MHz band).

[315] *See* Section 90.723(f) of the Commission's Rules, 47 C.F.R. § 90.723(f).

[316] The predicted signal from the Phase II licensee's station will be calculated using the F(50,10) field strength chart for Channels 7-13 in Section 73.699 of the Commission's Rules (Figure 10a), with a 9 dB correction factor for antenna height differential. The predicted signal from the Phase I licensee's station would be calculated using the F(50,50) field strength chart for Channels 7-13 in Section 73.699 of the Commission's Rules (Figure 10), with a 9 dB correction factor for antenna height differential. As proposed in the *Third Notice*, we will modify Section 90.723(f) of the Commission's Rules to identify use of these field strength charts as the appropriate method for calculating the prescribed 10 dB protection a Phase I licensee must provide to another co-channel Phase I licensee. *Third Notice*, 11 FCC Rcd at 237 n.151 (para. 99).

may construct and operate a base station less than 120 kilometers from an existing co-channel base station or with less than 10 dB protection to an existing co-channel station's predicted 38 dBuV/m contour if the Phase II licensee obtains the consent of the affected co-channel licensee.

174. The predicted 38 dBuV/m contour of the Phase I licensees will be calculated based on the licensee's authorized effective radiated power (ERP) and antenna height-above-average-terrain (HAAT) -- not on the maximum allowable ERP and HAAT provided in our rules for the 220-222 MHz band. Licensees shall be required to operate at their initially authorized ERP and HAAT, and will not be permitted to seek modification of their authorization to operate at a higher ERP or HAAT.[317] Licensees operating at power levels lower than their initially authorized ERP shall be required to seek modification of their authorization to reflect the lower ERP. By operating at such lower power levels, licensees shall receive less protection than they would have received by operating at their initially authorized ERP. We reach this decision because our ultimate goal is to provide 220 MHz service to the public. If we protect Phase I licensees beyond the predicted 38 dBu contour associated with their initially authorized height and power, then these licensees would be protected beyond the area that they had sought to serve. In addition, we do not think it would be appropriate to allow Phase I licensees to expand their service areas by increasing their power or antenna height without allowing the filing of mutually exclusive applications. Because Phase II licensees will have sought authorization for a large geographic area, we believe that it is appropriate to allow them to serve any portion of their licensed geographic area, except for portions of the area already being served by co-channel Phase I licensees. We also believe that it is likely that Phase II licensees will want to provide service to those areas that would have been protected if we had assumed herein that Phase I licensees are operating at maximum allowable height and power.

175. We reject the arguments of commenters who believe that we should provide greater protection to Phase I licensees' base stations. Commenters suggest that we protect a Phase I licensee's 32 dBu contour or 28 dBu contour because, they claim, ``reliable" 220 MHz signals are being received by mobiles and ``reliable service" is being provided at distances from base stations farther than the 38 dBu contour. We decline to adopt the suggestions made by commenters because their arguments are not consistent with the methodology we have used to provide for co-channel protection for incumbent licensees in other auctionable land mobile services (*e.g.*, 800 MHz and 900 MHz SMR). Commenters have failed to explain why we should adopt a different methodology for determining co-channel protection (*e.g.*, affording protection to a contour at which commenters claim ``reliable" signals are being received). Therefore, as we explain in the following paragraphs, we continue to believe that our methodology for determining Phase I co-channel protection was appropriate and should also be used to determine the protection that Phase II licensees must afford to Phase I licensees.

176. In the 800 MHz and 900 MHz services, as well as the 220 MHz service, our rules provide a certain degree of protection to a particular, ``desired" signal contour of a base station, under the assumption that an ``undesired" interfering signal from a co-channel base station will be present. For example, when we first determined the appropriate interference protection criteria for land mobile stations operating in the 800/900 MHz bands, we decided that our goal in

[317] In the *220 MHz Second Report and Order*, we did permit Phase I licensees to seek modification of their authorizations to *relocate* their base stations. *See 220 MHz Second Report and Order*, 11 FCC Rcd 3668.

establishing parameters for 900 MHz stations was to provide ``a high quality signal to about 50 percent of the locations, 50 percent of the time, within the service area of the stations." [318] We concluded that to accomplish this objective, ``the average desired signal should be 40 dBu at the edge of the service area."[319] This, we stated, would ``give a high level of service in the area in which [the licensee] planned to operate." [320] We concluded that, to maintain this quality of service in the presence of an interfering signal, the interfering signal ``should be 10 dB less than the desired signal at the boundary of the service area of the protected station." [321]

177. Similarly, in the 220 MHz service we proposed to adopt technical parameters to ``enable private land mobile licensees to obtain quality service . . ." [322] and we determined that a 220 MHz station should be protected from interference by the provision of 10 dB protection to the station's 38 dBu contour. [323] E.F. Johnson states that ``reliable" 220 MHz signals may be received at more distant contours than the 38 dBu contour. [324] Other commenters state that ``reliable service" is being provided at such contours. [325] However, these commenters do not define what is meant by a reliable signal or reliable service in the context of the 220 MHz service -- nor do they draw a relationship between the use of these terms and our adoption of criteria to provide for the *protection* of 220 MHz signals in the presence of interfering signals. The signal contour at which they claim ``reliable service" may be provided or where a ``reliable signal" may be received by a mobile (*e.g.*, the location of the 32 dBu or 28 dBu contour) is therefore not determinative in deciding the appropriate 220 MHz signal contour to be protected.

178. Incom argues that we should modify the 38 dBu service contour for the 220 MHz service because we have changed the method by which protected service areas for cellular service are determined,[326] and have also changed the distance that defines protected service areas for

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[318] *See* An Inquiry Relative to the Future Use of the Frequency Band 806-960 MHz; and Amendment of Parts 2, 18, 21, 73, 74, 89, 91, and 93 of the Rules Relative to Operation in Land Mobile Services Between 806 and 960 MHz, Docket No. 18262, Second Report and Order, 46 FCC 2d 752, 774 n.26 (para. 76) (1974), *recon. granted in part*, 51 FCC 2d 945, *clarified*, 55 FCC 2d 771 (1975), *aff'd sub nom.* NARUC v. FCC, 525 F. 2d 630 (1976), *cert. denied*, 425 U.S. 992 (1976).

[319] *Id.*

[320] *Id.*

[321] *Id*.

[322] *220 MHz Notice*, 4 FCC Rcd at 8601 (para. 55).

[323] *220 MHz Report and Order*, 6 FCC Rcd at 2371 (para. 119).

[324] *See* E.F. Johnson Comments at 7.

[325] *See* Incom Comments at 5; Roamer One Comments at 5, 6.

[326] See para. 171, *supra*.

MMDS stations.[327] However, as explained in footnote 306, our action in the *Cellular Unserved Second Report and Order* was not an adjustment from one field strength level to another; rather, it was a fundamental change in the methodology for determining a cellular licensee's CGSA, from an arbitrarily determined area to one that is based on the technical parameters of authorized existing and proposed facilities. Similarly, in the MMDS service, while we increased the ``protected service area'' for MMDS stations, we did not indicate that we did so in an effort to expand the area within which quality television service signals could be provided. [328] Thus, we find that one of the principal objectives of our signal protection rules for the 220 MHz service -- the design of technical parameters to enable licensees to obtain quality service -- does not have a parallel in the MMDS service, and, therefore, we reject Incom's unsupported suggestion that the MMDS decision is somehow relevant to the issues presented here. Further, no commenter has provided assurance that this principal objective would not be compromised by proposals to provide protection to other than the 38 dBu contour.

179. We do not believe, therefore, that these actions should be applied to our use of the 38 dBu service contour as the protected contour for the 220 MHz land mobile radio service. Moreover, we conclude that our recent decisions in which we *have* examined the protected contour for other mobile services support our decision to not change the 38 dBu contour for the 220 MHz service. For example, in our proceedings addressing the licensing of the 800 MHz and 900 MHz SMR service, we proposed the continued use of the *40* dBu contour as the basis for protection for these services. In both instances, we concluded that we should continue to base interference protection in these services on the provision of protection to the 40 dBu contour. [329] In the *800 MHz SMR Report and Order,* for example, we decided to ``require EA licensees to afford interference protection to incumbent SMR systems, as provided in Section 90.621 of the Commission's rules"[330] -- which provides for protection of a licensee's 40 dBu contour. In support of our decision, we stated that this will ``ensure adequate protection of incumbent operations, without hampering the ability of EA licensees to construct stations throughout their authorized

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[327] Incom Comments at 5 (citing Amendment of Parts 21, 43, 74, 78 and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting Private Operational-fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, and Cable Television Relay Service, GN Docket Nos. 90-54 and 80-113, Second Order on Reconsideration, 10 FCC Rcd 7074 (1995) (*Second Order on Reconsideration*).

[328] *See Second Order on Reconsideration* at 7078 (para. 9).

[329] *See* Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, Implementation of Sections 3(n) and 322 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, First Report and Order, Eighth Report and Order, and Second Further Notice of Proposed Rulemaking, 11 FCC Rcd 1463 (1995) (*800 MHz SMR Report and Order*); Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands to the Specialized Mobile Radio Pool, PR Docket No. 89-553, Second Report and Order and Second Further Notice of Proposed Rule Making, 10 FCC Rcd 6884 (1995) (*900 MHz SMR Second Report and Order*).

[330] *800 MHz SMR Report and Order*, 11 FCC Rcd at 1516 (para. 92).

service areas."[331] For all of these reasons, we believe that it is appropriate to continue to employ the predicted 38 dBu contour as the contour that must be protected by co-channel 220 MHz licensees, and thus we will require Phase II licensees to provide 10 dB protection to the predicted 38 dBu service contour of the base stations of Phase I licensees.

7. Field Strength Limit at EA and Regional Border

a. *Proposal*

180. In the *Third Notice* we indicated that our existing rules for the 220 MHz service do not define a particular ``service area" for non-nationwide stations, but indicated that, as discussed in the *220 MHz Report and Order,* stations operating at maximum authorized power and antenna height would ``provide a service area with a 38 dBu contour at about 45 kilometers (28 miles)." [332] We further pointed out that for various wireless communications services that we license within Commission-defined geographic areas (*e.g*., PCS, 900 MHz SMR) we prescribe limits on the strength of signals licensees may provide at the borders of their service areas. [333] We thus concluded that, for effective operation, a Phase II licensee should be permitted to transmit a signal of at least 38 dBuV/m throughout its area of service, and we therefore proposed a field strength limit of 38 dBuV/m at the border for EA and Regional 220 MHz licensees. [334] In order to allow licensees flexibility to exceed this limit if necessary, we also proposed that licensees be allowed to transmit signals greater than 38 dBuV/m at their border if all affected, co-channel EA and Regional licensees agree to the higher field strength. We also indicated that, when such agreements are in place among co-channel licensees, if interference were to occur to transmissions at or near the border between co-channel licensees, licensees would be expected to coordinate with one another and modify their facilities as necessary to minimize interference.

b. *Comments*

181. Commenters were opposed to our proposal to limit the base station transmissions of EA and Regional licensees to 38 dBu at their borders. Comtech, for example, contends that its systems can ``provide reliable communications well beyond the predicted 38 dBu contour, in the absence of co-channel interference." Comtech believes that if we adopt the proposed 38 dBu limit at EA and Regional borders, ``co-channel interference is likely to arise as a significant limitation to service along a system's border." Therefore, Comtech proposes a 28 dBu standard at

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[331] *Id. See also* 9*00 MHz SMR Second Report and Order,* 10 FCC Rcd at 6899-6900 (para. 44), where we decided to continue to base interference protection on the provision of protection to the 40 dBu contour.

[332] *220 MHz Report and Order*, 6 FCC Rcd at 2371 (para. 115).

[333] *See, e.g.*, Sections 24.236 and 90.671 of the Commission's Rules, 47 C.F.R. §§ 24.236, 90.671.

[334] In calculating the predicted 38 dBuV/m contour resulting from the transmissions of their base stations, licensees will use the F(50,50) field strength chart for Channels 7-13 in Section 73.699 of our Rules (Figure 10), with a 9 dB correction factor for antenna height differential. *See* 47 C.F.R. § 73.699.

the borders.[335] AMTA believes that in conjunction with its proposal that Phase II licensees not exceed 28 dBu at Phase I licensees 28 dBu contour, ``allowing Phase II licensees to provide a signal strength of 28 dBu at borders will provide signal parity between existing and new licensees."[336]

c. *Decision*

182. We have concluded that the predicted 38 dBu service contour is the appropriate field strength contour that should be protected from co-channel interference for the 220 MHz service. Thus, to allow two Phase II licensees operating in adjacent EAs or Regions to each employ a 38 dBu field strength at their border could conceivably result in interference at or near such borders. However, if we were to require that licensees provide a field strength lower than 38 dBu at their borders, we might unnecessarily restrict their ability to provide a quality service to mobiles operating in those areas. Thus, we conclude that to afford Phase II licensees the maximum degree of flexibility in designing their systems and provide a quality signal to all parts of their service area, we will permit licensees to transmit up to a predicted 38 dBu field strength at their border. [337] As proposed, we will also allow licensees to exceed this limit if all affected, co-channel EA and Regional licensees agree to a higher field strength. In instances where interference occurs between co-channel licensees at or near their borders -- *i.e.*, when licensees are operating at or below field strength levels of 38 dBu at the border, or when licensees are operating at greater field strength levels pursuant to agreements with co-channel Phase II licensees -- we will expect licensees to coordinate amongst themselves to minimize such interference and to cooperate to resolve any interference problems that may arise. [338]

D. APPLICATION PROCEDURES

1. Pending Applications for 220 MHz Channels

a. *Proposal*

183. The Commission indicated in the *Third Notice* that it had not yet requested the amending information necessary to process the 33 pending Phase I applications for the

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[335] Comtech Comments at 12.

[336] AMTA Reply Comments at 3.

[337] As proposed in the *Third Notice*, in calculating the predicted 38 dBuV/m contour resulting from the transmissions of their base stations, licensees will use the F(50,50) field strength chart for Channels 7-13 in Section 73.699 of our Rules (Figure 10), with a 9 dB correction factor for antenna height differential. *Third Notice*, 11 FCC Rcd at 237 (para. 99) (citing 47 C.F.R. § 73.699 (Fig. 10)).

[338] *See, e.g.*, Section 90.173(b) of the Commission's Rules, 47 C.F.R. § 90.173(b).

nationwide, non-commercial channels.[339] The Commission sought comment on three different means by which to address the pending applications:[340]

- Return the applications without prejudice, as well as the appropriate filing fees, to the 33 applicants, establish a date for the filing of ``short-form'' applications for nationwide licenses, and auction mutually exclusive applications.
- Act on the pending petitions for reconsideration of the Commission's June 21, 1993, Order, solicit the required amending information from the 33 applicants, and then conduct a lottery to award the four available nationwide licenses.
- Grant authorizations among the 33 applicants through comparative hearings.

The Commission sought comment regarding the advantages and disadvantages of each of these proposals, and encouraged commenters to address factors that should be deemed relevant for purposes of ascertaining the most appropriate handling of the applications.

184. The Commission also observed that, although it has processed nearly all of the 60,000 applications filed for non-nationwide licenses, there are five groups of applications, totalling 34 applications, that were filed on the final day the Commission accepted 220 MHz applications and are mutually exclusive with one another.[341] The Commission sought comment on whether the Commission should resolve these mutually exclusive situations using competitive bidding, lotteries, or comparative hearings.[342]

b. *Comments*

185. Commenters disagree regarding how the Commission should treat pending applications for 220 MHz licenses. Many commenters, particularly Phase I 220 MHz non-commercial, nationwide applicants, urge that we exercise our discretion to use lotteries.[343] Several of these commenters, however, believe that licenses should be awarded by lottery only if

[339] *Third Notice*, 11 FCC Rcd at 206 (para. 30).

[340] *Id.*

[341] *Id*. at 206 (para. 31).

[342] *Id*.

[343] Airborne Comments at 2; AMTA Comments at 8-11; AMTA Reply at 6-7; Columbia Comments at 2-10; Comtech Comments at 2-4; Comtech Reply at 2-4; Fleet Comments at 2; Global Comments at 1-2; Mtel Comments at 1-10; Mtel Reply at 2-3; PCIA Comments at 5-6; PNC Comments at 4-14; Roamer Comments at 1-2 (supporting position taken by AMTA on this issue); Securicor Comments at 16; 360 Mobile Comments at 1-2; U.S. Central Comments at 1-2; UTC Comments at 3-8; WLF Comments at 2-5.

the licenses are designated strictly for non-commercial purposes and licensees are restricted from leasing excess capacity.[344]

186. Some commenters who support lotteries base their reasoning on equitable arguments, contending that it would be unfair to applicants who applied in good faith, in accordance with then existing rules, for the Commission to change the rules with respect to these applications.[345] A number of commenters argue that the applicants acted in reasonable

reliance on these rules, spending valuable time and money on these applications, [346] and that their business plans did not take into account the possibility that these licenses subsequently might be awarded through competitive bidding.[347] Columbia, Mtel, and WLF contend that a refund of applicants' filing fees is not a sufficient step for the Commission to take, because applicants incurred other out of pocket expenses.[348] Some commenters point out that the delay in processing these applications was caused by the Commission and not by the applicants. [349]

187. Other commenters believe there are equally strong equitable arguments for returning the pending applications and awarding these nationwide licenses through auctions. [350] They point out that, with the dramatic change in circumstances due to the comprehensive restructuring of the rules governing 220 MHz service undertaken by the Commission in this proceeding, it would be unfair to move forward with the original applications. [351] If the licenses are redesignated for commercial use it is unfair to limit the pool of applicants to those who applied for non-commercial licenses and consequently to prevent other parties who desire commercial 220 MHz spectrum

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[344] AMTA Reply at 7 n.12; Comtech Reply at 3. These parties agree that if there is any possibility that these licenses may be used for commercial purposes then they should be awarded by competitive bidding.

[345] *See* AMTA Comments at 8-9; AMTA Reply at 6-7; Columbia Reply at 3; Ericsson Comments at 2-3; Mtel Comments at 10; Mtel Reply at 2-3; WLF Comments at 3-4; Securicor Comments at 16; U.S. Central Comments at 1-2; 360 Comments at 2-3.

[346] Fleet Comments at 2; PNC Comments at 6-8; Columbia Comments at 10; Mtel Comments at 9-10; WLF Comments at 4.

[347] Global Comments at 3; PNC Comments at 9; WLF Comments at 4.

[348] Columbia Comments at 10; Columbia Reply at 6-7; Mtel Comments at 9-10; WLF Comments at 4.

[349] Airborne Comments at 2; AMTA Comments at 9; Columbia Comments at 5-6; Columbia Reply at 5-6; PCIA Comments at 5; Securicor Comments at 16; U.S. Central Comments at 1-2; UTC Comments at 5; WLF Comments at 3.

[350] *See* Metricom Comments at 7-8; U.S. Mobilcomm Comments at 4-5; Pagenet Comments at 15-17; Pagenet Reply at 7; SMR Reply at 6.

[351] Metricom Comments at 7-8; U.S. Mobilcomm Comments at 4-5; Pagenet Comments at 15, 17; Pagenet Reply at 7; SMR Reply at 6.

from obtaining it.[352] Pagenet contends that pending applicants would be unjustly enriched if permitted to obtain licenses through a lottery process.[353] SMR asserts that it may be true that these applicants applied in good faith, but it is also true that they have not yet incurred significant costs associated with their pending applications, and, in any event, their filing fees would be refunded under the competitive bidding option posed by the Commission in the *Third Notice*.[354]

188. Ericsson sets forth a compromise approach in its comments, suggesting that the most equitable solution would be to allocate, by competitive bidding, two nationwide 10 channel blocks for commercial use, and to allocate, by random selection, one nationwide 10 channel block for non-commercial use.[355] Ericsson believes this option accomplishes the Commission's purposes without disadvantaging those applicants who applied for non-commercial licenses.[356]

189. Commenters urge the Commission to avoid delay regarding the licensing of 220 MHz service. For example, Johnson states that it is largely indifferent as to whether the spectrum is allocated for commercial or non-commercial use, or how the licenses are awarded, but it urges the Commission to act expeditiously regardless of the path it takes.[357] PNC believes that choosing auctions over lotteries would lead to additional costs and delays because the Commission would have to dismiss pending applications, accept new applications, and then conduct an auction.[358] PNC also cites delays that have taken place in conducting previous auctions.[359] SMR contends, however, that there would be even greater delays if lotteries were used because the Commission would have to address several petitions for reconsideration, solicit additional information regarding the pending applications, and then review that information prior to conducting a lottery.[360]

190. Columbia, Mtel, and WLF argue that the pending applicants will be subjected to disparate treatment as compared to other 220 MHz Phase I licensees if the licenses for pending

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[352] Pagenet Comments at 17; Pagenet Reply at 7; U.S. Mobilcomm Comments at 4-5; Metricom Comments at 7-8.

[353] Pagenet Reply at 7.

[354] SMR Comments at 9.

[355] Ericsson Comments at 3.

[356] *Id.*

[357] Johnson Comments at 3-4.

[358] PNC Comments at 11-14.

[359] *Id.* at 13.

[360] SMR Comments at 8-9.

applicants are not awarded by lottery.[361] They point out that these applicants will be singled out unfairly for different treatment and will have to spend substantial sums for their licenses while other Phase I applicants have been permitted to receive their licenses at relatively low cost.[362] On the other hand, Pagenet contends that awarding the licenses by auction is the only way to prevent disparate treatment between winners of the lottery who will, at a minimum, be able to lease excess capacity, and other commercial mobile radio service providers who have paid substantial sums for their spectrum licenses.[363]

191. Commenters generally acknowledge that the Budget Act granted the Commission the discretion to award these licenses by either lotteries or competitive bidding.[364] Several commenters cite two recent decisions, the *MMDS Report and Order* and *Unserved Cellular Lottery Order,* in which the Commission decided to award licenses to pending applicants by lottery rather than by competitive bidding.[365] Mtel, PNC, and Columbia believe that, if the Commission does not follow this precedent in this proceeding, then the Commission would be subjecting these applicants to disparate treatment.[366] Some commenters also argue that the same considerations that led the Commission to decide to award the licenses by lottery in these cases are present in this case.[367] Several commenters contend that since the Commission did not have auction authority until after these applications were filed, the Commission cannot now retroactively apply new rules to pending applications.[368] SMR and Pagenet argue, however, that the Commission's action would not result in the retroactive application of our rules.[369] Pagenet contends that there is ample precedent for dismissing pending applications,[370]

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[361] Columbia Comments at 6-7; Columbia Reply at 3-4; Mtel Comments at 8-9; WLF Comments at 3.

[362] Columbia Comments at 7; WLF Comments at 3.

[363] Pagenet Comments at 6, 9; Pagenet Reply at 11-12.

[364] Columbia Comments at 2-3; Pagenet Reply at 4-5; PNC Comments at 4; SMR Comments at 6-7; SMR Reply at 6-7; U.S. Mobilcomm Comments at 6-7; WLF Comments at 3.

[365] Columbia Comments at 3; Columbia Reply at 4; PNC Comments at 9-10, 12-13; WLF Comments at 4; Mtel Comments at 8-9; UTC Comments at 7-8; U.S. Central Comments at 1-2.

[366] Mtel Comments at 8-9; PNC Comments at 9-10; Columbia Reply at 4.

[367] PNC Comments at 12-13 (delay and costs to the Commission and applicants); PNC Comments at 8-9 (stringent construction and operation requirements will prevent speculation, business plans did not take auctions into account); U.S. Central Comments at 1-2 (delay was not the fault of applicants who had assumed that the Commission would conduct lotteries); UTC Comments at 7-8 (few applications, pending a significant period of time).

[368] AMTA Comments at 8-9; AMTA Reply at 6-7; Global Comments at 2; 360 Mobile Comments at 2; Mtel Comments at 4-5.

[369] SMR Reply at 5; Pagenet Reply at 8-11.

[370] Pagenet Comments at 16; Pagenet Reply at 6.

and also argues that in the *Cellular Lottery Rulemaking*[371] the Commission decided to amend its rules and implemented the use of lotteries for cellular applications that were already on file. [372]

192. Several commenters are concerned that the Commission's willingness to adopt competitive bidding with respect to these licenses indicates that the Commission has decided to elevate revenue raising over the public interest and the needs of potential users. [373] Comtech contends that such a policy is proscribed by the Communications Act. [374] Pagenet, however, argues that auctions allow the Federal Government, on behalf of the American people, to collect some measure of value in return for the use of the public spectrum. [375] Pagenet also argues that under the Communications Act the Commission is charged with promoting the development and rapid deployment of services to the public and ensuring that the spectrum is used productively and efficiently.[376]

193. Pagenet and Metricom assert that using auctions will speed development and lead to the more efficient use of 220 MHz spectrum. [377] Pagenet argues that lotteries do not ensure that the winner will actually provide service, and asserts that many prior licenses granted by lottery were eventually forfeited for failure to construct or were sold prior to construction of any systems to serve the public.[378] Pagenet points out that lottery winners would be more likely to construct a system using relatively inexpensive, spectrum inefficient technology, with an eye toward selling their licenses as soon as the rules permit. [379] Pagenet asserts that the competitive bidding process discourages this type of speculation. [380] Columbia points out, however, that in the case of the 220

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[371] Amendment of the Commission's Rules to Allow the Selection from Among Mutually Exclusive Competing Cellular Applications Using Random Selection or Lotteries Instead of Comparative Hearings, CC Docket No. 83-1096, Report and Order, 98 FCC 2d 175 (1984) (*Cellular Lottery Rulemaking*). At the time the applications were filed licenses were awarded on the basis of comparative hearings.

[372] Pagenet Reply at 7.

[373] Comtech Comments at 3; Columbia Reply at 7; ITA Comments at 8-9.

[374] Comtech Comments at 3.

[375] Pagenet Comments at 4-5; Pagenet Reply at 11.

[376] Pagenet Comments at 7; Pagenet Reply at 5, 10-11.

[377] Pagenet Comments at 5, 7; Metricom Comments at 7.

[378] Pagenet Comments at 5.

[379] Pagenet Comments at 7-8.

[380] Pagenet Comments at 5.

MHz spectrum there are stringent entry criteria, build out requirements, and rules to prevent unjust enrichment which will prevent trafficking and speculation in these licenses. [381]

194. SMR argues that awarding licenses through competitive bidding ensures that the spectrum will be held by the parties that value it the most, not by those who are the luckiest. [382] Columbia asserts, however, that a party's ability to pay does not equate with the party who values the spectrum the most, and that the Commission will never be able to meet its statutory obligation to provide spectrum for private, non-commercial requirements under this mistaken rationale. [383]

195. No commenters prefer using comparative hearings rather than lotteries to award these licenses. Airborne is the sole commenter supporting the use of comparative hearings if the Commission were choosing between comparative hearings and auctions. [384] Several commenters cite the delays and costs associated with comparative hearings. [385] PNC believes that comparative hearings do not necessarily result in the selection of more qualified licensees. [386] In addition, commenters assert that the Commission has previously rejected the option of using comparative hearings to award licenses in the *220 MHz Report and Order*, and that there is no need to revisit the issue at this time. [387]

196. Finally, Echo asks that, regardless of the option selected, the Commission allow the pending applicants to withdraw their applications and recoup their filing fees. [388] Echo argues that, because of the extended delay, business conditions have changed dramatically and the Commission should accommodate those applicants who have undergone unforeseen changed circumstances by allowing pending applicants this option. [389]

c. *Decision*

197. We find that it is in the public interest to return all pending applications and appropriate filing fees, both nationwide and local, for the 220 MHz service, without prejudice,

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[381] Columbia Comments at 9. *See also* PNC Comments at 9 (build-out requirements).

[382] SMR Comments at 9.

[383] Columbia Reply at 6.

[384] Airborne Comments at 3.

[385] AMTA Comments at 8 n.16; Columbia Comments at 11-12; Pagenet Comments at 5, 7; Pagenet Reply at 5-6; PNC Comments at 17-19; SMR Comments at 8.

[386] PNC Comments at 15-17.

[387] Columbia Comments at 10-11; Mtel Comments at 3; PNC Comments at 14-15; UTC Comments at 4-5.

[388] Echo Comments at 2-4.

[389] *Id.*

and to accept new applications after the effective date of our Phase II rules. As we explain below, all mutually exclusive Phase II applications, except those applications for public safety and EMRS channels, will be subject to competitive bidding because they met the criteria for auctionable services.

198. We base our decision on several factors. First, the rules we adopt in this Report and Order will significantly alter the technical and operational rules for the 220 MHz service. Our new 220 MHz rules will afford licensees a great deal more flexibility than the rules in effect when the pending applications were filed. For example, the original rules permitted fixed and paging operations only on an ancillary basis to a licensee's primary land mobile operations. Our action today replaces those rules with a licensing framework that permits 220 MHz licensees to engage in fixed and paging operations on a primary basis. In addition, we have found that geographic, rather than individual site-specific, licensing is more appropriate for the 220 MHz service. We are therefore replacing the prior form of licensing with a framework that provides carriers with an increased degree of flexibility in providing service throughout a geographic license area.

199. The nature of the use for the nationwide channels has changed even more dramatically since the time we originally adopted rules for 220 MHz service. At the time the Commission accepted the pending nationwide applications, the rules specified that these channels could be used for non-commercial purposes and that a licensee could lease excess capacity only after meeting its five-year construction benchmarks.[390] As we have previously concluded, we no longer believe that it serves the public interest to designate these channels for non-commercial use. Instead, we find that the public will benefit by allowing a nationwide licensee the flexibility to use some or all of its licensed 220 MHz spectrum to offer service to the public. We note that two commenters advocating that we lottery pending applications have acknowledged that if the Commission allows these licensees to provide any commercial services, a lottery would not be an appropriate method to award the licenses because auctions provide incentives for more efficient use of the spectrum.[391]

200. We conclude that, because the nature of the 220 MHz service is undergoing such substantial change, it would be unfair to preclude new applicants from having the opportunity to apply for these 220 MHz licenses. In 1991, when the pending applications were filed, parties interested in using the 220 MHz spectrum may have decided not to apply for these licenses because the rules precluded a licensee from offering the type of service that these parties desired to offer, such as primary fixed service, paging, or nationwide commercial service. Although we will not preclude licensees from using their 220 MHz licenses for internal communications or for two-way land mobile communications, we do not believe that pending applicants should be afforded the exclusive benefit of receiving licenses that may be used for substantially different purposes than those for which the licenses originally could be used, and at the same time prevent new applicants who may desire to offer service to the public from having the opportunity to apply for such licenses. We have concluded that such a restriction on the pool of applicants is not equitable, nor is it sound public policy. Opening a filing window for all interested applicants, in

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[390] Section 90.733(d) of the Commission's Rules, 47 C.F.R. § 90.733(d).

[391] AMTA Reply at 7; Comtech Reply at 3.

our view, will increase the likelihood that competitive processes will trigger the delivery of a broad array of services to customers at reasonable prices.

201. Second, we agree with commenters that comparative hearings would lead to delay of service to the public and would increase administrative costs for applicants and the Commission. As commenters indicate, the Commission previously has considered and rejected the use of comparative hearings to assign 220 MHz licenses from among mutually exclusive applicants. [392]

202. Finally, we note that the Commission has found that auctioning spectrum will benefit the public by ensuring that licenses go to those who value them the most and to those who have an incentive to build their systems quickly, thereby speeding the provision of service to the public.[393]

203. We disagree with those commenters who argue that a decision to return these applications and conduct an auction will increase the likelihood of petitions for reconsideration and court challenges. Given the significant changes to the 220 MHz service rules that we adopt in this Report and Order, we think it is equally likely that a decision to lottery the pending applications would result in the same type of delay because the Commission would foreclose the opportunity for newly interested parties to obtain these licenses, thus exposing the Commission to court challenges from a different direction.

204. We also disagree with commenters arguing that Commission precedent requires that we lottery the pending applications. In the case of cellular unserved area applications, the Commission had not significantly altered the rules for the provision of cellular service, such that a Commission decision might stimulate substantially more interest by potential applicants. Indeed, the geographic area for which an applicant originally applied did not change, nor did the nature of the service. Similarly, in the *MMDS Report and Order,* we specifically stated that ``while we are moving to larger geographic area authorizations and expanded service area protection, we are not fundamentally changing the nature of the service. Licensees still will be providing wireless cable service to subscribers, albeit under altered conditions designed to make the service more competitive with cable television."[394] Additionally, pending nationwide applications are distinguishable from the pending MMDS applications because unlike in the MMDS situation in which the Commission was able to proceed quickly to conduct a lottery, if we decide to award these licenses by lottery the Commission would first have to address petitions for reconsideration of our nationwide, non-commercial decisions, and consequently applicants may have to alter their original submissions.[395]

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[392] *220 MHz Memorandum Opinion and Order*, 7 FCC Rcd at 4488-89 (paras. 17-22).

[393] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2349-50 (paras. 3-5).

[394] *MMDS Report and Order*, 10 FCC Rcd at 9633 (para. 92).

[395] *See id.* at 9632 (para. 90).

205. We also disagree with commenters claiming that the Commission does not have the authority to return these pending applications and conduct an auction from among new, mutually exclusive applications. As we explained in the *MMDS Report and Order,* Section 6002(e) of the Budget Act, entitled ``Special Rule," made an exception to the general requirement that, if a service met the standards for auctionability under Section 309(j)(2) of the Communications Act, the Commission could not use a lottery to award licenses for such service. Section 6002(e) permits the Commission to use a lottery to award licenses even for an otherwise auctionable service for applications accepted for filing before July 26, 1993. [396] In adopting this provision, Congress indicated that the exception would ``permit" but not require, the Commission to use lotteries for certain IVDS and ``several other licenses." [397] Since, as we explain below, we find that the 220 MHz service meets the standards for auctionability, the Commission has the authority to award these licenses by competitive bidding.

206. We also agree with Pagenet that there is clear legal precedent for the Commission to dismiss pending applications. [398] Contrary to the views of some commenters, applying new rules to pending applications does not constitute retroactive rulemaking. It is well settled that the Commission may apply new rules to pending applications. [399] As we previously found in the *Part 22 Rewrite Order,* the fact that an application remained pending because of petitions for reconsideration does not affect the Commission's authority to apply new rules to the application. [400] Furthermore, ``[u]ntil action on an application is final, processing has not been completed, and rule changes applied to that application are not retroactive." [401] Because we have decided to return pending applications and open a filing window for new applications before conducting an auction, we need not address contentions in the record that the Commission does not have the authority to conduct an auction that limits participation to parties with pending applications. Furthermore, since we will be returning the pending applications we find that the Petitions for Reconsideration filed in this matter by Columbia Cellular Corporation, PLMRS Narrowband Corp. and 360 Mobile Data Joint Venture on August 6, 1993 should be dismissed as moot. These petitions requested reconsideration of our 1993 decision in the *220 MHz Second Reconsideration Order,* which only addressed issues concerning non-commercial nationwide 220

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[396] *Id*. at 9633 (para. 94).

[397] H. R. Conf. Rep. No. 103-213 at 498, 103rd Cong., 1st Sess., (1993), 1993 U.S.C.C.A.N. 1088 at 1113-14.

[398] Pagenet Comments at 15-16 (citing Private Operational-Fixed Microwave Service, 48 Fed. Reg. 32,578 (1983), *aff'd*, Affiliated Communications Corp. v. FCC, No. 83-1686 (D.C. Cir. May 9, 1985)).

[399] *See, e.g.*, United States v. Storer Broadcasting Co., 351 U.S. 192 (1956); Hispanic Information and Telecommunications Network v. FCC , 865 F.2d 1289 (D.C. Cir. 1989); Maxcell Telecom Plus, Inc. v. FCC, 815 F.2d 1551 (D.C. Cir. 1987).

[400] Revision of Part 22 of the Commission's Rules Governing the Public Mobile Services, CC Docket No. 92-115, Report and Order, 9 FCC Rcd 6513, 6534-35 (para. 100) (1994) (*Part 22 Rewrite Order*).

[401] *Id.* at 6535 (para. 100).

MHz licenses.[402] The Petitions for Reconsideration will be moot because we will no longer have a non-commercial designation in the 220 MHz service.

2. Other Applications Issues

207. As we noted in the *Third Notice*, in the *CMRS Third Report and Order*, we adopted rules to govern the filing and processing of applications for Part 90 services reclassified as CMRS that were comparable to our rules for Part 22 services, but declined to consider definitions of initial applications and major or minor modifications and amendments for the 220 MHz service until we more fully examined the service in this rulemaking proceeding. We address these definitions and other application issues below.

a. *Initial Applications*

208. As we observed in the *Third Notice*, we proposed a definition of initial applications for the 220 MHz service that is similar to that adopted in the *CMRS Third Report and Order* for other mobile services that are licensed on a market or geographically-defined basis. Specifically, we propose to define an initial application for a 220 MHz license as an application for an EA, Regional, or nationwide license, regardless of whether the applicant is an incumbent 220 MHz licensee in the geographic area covered by the requested license.
No comments were received regarding this issue. We will therefore define initial applications for the 220 MHz service as proposed.

b. *Amendment of Applications and Modification of Authorizations*

209. In the *Third Notice*, we proposed to adopt rules consistent with other reclassified Part 90 services to govern amendments to applications and modification of Phase II licenses. We thus proposed that applicants for the Phase II licenses have a limited opportunity to cure minor defects in their short-form applications and not be allowed major amendments after the expiration of the short-form filing window.[403] We also noted that a nationwide, EA, or Regional licensees generally would not seek major modification other than in the case of assignments or transfers of control.[404] We received no comments on this issue. We thus adopt our proposed limitations for filing amendments to applications, and will permit Phase II licensees to file modifications to their licenses only in cases of assignments or transfers of control.

c. *Special Temporary Authority*

(1) Proposal

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[402] *220 MHz Second Reconsideration Order*, 8 FCC Rcd 4161.

[403] Sections 24.422 and 24.822 of the Commission's Rules, 47 C.F.R. §§ 24.422, 24.822.

[404] Amendment of Part 90 of the Commission's Rules To Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, RM-8117, RM-8030, RM-8029, and Implementation of Section 309(j) of the Communications Act - Competitive Bidding: 800 MHz SMR, PP Docket No. 93-253, Further Notice of Proposed Rule Making, 10 FCC Rcd 7970 (1994) (*800 MHz Further Notice*).

210. In the *Third Notice*, we noted that under the *CMRS Second Report and Order*, all paging services and all private mobile licensees reclassified as CMRS and licensed to provide service as of August 10, 1993 were afforded a three-year grandfathering period under the Part 90 PMRS rules.[405] In the *CMRS Third Report and Order*, we had concluded that ``licensee status before the August 10, 1993 deadline is the sole factor in determining whether the licensee will be treated as being in the PMRS until August 10, 1996."[406] Some reclassified PMRS providers have Part 90 STAs or conditional grants that were in effect at the time we adopted the *CMRS Third Report and Order*. However, we concluded that such STAs or conditional grants would be extended only until August 10, 1996, when their reclassification as CMRS becomes effective.[407] Additionally, we concluded that: (1) reclassified PMRS that were not grandfathered under the Part 90 rules and that had STAs or conditional grants only possessed such grants until the grants' scheduled expiration, or 60 days from the effective date of the *CMRS Third Report and Order*;[408] and (2) such STAs could not be extended, and the non-grandfathered reclassified licensees could only apply for STAs and conditional grants under Part 22 rules.

211. In the *Third Notice* we decided that such reasoning should also be applied to the 220 MHz service, and thus tentatively concluded that non-grandfathered 220 MHz CMRS licensees with STAs should only be allowed to apply for STAs or conditional grants, or extensions to existing STAs or conditional grants, under Part 22 rules. Additionally, we indicated that in granting STAs for 220 MHz licensees we must follow Section 309(f) of the Communications Act, which states that STAs should be granted to CMRS providers only in ``extraordinary circumstances involving particular applications."

(2) Decision

212. AMTA and SMR argue that Phase I licensees should be deemed to have satisfied the extraordinary circumstances criteria for obtaining an STA to the extent that they were unable to modify their licenses due to the freeze that was in existence at the time their comments were filed.[409] As noted in the *Third Notice*, we have issued a number of STAs to Phase I 220 MHz licensees to operate their base stations at unauthorized locations. We conclude that such STAs should be extended until such time as the applications of such licensees to modify their authorization to relocate their base stations are acted upon by the Commission (*see 220 MHz Second Report and Order*). STAs granted to licensees for any other type of unauthorized operation (*e.g.*, to operate at higher power levels than authorized) shall not be renewed. We conclude further that as of August 10, 1996, all 220 MHz licensees meeting the definition of CMRS are required to seek STAs as common carriers, and that we will apply the standard for

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[405] *CMRS Second Report and Order*, 9 FCC Rcd at 1513-14 (paras. 280-284).

[406] *CMRS Third Report and Order*, 9 FCC Rcd at 8166 (para. 409).

[407] *Id.* at 8156 (para. 384).

[408] *Id.*

[409] AMTA Comments at 20; SMR Comments at 17-18.

granting STAs as prescribed in Section 309(f) of the Communications Act -- *i.e.*, that STAs should be granted to CMRS providers only in ``extraordinary circumstances involving particular applications."[410]

d. *Renewal Expectancy*

(1) Proposal

213. In the *CMRS Third Report and Order*, we decided that every Part 90 licensee that is reclassified and treated as a CMRS carrier when its current license term expires would have a 10-year license term and be afforded a renewal expectancy. [411] We also extended our rules for Part 22 services regarding renewal expectancy to all Part 90 CMRS licensees. [412] Specifically, Section 22.940 of our rules provides that a cellular renewal applicant will receive a preference in a comparative renewal proceeding by demonstrating that it: (1) has provided substantial service during the license term; and (2) has complied with applicable Commission rules and policies, and the Act.[413]

214. In the *Third Notice*, we proposed to apply these provisions to all Phase I and Phase II 220 MHz licensees, rather than only to those providing CMRS services as currently required. We advanced this proposal because: (1) we had proposed a 10-year license term for all Phase II 220 MHz licensees regardless of whether the licensee is CMRS or PMRS; and (2) because the new framework for the 220 MHz service proposed in the *Third Notice* significantly alters the service.[414] We thus believed it was appropriate to apply these more stringent renewal standards to non-CMRS as well as CMRS licensees as part of the overall changes to the 220 MHz framework.

(2) Comments; Decision

215. Pagemart and SMR support the Commission's proposal to provide a renewal expectancy for all Phase I and Phase II 220 MHz licensees that would be consistent with renewal

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[410] *CMRS Third Report and Order*, 9 FCC Rcd at 8155 (para. 383).

[411] *Id.* at 8157 (para. 386).

[412] *CMRS Further Notice*, 9 FCC Rcd at 2892 (paras. 139-140).

[413] Section 22.940 of the Commission's Rules, 47 C.F.R. § 22.940. Substantial service is defined in the rule as service that is sound, favorable, and substantially above a level of mediocre service, which would barely warrant renewal. We noted that although Part 22 does not expressly provide for preferences in the case of non-cellular licensees, we have applied to other Part 22 licensees, by case law, renewal expectancy principles that are similar to the standards applied to cellular licensees. *See CMRS Further Notice*, 9 FCC Rcd at 2892 n.244 (para. 139); (citing, as an example of the case law, In re Applications of Baker Protective Services, Inc., 59 Rad. Reg. 2d 1141 (1986)).

[414] We indicated, as an example of the changes to the service, our proposal to allow fixed and paging operations on a primary basis for both Phase I and Phase II licensees.

expectancies for other CMRS licensees.[415] We continue to believe that it is appropriate to require all Phase I and Phase II 220 MHz licensees seeking renewal of their authorization to meet the requirements for license renewal similar to those provided in Section 22.940 of our rules. Phase I, non-nationwide licensees will be required to meet these requirements at the end of their 5-year license term; and Phase I nationwide licensees and all Phase II licensees will be required to meet these requirements at the end of their 10-year license term.

E. AUCTION RULES

1. Competitive Bidding Design

a. *Proposal*

216. In the *Competitive Bidding Second Report and Order*, we found that: (l) licenses with strong value interdependencies should be auctioned simultaneously; and (2) multiple round auctions generally yield more efficient allocations of licenses than single round bidding by providing bidders with information regarding other bidders' valuations of licenses, especially where there is substantial uncertainty as to value.[416] We tentatively concluded in the *Third Notice* that simultaneous multiple round auctions would be appropriate for the Phase II licenses of the 220 MHz service, based on our conclusions in the *Competitive Bidding Second Report and Order* and our auction experience.[417] We also sought comment on any alternative bidding designs and their applicability to the 220 MHz service.[418] However, we tentatively concluded that combinatorial bidding, for example, would be unnecessary in most 220 MHz auctions.[419]

b. *Comments*

217. The SMR Advisory Group supports the use of the simultaneous multiple round auction design for all Phase II 220 MHz licenses.[420] AMTA, while disagreeing with the Commission's proposal to auction the noncommercial nationwide 220 MHz licenses, otherwise concurs that a simultaneous multiple round auction is an appropriate competitive bidding design

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[415] Pagemart Comments at 5, SMR Comments at 17.

[416] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2360 (para. 69); *recon*. Second Memorandum Opinion and Order, 9 FCC Rcd 7245 (1994) (*Competitive Bidding Second Memorandum Opinion and Order*).

[417] *Third Notice*, 11 FCC Rcd at 243 (para. 111).

[418] *Id*. at 244 (para. 112).

[419] *Id*. at 244-45 (para. 113).

[420] SMR Comments at 19.

for Phase II 220 MHz licenses.[421] The National Telecommunications and Information Administration (NTIA) urges the Commission to adopt combinatorial bidding for the 220 MHz auction. NTIA contends that this auction design is more efficient because allowing package bidding will result in the award of licenses at their actual value to bidders who value them the highest, will reduce or eliminate the risk for bidders of winning only a part of the package sought, and will likely generate more revenue.[422]

c. *Decision*

218. Based on the record in this proceeding and our successful experience conducting simultaneous multiple round auctions for other CMRS services (*e.g.*, narrowband and broadband PCS and 900 MHz SMR) and the Multipoint Distribution Service (MDS), we conclude that this is the preferable competitive bidding design for all Phase II 220 MHz service licenses. We have developed a computer system capable of handling approximately 1500 licenses in a simultaneous multiple round auction, and it is therefore administratively feasible to use this auction design to award all 220 MHz licenses simultaneously. For certain bidders, these licenses will be significantly interdependent because of the desirability of aggregation across spectrum blocks and geographic areas. Simultaneous multiple round bidding will generate more information about license values during the course of the auction and provide bidders with more flexibility to pursue back-up strategies than if the licenses were auctioned separately or through sealed bidding. We also expect the value of these licenses to be sufficiently high to warrant simultaneous multiple round bidding. We currently do not have the operational capability of conducting an auction using combinatorial bidding and therefore will not do so to award 220 MHz licenses. However, we are looking into the possibility of developing this capability for future auctions.

2. Bidding Procedures

a. *License Grouping*

(1) Proposal

219. We proposed in the *Third Notice* to auction the nationwide and Regional licenses in one simultaneous multiple round auction. We stated that grouping the nationwide and Regional licenses together would allow bidders to pursue aggregate bidding strategies.[423] We proposed to auction the EA licenses subsequently in one simultaneous multiple round auction.

(2) Comments

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[421] AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[422] NTIA Reply Comments at 5-6.

[423] *Third Notice*, 11 FCC Rcd at 246 (para. 116).

220. The SMR Advisory Group, the sole commenter addressing this issue, supports our proposal to auction the nationwide and regional licenses in a single simultaneous multiple round auction, followed by a simultaneous multiple round auction of the EA licenses. [424]

(3) Decision

221. After further consideration, we believe that the nationwide, Regional, and EA 220 MHz licenses are all highly interdependent. Grouping interdependent licenses and putting them up for bid at the same time facilitates awarding licenses to bidders who value them most highly by providing bidders with information about the prices of complementary and substitutable licenses during the course of an auction. We therefore plan to hold a single simultaneous multiple round auction for all nationwide, Regional, and EA licenses. We reserve the discretion, however, to auction each of these license groupings (*i.e.*, nationwide, Regional, EA) separately or in different combinations (*e.g.*, nationwide and Regional together) if there are administrative reasons for doing so.

b. ***Bid Increments and Tie Bids***

(1) Proposal

222. A minimum bid increment is the amount or percentage by which a bid must be raised above the previous round's high bid in order to be accepted as a valid bid in the current bidding round.[425] The application of a minimum bid increment speeds the progress of the auction and, along with activity and stopping rules, helps to ensure that the auction closes within a reasonable period of time.[426]

223. In the *Third Notice*, we proposed to start the 220 MHz auctions with relatively large minimum bid increments, and to adjust the increments as bidding activity warrants. We stated that it was important when simultaneous multiple round bidding is used, in establishing the amount of the minimum bid increment, to express such an increment as both a percentage and fixed-dollar amount. This ensures a timely completion of the auction even if bidding begins at a very low dollar amount. Accordingly, we suggested a minimum bid increment of five percent of the high bid in a previous round, or $0.01 per MHz-pop, whichever is greater. [427] We also proposed to retain the discretion to vary the minimum bid increments for individual licenses or

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[424] SMR Comments at 19 n.20.

[425] *See, e.g., Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2369 (para. 124).

[426] *Id.*

[427] The number of ``MHz-pops," or bidding units, is calculated by multiplying the population of the license service area by the amount of spectrum authorized by the license. Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, Second Order on Reconsideration and Seventh Report and Order, PR Docket No. 89-553, PP Docket No. 93-253, GN Docket No. 93-252, 11 FCC Rcd 2639, 2672 (para. 80 n.159) (1995) (*Competitive Bidding Seventh Report and Order*).

groups of licenses at any time before or during the course of the auction, based on the number of bidders, bidding activity, and the aggregate high bid amounts. [428]

(2) Comments

224. Parties commenting on this issue support the establishment of a minimum bid increment.[429]

(3) Decision

225. The general guidelines for bid increments will be announced by Public Notice prior to the auction. In the case of a tie bid, we will determine the high bidder by the order in which the bids were received by the Commission. [430]

c. *Stopping Rules*

(1) Proposal

226. In the *Third Notice*, we indicated that, if simultaneous multiple round auctions were used for the Phase II 220 MHz licenses, we preferred using: (1) a simultaneous stopping rule for the nationwide and Regional licenses; and (2) a hybrid stopping rule or a market-by-market closing rule for EA licenses.[431] We proposed to use a simultaneous stopping rule for the EA licenses as well if we determined that a simultaneous stopping rule would be simpler to administer than either a hybrid or a market-by-market stopping rule. Conversely, we proposed using a market-by-market or hybrid stopping rule for the higher value 220 MHz licenses if we concluded that a simultaneous stopping rule is too complex administratively. We proposed announcing by Public Notice before each auction the stopping rule that we would use. In addition, we proposed that if we adopted a simultaneous stopping rule, we would retain the discretion to declare at any point in a simultaneous multiple round auction that the auction would end after one additional round or some other specified number of additional rounds. [432]

(2) Comments

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[428] *Third Notice*, 11 FCC Rcd at 247 (para. 118).

[429] SMR Comments at 20 n.21; AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[430] *See Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2369 (para. 125).

[431] *Third Notice*, 11 FCC Rcd at 248 (para. 120).

[432] *Id*. at 249 (para. 121).

227. The SMR Advisory Group notes that our proposal with regard to stopping rules resembles the procedures used in previous auctions and that it therefore seems appropriate for the 220 MHz auction.[433] No other comments on this issue were received.

(3) Decision

228. We will adopt a simultaneous stopping rule for the Phase II 220 MHz service auction, and elect not to employ a hybrid rule or a market-by-market closing rule. Our experience to date demonstrates that the simultaneous stopping rule balances the interests of administrative efficiency and maximum bidder participation. Under a simultaneous stopping rule, bidding will remain open on all licenses in an auction until bidding stops on every license. We conclude that the substitutability between and among licenses in different geographic areas and the importance of preserving bidders' ability to pursue back-up strategies support the use of a simultaneous stopping rule.

229. The Phase II 220 MHz service auction will close after one round passes in which no new valid bids or proactive activity rule waivers (as discussed below) are submitted. We retain the discretion, however, to keep the auction open even if no new acceptable bids and no proactive waivers are submitted in a single round. In the event that we exercise this discretion, the effect will be the same as if a bidder has submitted a proactive waiver. We also retain the discretion to announce market-by-market closings.

230. We further retain the discretion to declare at any point that the auction will end after some specified number of additional rounds. If this option is exercised, bids will be accepted only on licenses where the high bid has increased in the last three rounds. This will deter bidders from continuing to bid on a few low value licenses solely to delay the closing of the auction. It also will enable the Commission to end the auction when it determines that the benefits of terminating the auction and issuing licenses exceed the likely benefits of continuing to allow bidding.

d. ***Activity Rules***

(1) Proposal

231. In the *Third Notice*, we proposed to employ the Milgrom-Wilson activity rule if simultaneous multiple round auctions were used for the Phase II 220 MHz licenses. [434] We proposed a minimum activity level requiring bidders to be active on at least one-third of the MHz-pops for which they are eligible in Stage I, two-thirds of the MHz-pops for which they are eligible in Stage II, and 100 percent of the MHz-pops for which they are eligible in Stage III. [435] Finally, to avoid the consequences of clerical errors and to compensate for unusual circumstances that

[433] SMR Comments at 20 n.21.

[434] *Third Notice*, 11 FCC Rcd at 249-51 (paras. 122-124).

[435] *Id.* at 250-51 (para. 124).

might delay a bidder's bid preparation or submission on a particular day, we proposed permitting each bidder to receive a certain number of waivers, to be announced by Public Notice. [436]

(2) Comments

232. The SMR Advisory Group supports use of the Milgrom-Wilson activity rule for 220 MHz service auctions.[437] AMTA likewise favors the Commission's adoption of the same type of activity rules that have proven successful in other auctions. [438] In order to increase bidder flexibility, however, NTIA proposes that the activity level for Stage III be reduced from 100 percent to 90 percent.[439]

(3) Decision

233. We will employ the Milgrom-Wilson activity rule in conjunction with the simultaneous stopping rule in a manner similar to that employed in our prior auctions. Unless a waiver is applied, as discussed below, a bidder's eligibility (in terms of bidding units) [440] in the current round is determined by the bidder's activity level and eligibility in the previous round. In the first round, however, eligibility is determined by the bidder's upfront payment.

234. In each round of Stage I, a bidder that wishes to maintain its current eligibility must be active on licenses encompassing at least 60 percent of the activity units for which it currently is eligible. Failure to maintain the requisite activity level will result in a reduction in the amount of activity units upon which a bidder will be eligible to bid in the next round of bidding (unless an activity rule waiver, as defined below, is used). During Stage I, if bidding activity is below the required minimum level, eligibility in the next round will be calculated by multiplying the current round activity by five thirds (5/3). Eligibility for each applicant in the first round of the auction is determined by the amount of the upfront payment received and the licenses identified in its auction application. In each round of Stage II, a bidder that wishes to maintain its current eligibility in the next round is required to be active on at least 80 percent of the activity units for which it is eligible in the current round. During Stage II, if activity is below the required minimum level, eligibility in the next round will be calculated by multiplying the current round activity by five fourths (5/4). In each round of Stage III, a bidder that wishes to maintain its current eligibility must be active on licenses encompassing at least 98 percent of the activity units for which it is eligible in the current round. In Stage III, if activity in the current round is below 98 percent of current eligibility, eligibility in the next round will be calculated by multiplying the current round activity by fifty forty-ninths (50/49).

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[436] *Id.* at 251-52 (paras. 125-126).

[437] SMR Comments at 20 n.21.

[438] AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[439] NTIA Reply Comments at 13-16.

[440] See note 427, *supra*.

235. We believe that initially establishing required activity at these levels will achieve a proper balance between allowing for bidder flexibility and completing the auction within a reasonable time. We agree with NTIA that requiring a 100 percent level of activity in Stage III may inhibit bidder flexibility and be unduly restrictive. In addition, activity levels of 60, 80 and 98 percent are far easier to administer, both for bidders and for the Commission, than the fractional one-third, two-thirds, and 100 percent activity levels. In addition to easing administrative burdens, the increased activity requirement will require bidders to focus their bidding and will contribute to increasing the pace of the auction.

236. As in prior auctions, we will determine the transition from one stage to the next in the Phase II 220 MHz auction based on a variety of measures of bidder activity including, but not limited to, the auction activity level (*i.e.*, the sum of bidding units of those licenses whose high bid increased in the current round, as a percentage of the total bidding units of all licenses in the auction), the percentage of licenses (measured in terms of bidding units) on which there are new bids, the number of new bids, and the percentage increase in revenue. [441] In no case can the auction revert to an earlier stage. The Wireless Telecommunications Bureau will announce when the auction will move from one stage to the next.

237. To avoid the consequences of clerical errors and to compensate for unusual circumstances that might delay a bidder's bid preparation or submission on a particular day, we will provide bidders with five activity rule waivers that may be used in any round during the course of the auction. If a bidder's activity level is below the required activity level, a waiver will be applied automatically. That is, for example, if a bidder fails to submit a bid in a round, and its activity level from any ``standing" high bid(s) (*i.e.*, high bid(s) at the end of the bid withdrawal period in the previous round) falls below its required activity level, the bidder will receive an automatic waiver. A waiver will preserve current eligibility in the next round, but cannot be used to correct an error in the bid amount. An activity rule waiver applies to an entire round of bidding and not to a particular nationwide, Regional, or EA service area.

238. Bidders may override the automatic waiver mechanism when they place a bid, if they wish to reduce their bidding eligibility. If a bidder overrides the automatic waiver mechanism, its eligibility will be reduced permanently (according to the formulas specified above), and it will not be permitted to regain its bidding eligibility from a previous round. If an automatic waiver is applied in a round where there are no valid bids, the auction will end. Bidders will have the option to proactively enter an activity rule waiver during the bid submission period. A proactive waiver, as distinguished from an automatic waiver, is one requested by the bidder. If a bidder submits a proactive waiver in a round in which no other bidding activity occurs, the auction will remain open.

e. *Duration of Bidding Rounds*

(1) Proposal

[441] *See* ``Auction of Broadband Personal Communications Services (D, E and F Blocks)," *Public Notice*, DA 96-1026 (rel. June 25, 1996).

239. In the *Third Notice*, we proposed that if simultaneous multiple round auctions are used for the Phase II 220 MHz licenses, we would use the same or similar procedures regarding duration of bidding rounds as those used in previous simultaneous multiple round auctions. [442]

(2) Comments

240. No comments were received on this issue.

(3) Decision

241. In simultaneous multiple round auctions, we recognize that bidders may need a significant amount of time to develop their bidding plans and evaluate back-up strategies. The Wireless Telecommunications Bureau will announce the duration of and intervals between bidding rounds, either by Public Notice prior to the auction or by announcement during the auction.

[442] *Third Notice*, 11 FCC Rcd at 252-53 (para. 129).

3. Procedural and Payment Issues

a. *Pre-Auction Application Procedures*

(1) Proposal

242. In the *Third Notice*, we proposed to follow the procedural and payment rules established in the *Competitive Bidding Second Report and Order*, with certain minor modifications designed to address the particular characteristics of the 220 MHz service. [443] In addition, we proposed to adopt general procedural and processing rules based on the rules governing PCS in Part 24 of our rules. [444]

(2) Comments

243. The SMR Advisory Group and AMTA support this approach. [445]

(3) Decision

244. We will generally use the application and payment procedures set forth in Part 1 of our rules, with certain modifications, for the Phase II 220 MHz service. A Public Notice announcing the auction will specify the licenses to be auctioned and the time and place of the auction in the event that mutually exclusive applications are filed. The Public Notice will also specify the method of competitive bidding to be used, applicable bid submission procedures, stopping rules, activity rules, the short-form filing deadline, and the upfront payment amounts.

245. Prior to the auction, the Wireless Telecommunications Bureau will also provide information about how to perform due diligence regarding incumbent licensees for applicants planning to participate in the auction. We encourage all potential bidders to do their own independent investigation regarding existing licensees' operations in each license area on which they intend to bid in order to maximize their success in the auction.

246. We will adopt the same bidding procedures used for MTA-based PCS licenses. Under these procedures, bidders will be able to submit bids from remote locations using special bidding software, or by telephone. We have established a schedule of fees that auction participants will be assessed for certain on-line computer services, bidding software, and Bidder Information Packages. [446] In addition, bidders will be permitted to bid electronically only if they

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[443] *Id.* at 253 (para. 131).

[444] *Id.* at 253 (para. 130).

[445] SMR Comments at 20 n.21; AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[446] *See* Assessment and Collection of Charges for FCC Proprietary Remote Software Packages, On-Line Communications Services Charges, and Bidder's Information Packages in Connection With Auctionable Services, Report and Order, WT Docket No. 95-69, 10 FCC Rcd 10,769 (1995). Specifically, the

have filed a short-form application electronically. Bidders who file their short-form applications manually may bid only telephonically. When submitting bids telephonically, bidders may utilize the Internet to learn the round-by-round results of the auction. Numerous online services provide Internet access at a reasonable cost. Bidders also may, at negligible cost, use a computerized bulletin board service, accessible by telephone lines, from which auction results can be downloaded to a personal computer.[447] The Commission intends to hold a seminar for prospective bidders to acquaint them with these bidding procedures.

b. *Short-Form Applications*

(1) Proposal

247. In the *Competitive Bidding Second Report and Order*, we determined that we should require only a short-form application prior to the auction.[448] In the *Third Notice*, we proposed to require applicants for nationwide, Regional, and EA 220 MHz licenses to file an initial short-form application (FCC Form 175) in order to qualify for competitive bidding.[449]

(2) Comments

248. All comments received on this issue support our proposal.[450]

(3) Decision

249. Section 309(j)(5) provides that no party may participate in an auction ``unless such bidder submits such information and assurances as the Commission may require to demonstrate that such bidder's application is acceptable for filing."[451] We adopt our proposal to require all applicants for Phase II 220 MHz licenses to submit FCC Form 175 in order to participate in the auction. As we indicated in the *Competitive Bidding Second Report and Order*, if we receive only one application that is acceptable for filing for a particular license, and thus there is no

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Commission has adopted a fee schedule for obtaining access to the Commission's database and remote bidding software packages. The remote access bidding software package is available for $175.00. The charge for on-line remote access via a 900 number is $2.30 per minute. Bidders also may bid via telephone for no charge. There is no charge for the first Bidder Information Package requested, and a $16.00 fee for each additional package that is subsequently requested by the same party.

[447] *Id.* at 10,770 (para. 3). *See also MMDS Report and Order*, 10 FCC Rcd at 9640 (para. 107).

[448] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2376 (para. 165).

[449] *Third Notice*, 11 FCC Rcd at 254 (para. 132).

[450] SMR Comments at 20 n.21; AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[451] 47 U.S.C. § 309(j)(5).

mutual exclusivity, we will issue a Public Notice cancelling the auction for that license and establish a date for the filing of a long-form application. [452]

c. *Short-Form Application Amendments and Modifications*

(1) Proposal

250. In the *Third Notice,* to encourage maximum bidder participation in 220 MHz auctions, we proposed to provide applicants whose short-form applications are substantially complete, but contain minor errors or defects, the opportunity to correct their applications prior to the auction.[453] We proposed using procedures similar to those employed in previous auctions.[454]

(2) Comments

251. All comments received support this approach. [455]

(3) Decision

252. We will apply the provisions set forth in Part 1 of our rules governing amendments to and modifications of short-form applications to the 220 MHz service. [456] Upon reviewing the short-form applications, we will issue a Public Notice listing all defective applications. Applicants with minor defects in their applications will be given an opportunity to cure them and resubmit a corrected version.

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[452] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2376 (para. 165).

[453] *Third Notice*, 11 FCC Rcd at 254 (para. 134).

[454] *Id*.; *see also* Section 1.2105(b)(2) of the Commission's Rules, 47 C.F.R. § 1.2105(b)(2) (modification and dismissal of Form 175).

[455] SMR Comments at 20 n.21; AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[456] *See* Section 1.2105 of the Commission's Rules, 47 C.F.R. § 1.2105.

d. *Upfront Payments*

(1) Proposal

253. In the *Third Notice*, we proposed to require 220 MHz auction participants to tender in advance to the Commission an upfront payment of $2,500 or $0.02 per MHz-pop, whichever is greater, for the largest combination of MHz-pops (bidding units) on which they anticipate bidding in any round. This upfront payment would define the upper bound of MHz-pops on which a bidder would be permitted to bid in any round.

(2) Comments

254. All responsive commenters support the Commission's proposed upfront payment formula.[457] Comtech, however, points out that the *Third Notice* is silent on whether all EA or Regional licenses in the same geographic area should command the same MHz-pop upfront payment.[458] In the rules for the 900 MHz SMR service, Comtech states, different upfront payment amounts were required for different channel blocks in the same geographic area depending upon whether the channels were licensed to an incumbent user. Comtech does not believe this is a sound approach. Instead, Comtech asserts, the same upfront payment amount should be required for all licenses for the same geographic area in order to maximize a bidder's flexibility during the auction.[459]

(3) Decision

255. In the *Competitive Bidding Second Report and Order*,we indicated that upfront payments should equal approximately five percent of the expected amounts of winning bids. [460] In general the license values in previous auctions have exceeded expectations. We also believe, based upon defaults occurring in the broadband PCS, IVDS, and MDS auctions, that, to guard against default, there is a need to obtain a higher payment upfront than the one proposed. We delegate to the Wireless Telecommunications Bureau the authority and discretion to determine an appropriate upfront payment for each license being auctioned, taking into account such factors as the population in each geographic license area, and the value of similar spectrum. We expect that the Bureau will follow the guidelines laid out in the *Competitive Bidding Second Report and Order* and establish upfront payments equal to approximately five percent of the expected amounts of winning bids for the various licenses. [461] In no event will the upfront payment for any license be less than $2,500, the minimum suggested in the *Competitive Bidding Second Report*

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[457] SMR Comments at 20 n.21; AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[458] Comtech Comments at 15-16.

[459] *Id.*

[460] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2379 (para. 177).

[461] *Id*. at 2378-79 (paras. 171-177).

and Order and the *Third Notice*, and the Bureau will retain the flexibility to modify this minimum if experience demonstrates that a higher amount would better deter speculative filings.

256. Prior to the 220 MHz auction, the Wireless Telecommunications Bureau will issue a Public Notice listing the upfront payment amounts required for the licenses to be auctioned. The number of bidding units determines the amount of upfront payment for each license. A prospective bidder must submit an upfront payment equal to the largest combination of bidding units on which the bidder anticipates being active in any single round. Although a bidder may file applications for every license being auctioned, the total upfront payment submitted by each applicant will determine the combinations on which the applicant will actually be permitted to be active in any single round of bidding. Upfront payments will be due by a date specified by Public Notice, but generally no later than 14 days before the scheduled auction.

e. *Down Payments and Full Payments*

(1) Proposal

257. In the *Third Notice*, we proposed to require the winning bidders for 220 MHz licenses (with the exception of winners that are small businesses) to supplement their upfront payments with a down payment sufficient to bring their total deposits up to 20 percent of their winning bid(s).[462]

(2) Comments

258. All responsive commenters support this proposal. [463]

(3) Decision

259. We will require all winning bidders, including small businesses and very small businesses,[464] to supplement their upfront payments with a down payment sufficient to bring their total deposits up to 20 percent of their winning bid(s). If the upfront payment already tendered by a winning bidder, after deducting any bid withdrawal and default payments due, amounts to 20 percent of its winning bids, no additional deposit will be required. If the upfront payment amount on deposit is greater than 20 percent of the winning bid amount after deducting any bid withdrawal and default payments due, the additional monies will be refunded.

260. We will require winning bidders, except small businesses and very small businesses, to submit the required down payment by cashier's check or wire transfer to our lock-box bank

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[462] *Third Notice*, 11 FCC Rcd at 256-57 (para. 137).

[463] SMR Comments at 20 n.21; AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[464] See paras. 289-295, *infra*.

within ten business days following release of a Public Notice announcing the close of bidding. [465] All auction winners, except those eligible for an installment payment plan, will be required to make full payment of the balance of their winning bids within ten business days following release of a Public Notice mailed to the successful applicant that the Commission is prepared to award the license. The Commission generally will grant uncontested licenses within ten business days after receiving full payment.

f. *Bid Withdrawal, Default, and Disqualification*

(1) Proposal

261. In the *Third Notice*, we proposed to adopt bid withdrawal, default, and disqualification rules for the Phase II 220 MHz service based on the procedures established in our general competitive bidding rules. [466] In the *Competitive Bidding Second Report and Order*,we noted that it is critically important to the success of our competitive bidding process that potential bidders understand that there will be a substantial monetary assessment imposed if they withdraw a high bid, are found not to be qualified to hold licenses, or default on payment of a balance due. [467]

(2) Comments

262. All commenters who addressed this issue agree with this approach. [468]

(3) Decision

263. We will apply the bid withdrawal, default, and disqualification provisions found in Part 1 of our rules to the 220 MHz auction. Any bidder that withdraws a high bid before the Commission declares bidding closed will be required to reimburse the Commission in the amount of the difference between its high bid and the amount of the ``winning bid'' the next time the license is offered, if this subsequent ``winning bid'' is lower than the withdrawn bid. [469] If a license is re-offered by auction, the ``winning bid'' refers to the high bid in the auction in which the license is re-offered. If a license is re-offered in the same auction, the ``winning bid'' refers to the high bid amount made subsequent to the withdrawal in that auction. If a license which is the subject of withdrawal or default is offered to the highest losing bidders in the initial auction, as opposed to

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[465] See para. 305, *infra*, regarding down payment deadlines for small businesses and very small businesses.

[466] *Third Notice*, 11 FCC Rcd at 257-59 (paras. 139-140).

[467] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2373-74 (para. 151).

[468] SMR Comments at 20 n.21; AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[469] Section 1.2104(g)(1) of the Commission's Rules, 47 C.F.R. § 1.2104(g)(1).

being re-auctioned, the ``winning bid" refers to the bid of the highest bidder who accepts the offer.[470]

264. After bidding closes, we will assess a defaulting auction winner an additional payment of three percent of the subsequent winning bid or three percent of the amount of the defaulting party's high bid, whichever is less.[471] This additional payment is designed to encourage bidders who wish to withdraw their bids to do so before bidding ceases. In the unlikely event that there is more than one bid withdrawal on the same license, we will hold each withdrawing bidder responsible for the difference between its withdrawn bid and the amount of the winning bid the next time the license is offered for auction.

265. If a bidder has withdrawn a bid or defaulted, but the amount of the default payment cannot yet be determined, the bidder will be required to make a deposit of up to 20 percent of the amount bid on the license. When it becomes possible to calculate and assess the default payment, any excess deposit will be refunded. Upfront payments will be applied to such deposits, and to bid withdrawal and default assessments due, before being applied toward the bidder's down payment on licenses the bidder has won and seeks to acquire.

266. If a default or disqualification involves gross misconduct, misrepresentation or bad faith by an applicant, the Commission may declare the applicant and its principals ineligible to bid in future auctions, and may take any other action that it deems necessary, including institution of proceedings to revoke any existing licenses held by the applicant.

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[470] We recently addressed the issue of how our bid withdrawal provisions apply to bids that are mistakenly placed and withdrawn in a decision involving the 900 MHz SMR and broadband PCS C block auctions. *See* Atlanta Trunking Associates, Inc. and MAP Wireless L.L.C. Request to Waive Bid Withdrawal Payment Provisions, FCC 96-203, Order (released May 3, 1996) (summarized in 61 Fed. Reg. 25,807 (May 23, 1996)), *recon. pending*.

[471] Section 1.2104(g)(2) of the Commission's Rules, 47 C.F.R. § 1.2104(g)(2).

g. *Long-Form Applications*

(1) Proposal

267. In the *Competitive Bidding Second Report and Order*, we established rules that require a winning bidder to submit a long-form application.[472] In the *Third Notice*, we proposed to apply these same procedures to the 220 MHz auction.[473]

(2) Comments

268. No comments were received regarding long-form applications.

(3) Decision

269. We will apply our Part 1 long-form procedures to the 220 MHz auction, as we proposed. A long-form application filed on FCC Form 600 must be filed by a date to be specified by Public Notice, generally within ten business days after the close of bidding. After the winning bidder's down payment and long-form application are received, we will review the application to determine if it is acceptable for filing. Upon acceptance for filing, we will issue a Public Notice announcing this fact, triggering the filing window for petitions to deny. If all petitions to deny are dismissed or denied, the license(s) will be granted to the auction winner.

h. *Petitions to Deny and Limitations on Settlements*

(1) Proposal

270. In the *Third Notice*, we proposed to adopt petition to deny procedures based on former Section 22.30 of our rules, which provided for procedures regarding oppositions to applications.[474] In addition, we proposed to adopt rules similar to former Section 22.943 of our rules, which provided for procedures regarding the withdrawal of applications, [475] to prevent the filing of speculative applications and pleadings designed to extract money from sincere 220 MHz license applicants.[476]

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[472] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2383 (para. 199). *See also* Sections 1.2107(c) and 1.2107(d) of the Commission's Rules, 47 C.F.R. §§ 1.2107(c) and 1.2107(d).

[473] *Third Notice*, 11 FCC Rcd at 259-60 (para. 142).

[474] This provision was slightly modified and recodified as Section 22.130 of the Commission's Rules. *See Part 22 Rewrite Order*, 9 FCC Rcd 6599 (citing 47 C.F.R. § 22.130). The text of this provision is identical to that of the Part 90 provision 47 C.F.R. § 90.163, which is referenced in the rule adopted herein.

[475] This provision was recently amended and recodified as Section 22.129 of the Commission's Rules. *See Part 22 Rewrite Order*, 9 FCC Rcd at 6598.

[476] *Third Notice*, 11 FCC Rcd at 260 (para. 143).

(2) Comments

271. No comments on this issue were received.

(3) Decision

272. We adopt our proposals regarding petitions to deny and limitations on settlements. A party filing a petition to deny against a 220 MHz license application will be required to demonstrate standing and meet all other applicable filing requirements. The restrictions in Section 90.162 (which replaced Section 22.943 for purposes of CMRS) [477] were established to prevent the filing of speculative applications and pleadings (or threats of the same) designed to extract money from 220 MHz license applicants. Thus, we will limit the consideration that an individual or entity is permitted to receive for agreeing to withdraw an application or a petition to deny to the legitimate and prudent expenses of the withdrawing applicant or petitioner. [478]

4. Regulatory Safeguards

a. *Anti-Collusion Rules*

(1) Proposal

273. In the *Competitive Bidding Second Report and Order*, as modified by the *Competitive Bidding Reconsideration Order*, we adopted special rules prohibiting collusive conduct in the context of competitive bidding. [479] In the *Third Notice*, we proposed to apply these rules to the Phase II 220 MHz service. [480] Generally, our rules limit parties who have applied for licenses in the same geographic license areas from agreeing to bidding strategies that divide the market according to their strategic interests and/or disadvantage other bidders.

[477] *See also* Section 1.53 of the Commission's Rules, 47 C.F.R. § 1.53.

[478] *But see* Section 1.2105(c) of the Commission's Rules, 47 C.F.R. § 1.2105(c).

[479] *Competitive Bidding Second Report and Order* at 2386-88 (paras. 221-26); Implementation of Section 309(j) of the Communications Act--Competitive Bidding, Second Memorandum Opinion and Order, PP Docket No. 93-253, 9 FCC Rcd 7245, 7253-54 (paras. 48-53) (1994); Erratum, Mimeo No. 50228 (released Oct. 19, 1994).

[480] *Third Notice*, 11 FCC Rcd at 262-63 (paras. 147-149).

(2) Comments

274. The SMR Advisory Group supports our proposed anti-collusion rules for the Phase II 220 MHz service.[481] No other commenters addressed this issue.

(3) Decision

275. We will require Phase II 220 MHz service applicants to comply with the reporting requirements and rules prohibiting collusion embodied in Sections 1.2105 and 1.2107 of our rules.[482] We also note that even where the applicant discloses parties with whom it has reached an agreement on the short-form application, thereby permitting discussions with those parties, the applicant nevertheless is subject to existing antitrust laws. [483] Moreover, where specific instances of collusion in the competitive bidding process are alleged during the petition to deny process, we may conduct an investigation or refer such complaints to the United States Department of Justice for investigation. Bidders who are found to have violated the antitrust laws, in addition to any penalties they incur under the antitrust laws, or who are found to have violated the Commission's rules in connection with their participation in the auction process, may be subject to a variety of sanctions, including forfeiture of their down payment or their full bid amount, revocation of their license(s), and possible prohibition from participating in future auctions. [484]

b. ***Transfer Disclosure Requirements***

(1) Proposal

276. In Section 309(j)(4)(E) of the Communications Act, Congress directed the Commission to ``require such transfer disclosures and anti-trafficking restrictions and payment schedules as may be necessary to prevent unjust enrichment as a result of the methods employed to issue licenses and permits."[485] In the *Competitive Bidding Second Report and Order*, the Commission adopted safeguards designed to ensure that the requirements of Section 309(j)(4)(E) are satisfied, including a transfer disclosure requirement for licenses obtained through the competitive bidding process.[486] In the *Third Notice*, we proposed to apply the transfer disclosure

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[481] SMR Comments at 20 n.21.

[482] *See* Sections 1.2105(c) and 1.2107 of the Commission's Rules, 47 C.F.R. §§ 1.2105(c), 1.2107.

[483] *Competitive Bidding Fourth Memorandum Opinion and Order*, 9 FCC Rcd at 6869 n.134 (para. 59).

[484] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2388 (para. 226).

[485] 47 U.S.C. § 309(j)(4)(E).

[486] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2384-88, 2394-95 (paras. 210-226, 258-265). *See also* Section 1.2111(a) of the Commission's Rules, 47 C.F.R. § 1.2111(a).

requirements contained in Section 1.2111(a) of our rules to all Phase II 220 MHz licenses obtained through the competitive bidding process. [487]

(2) Comments

277. The SMR Advisory Group supports our proposed transfer disclosure provisions. [488] No other commenters addressed this issue.

(3) Decision

278. We will apply Section 1.2111(a) to all Phase II 220 MHz licenses obtained through the competitive bidding process. We have also adopted specific rules that will apply solely to small business licensees, as discussed in subsequent sections. We will give particular scrutiny to auction winners who have not yet begun commercial service and who seek approval for a transfer of control or assignment of their licenses within three years after the initial license grant, so that we may determine if any unforeseen problems relating to unjust enrichment have occurred.

5. Treatment of Designated Entities

a. *Overview and Objectives*

279. Section 309(j) of the Communications Act provides that, in developing competitive bidding procedures, the Commission shall, *inter alia*, ``promot[e] economic opportunity and competition and ensur[e] that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women." [489] Small businesses, rural telephone companies and businesses owned by minorities and/or women are collectively referred to as ``designated entities."[490] Section 309(j)(4)(A) provides that in order to promote such objectives, the Commission shall ``consider alternative payment schedules and methods of calculation, including lump sums or guaranteed installment payments, with or without royalty payments, or other schedules or methods . . . and combinations of such schedules and methods."[491] Section 309(j)(4)(D) also requires the Commission to ``ensure that small businesses,

[487] *Third Notice*, 11 FCC Rcd at 260-61 (para. 145).

[488] SMR Comments at 20 n.21.

[489] 47 U.S.C. § 309(j)(3)(B).

[490] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2388 (para. 227).

[491] 47 U.S.C. § 309(j)(4)(A).

rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services." [492]

280. To meet the statutory objective of providing opportunities for designated entities, we have employed a wide range of special provisions and eligibility criteria in other spectrum-based services.[493] These measures have been designed to help designated entities overcome barriers to accessing capital and increase the likelihood that designated entities that win licenses in the auctions become strong competitors in the provision of wireless services. In the *Third Notice*, we sought comment on the type of designated entity provisions that should be incorporated into our competitive bidding procedures for the Phase II 220 MHz service. [494]

b. *Small Businesses*

(1) Proposal

281. In the *Third Notice*, we asked commenters to address: (1) the capital requirements of the 220 MHz service in comparison with other wireless services; (2) the degree to which designated entities currently provide 220 MHz service; and (3) whether designated entities and small businesses in particular face barriers to entry into the 220 MHz service based on lack of access to capital or other factors. [495] We tentatively concluded that it was appropriate to establish special provisions in our 220 MHz rules to promote and facilitate participation by small businesses.[496]

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[492] *Id*. at § 309(j)(4)(D).

[493] For instance, we determined that minority- and women-owned businesses in the nationwide narrowband PCS auction would receive a 25 percent bidding credit on certain channels. *Competitive Bidding Third Report and Order*, 9 FCC Rcd at 2970 (para. 72). In the regional narrowband PCS auction women- and minority-owned businesses were eligible for a 40 percent bidding credit on certain channels and small businesses were eligible for installment payments on all channels. *Id*. at 2978-79 (para. 87); Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93-253, Third Memorandum Opinion and Order and Further Notice of Proposed Rule Making, 10 FCC Rcd 175, 201 (para. 58) (1994) (*Competitive Bidding Third Memorandum Opinion and Order and Further Notice*). After the Supreme Court's decision in Adarand Constructors, Inc. v. Peña, 115 S.Ct. 2097 (1995), discussed at para. 284, *infra*, we amended our rules for various auctions, making them race- and gender-neutral and extending certain special provisions to small businesses. We took this approach to the broadband PCS C block and F block rules, for example. Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93-253, Sixth Report and Order, 11 FCC Rcd 136, 161 (para. 47) (1995) (*Competitive Bidding Sixth Report and Order)*; Amendment of Parts 20 and 24 of the Commission's Rules - Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, WT Docket No. 96-59, Report and Order, 11 FCC Rcd 7824, 7834 (para. 18) (1996) (*D, E and F Block Report and Order*). We believe that minority- and women-owned entities will benefit from these provisions.

[494] *Third Notice*, 11 FCC Rcd at 267 (para. 159).

[495] *Id*. at 266-67 (paras. 158-59).

[496] *Id*. at 267 (para. 160).

(2) Comments

282. AMTA indicates its support for the eligibility criteria proposed as part of our designated entity provisions.[497] In addition, AMTA states that our proposed bidding credits are reasonable in light of our desire to encourage small business participation in the 220 MHz service.[498]

(3) Decision

283. Congress specifically cited the needs of small businesses in enacting Section 309(j), directing the Commission to promote economic opportunities for small businesses. The House Report states that the statutory provisions related to installment payments were intended to promote economic opportunity by ensuring that competitive bidding does not inadvertently favor incumbents with ``deep pockets" over new companies or start-ups. [499] While a number of small businesses are successfully participating in the 220 MHz industry, we conclude that it is appropriate to establish special provisions in our 220 MHz service rules to facilitate competitive bidding by small businesses. Construction of a 220 MHz system may require a significant amount of capital. Moreover, Congress made specific findings with regard to access to capital in the Small Business Credit and Business Opportunity Enhancement Act of 1992, finding that ``small business concerns which represent higher degrees of risk in financial markets than do large businesses, are experiencing increased difficulties in obtaining credit." [500] For these reasons, we believe that small businesses applying for 220 MHz licenses should be entitled to some type of bidding credit and should be allowed to pay their bids in installments.

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[497] AMTA Comments at 21-22.

[498] *Id*.

[499] *See* H.R. Rep. No. 111, 103d Cong., First Sess. (1993) at 255.

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

c. *Minority- and Women-Owned Businesses*

(1) Proposal

284. In *Adarand Constructors, Inc. v. Peña*,[501] the Supreme Court held that ``all racial classifications . . . must be analyzed by a reviewing court under strict scrutiny." [502] As a result of the *Adarand* decision, any federal program that makes distinctions on the basis of race must serve a compelling governmental interest and must be narrowly tailored to serve that interest in order to pass constitutional muster.[503] Gender-based programs must satisfy intermediate scrutiny. [504] Under this standard, there must be an ``exceedingly persuasive justification" for a gender-based government provision and such a provision is constitutional if it serves an important governmental objective and is substantially related to achievement of that objective. [505] In the *Third Notice*, we emphasized that we had not concluded that race- and gender-based measures are unconstitutional or otherwise inappropriate for spectrum auctions we will hold in the future. At a minimum, however, we stated that we must build a thorough factual record concerning the participation of minorities and women in spectrum-based services to support race- and gender-based measures. We expressed our belief that a sufficient factual record does not exist with respect to spectrum-based services generally or the 220 MHz service specifically to sustain such measures under strict scrutiny.[506] We also indicated our uncertainty regarding the sufficiency of the record to sustain gender-based preferences under intermediate scrutiny. [507] In light of these considerations, we proposed to limit designated entity provisions for the 220 MHz service to small businesses. [508]

285. We requested comment, however, on the possibility that in addition to small business provisions, separate provisions for women- and minority-owned entities should be adopted for the 220 MHz service. We asked commenters to discuss whether the capital requirements of the 220 MHz service pose a barrier to entry by minorities and women and whether assisting women and minorities to overcome such a barrier, if it exists, would constitute a compelling government interest. In particular, we sought comment on the actual cost of acquisition, construction and operation of 220 MHz systems, and the proportion of existing 220 MHz businesses that are owned by women or minorities. We also sought comment on the analytical framework for

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[501] 115 S. Ct. 2097 (1995).

[502] *Id*. at 2113.

[503] *Id.*

[504] United States v. Virginia, 116 S. Ct. 2263 (1996).

[505] *Id*. at 2275. *See* also J.E.B. v. Alabama ex. rel T.B., 511 U.S. 127 (1994); Mississippi Univ. for Women v. Hogan, 458 U.S. 718 (1982).

[506] *Third Notice*, 11 FCC Rcd at 266 (para. 158).

[507] *Id*.

[508] *Id.*

establishing a history of past discrimination in the 220 MHz service industry and urged parties to submit evidence (statistical, documentary, anecdotal or otherwise) about patterns or cases of discrimination in this and related communications services. We sought comment on whether, assuming that a compelling governmental interest is established, separate provisions for women and minorities are necessary to further this interest and whether such provisions can be narrowly tailored to satisfy the standard of judicial review. [509]

(2) Comments

286. AMTA agrees with the Commission's determination that a sufficient record has not been developed to indicate that race-based measures would be sustained under the strict scrutiny standard adopted by the Supreme Court in *Adarand.*[510] AMTA is not aware of any compelling governmental interest that would be served by increased participation by women or minorities in the provision of 220 MHz service. [511] AMTA also is unable to provide the Commission with any particular evidence, other than general societal trends, linking past discrimination with either 220 MHz service specifically or communications services in general. [512] Comtech's comments generally concur with AMTA's position. [513] Comtech believes that the best way to promote opportunities for women and minorities is to make special provisions, such as bidding credits, reduced down payments, and installment payments, available to small businesses on all 220 MHz channel blocks.[514]

(3) Decision

287. In the Phase II 220 MHz service, as in other auctionable services, we are committed to meeting the statutory objectives of promoting economic opportunity and competition, of avoiding excessive concentrations of licenses, and of ensuring access to new and innovative technologies by disseminating licenses among a wide variety of applicants, including businesses owned by members of minority groups and women. Commenters did not cite any evidence of specific discrimination for purposes of creating a record sufficient to support special provisions for minorities under the strict scrutiny standard. *Adarand* makes clear that only a record of discrimination against a particular racial group would support remedial measures designed to help

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[509] *Id.* at 267 (para. 159).

[510] AMTA Comments at 21. *See also* U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[511] AMTA Comments at 21.

[512] *Id.* at 21-22.

[513] Comtech Comments at 16.

[514] *Id.*

that group. A record of discrimination against minorities in general may not be sufficient. [515] We are also concerned that our record would not support gender-based provisions under intermediate scrutiny.[516] Balancing our obligation to provide opportunities for women- and minority-owned businesses to participate in spectrum-based services against our statutory duties to facilitate the rapid delivery of new services to the American consumer and promote efficient use of the spectrum, we conclude that we should not delay the Phase II 220 MHz service auction for the amount of time it would take to adduce sufficient evidence to support race- and gender-based provisions. Moreover, we believe that most minority- and women-owned businesses will be able to take advantage of the specific provisions that we adopt for small businesses, as discussed *infra*.[517]

288. We note, too, that we have initiated a separate inquiry to gather information regarding barriers to entry faced by minority- and women-owned firms as well as small businesses.[518] We will also continue to track the rate of participation in our auctions by minority- and women-owned firms and evaluate this information with other data gathered with the goal of developing a record to support race- and gender-based provisions that will satisfy judicial scrutiny. If a sufficient record can be adduced, we will consider race- and gender-based provisions for future auctions. Finally, we are looking for other ways to reduce barriers to entry for women- and minority-owned businesses, such as extending partitioning and disaggregation of licenses to entities that do not currently qualify, an adjustment to our rules that may be helpful to small businesses generally.[519]

d. *Small Business Definition*

(1) Proposal

289. In the *Third Notice*, we sought comment regarding how to define small business for purposes of eligibility for bidding credits, installment payments, and reduced down payments. [520] For companies wanting to bid on nationwide and Regional licenses, we proposed to define small businesses as those entities with less than $15 million in average annual gross revenues for the preceding three years. For companies bidding for EA licenses, we proposed to define small businesses as those entities with less than $6 million in average annual gross revenues for the

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[515] *Adarand*, 115 S. Ct. at 2113.

[516] Telephone Electronics Corp. v. FCC, No. 95-1015, (D.C. Cir. Mar. 15, 1995) (order granting stay); United States v. Virginia, 116 S. Ct. at 2275.

[517] See paras. 298, 301, *infra*.

[518] Section 257 Proceeding to Identify and Eliminate Market Entry Barriers for Small Businesses, Notice of Inquiry, GN Docket No. 96-113, 11 FCC Rcd 6280 (1996).

[519] See paras. 306-311, *infra*.

[520] *Third Notice*, 11 FCC Rcd at 271 (para. 170).

preceding three years.[521] We sought comment on whether different definitions of small business should be used for nationwide, Regional and EA licenses. We also sought comment regarding the treatment of gross revenues of affiliates and certain investors as it may affect the calculation of a small business's gross revenues and income.[522]

(2) Comments

290. AMTA and the SMR Advisory Group support our proposed two-tiered eligibility criteria for small businesses.[523] Metricom contends that because of the high costs associated with the build-out and operation of a Regional or nationwide system, the Commission should define small business for the Phase II 220 MHz nationwide and Regional licenses as an entity with $25 million or less in average gross revenues for the preceding three years, rather than $15 million or less.[524] Metricom also asserts that the Commission should modify its proposed attribution rules for small businesses so that small, publicly traded companies with widely dispersed voting power would not be ineligible.[525] Comtech believes that for purposes of determining whether an entity qualifies as a small business, revenues and assets of investors holding more than 25 percent of an applicant's voting stock and revenues and assets of all affiliates should be attributable to the applicant.[526]

(3) Decision

291. While the nationwide and Regional Phase II 220 MHz licenses will have higher build-out and operational costs than will the EA licenses, we believe, based upon our prior auction experience -- particularly in the 900 MHz SMR auction -- that it is likely that bidders will attempt to aggregate licenses across regions or EAs to establish their markets. Thus, for example, bidders may elect to aggregate EAs to create a regional market, rather than bid for the Regional license itself. In order to ensure the meaningful participation of small business entities in the auction, therefore, we have decided to adopt a two-tiered definition of small business with thresholds applicable across all three categories of license. This approach will give qualifying small businesses flexibility to bid for a Regional license or, on the other hand, elect to bid for several EAs, without having to choose which type of license to bid for prior to the start of the auction. For purposes of bidding on the nationwide, Regional, and EA licenses, therefore, we will define: (1) a very small business as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the three preceding

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[521] *Id.*

[522] *Id.* at 272 (para. 173).

[523] AMTA Comments at 22; SMR Comments at 20.

[524] Metricom Comments at 13-14.

[525] *Id.* at 11.

[526] Comtech Comments at 18.

years; and (2) a small business as an entity that, together with affiliates and controlling principals, has average gross revenues that are not more than $15 million for the three preceding years. Bidding credits will be determined, as discussed *infra*, based upon this two-tiered approach.

292. We disagree with Metricom that we should increase the gross revenues threshold amount to $25 million, because, based upon our experience in the 900 MHz SMR auction, such an increase would be far too inclusive. In the 900 MHz SMR auction, we established small business definitions of $15 million and $3 million. Of the 128 applicants to participate in the auction, 101 qualified for the small business bidding credits. We believe the cost of building out a 220 MHz system most closely resembles the cost of a 900 MHz SMR system, that our experience in conducting the 900 MHz SMR auction indicates that our definitions of eligible small businesses were appropriate, and that it would substantially dilute the value of the small business preferences to increase the size of small businesses eligible for special bidding provisions. Therefore, we decline to adopt the Metricom proposal. We also conclude that, because the build-out costs of 220 MHz systems are similar to the build-out costs of 900 MHz SMR systems, it is appropriate to establish a definition of ``very small business" for the 220 MHz service that is consistent with the definition we adopted for the 900 MHz SMR service. We therefore decline to adopt a definition based on the $6 million we originally proposed to use for entities bidding on EA licenses.

293. For purposes of our Phase II 220 MHz small business definition, we will consider the gross revenues of the small business applicant, its affiliates, and certain investors in the applicant. Specifically, for purposes of determining small business status, we will attribute the gross revenues of all controlling principals in the small business applicant as well as the gross revenues of affiliates of the applicant. This is a much simpler approach than we utilized in broadband PCS since it does not require a ``control group." [527] We believe this simpler approach is appropriate because we do not anticipate that 220 MHz licensees will have the same sort of capital requirements as broadband PCS licensees. We also choose not to impose specific equity requirements on the controlling principals of entities that meet our small business definition. We will still require, however, that in order for an applicant to qualify as a small business, qualifying small business principals must maintain ``control" of the applicant, including both *de facto* and *de jure* control. For this purpose, we will borrow from certain SBA rules that are used to determine when a firm should be deemed an affiliate of a small business. [528] Typically, *de jure* control is evidenced by ownership of 50.1 percent of an entity's voting stock. *De facto* control is determined on a case-by-case basis. An entity must demonstrate at least the following indicia of

[527] A control group is defined as an entity, or a group of individuals or entities, that possesses *de jure* and *de facto* control of an applicant or licensee, such that (1) the entity and/or its members own unconditionally at least 50.1 percent of the total voting interests of a corporation; (2) the entity and/or its members receive at least 50.1 percent of the annual distribution of any dividends paid on the voting stock of a corporation; (3) in the event of dissolution or liquidation of a corporation, the entity and/or its members are entitled to receive 100 percent of the value of each share of stock in its possession and a percentage of the retained earnings of the concern that is equivalent to the amount of equity held in the corporation; and (4) the entity and/or its members have the right to receive dividends, profits, and regular and liquidating distributions from the business in proportion to its interest in the total equity of the applicant or licensee. Section 24.720(j) of the Commission's Rules, 47 C.F.R. § 24.720(j).

[528] *See* 13 C.F.R. § 121.401.

control to establish that it retains *de facto* control of the applicant: (1) the entity constitutes or appoints more than 50 percent of the board of directors or partnership management committee; (2) the entity has authority to appoint, promote, demote and fire senior executives that control the day-to-day activities of the licensees; and (3) the entity plays an integral role in all major management decisions.[529] Moreover, we caution that while we are not imposing specific equity requirements on small business principals, the absence of significant equity could raise questions about whether the applicant qualifies as a *bona fide* small business.

294. As we did in broadband PCS, we will permit eligible small businesses to form consortia and not aggregate their gross revenues.[530] Additionally, a small corporation that has dispersed voting stock ownership and no controlling affiliates will not be required to aggregate with its own revenues the revenues of each shareholder for purposes of small business status.[531] Thus, we clarify that such an applicant may qualify -- even in the absence of identifiable control being held by particular investors.

295. We note also that applicants and licensees claiming eligibility as a small business or consortium of small businesses are subject to audits by the Commission. Selection for audit may be random, on information, or on the basis of other factors. Consent to such audit is part of the certification included in the short-form application (FCC Form 175). Such consent includes consent to the audit of the applicant's or licensee's books, documents, and other material, including accounting procedures and practices, regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are and remain accurate. Such consent also includes inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business or keeping records regarding licensed Phase II 220 MHz service, and will also include consent to the interview of principals, employees, customers, and suppliers of the applicant or licensee.

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[529] *See Competitive Bidding Fifth Memorandum Opinion and Order*, 10 FCC Rcd at 447 (para. 80).

[530] *See* Section 24.720(b) of the Commission's Rules, 47 C.F.R. § 24.720(b).

[531] *See Competitive Bidding Fifth Memorandum Opinion and Order*, 10 FCC Rcd at 444-45 (para. 74); Section 24.720(m) of the Commission's Rules, 24 C.F.R. § 24.720(m) (defining ``publicly traded corporation with widely dispersed voting power'').

e. *Bidding Credits*

(1) Proposal

296. In the *Third Notice*, we proposed an approach that would be a hybrid of the bidding credit options offered to small businesses in the 900 MHz SMR auction and the nationwide narrowband PCS auction.[532] In order to ensure that small businesses have a realistic opportunity to acquire Phase II 220 MHz nationwide and Regional licenses, we proposed a 40 percent bidding credit for all qualified designated entities. For Phase II 220 MHz nationwide licenses, we proposed, *inter alia*, to offer this bidding credit on only one of the available channel blocks. For Phase II 220 MHz Regional licenses, we proposed to offer the bidding credit on all available channel blocks. Because we believed that the Phase II 220 MHz EA licenses are similar to the licenses offered in the 900 MHz SMR service, we proposed offering the same 10 percent bidding credit to qualified small businesses in the Phase II 220 MHz EA auction as we did in the 900 MHz SMR auction.[533]

(2) Comments

297. The SMR Advisory Group supports our proposed bidding credits.[534] Comtech supports our proposal to provide a 40 percent bidding credit on all Phase II 220 MHz Regional license blocks, but asserts that the 40 percent bidding credit should also be available for all nationwide blocks.[535]

(3) Decision

298. We believe that small businesses are in the best position to decide which blocks of licenses to bid on. As we stated *supra*, based upon our experience in previous auctions, it is very likely that bidders will attempt to aggregate Regional and EA licenses in the development of their bidding strategies, particularly if these licenses are auctioned together. Thus, we will establish bidding credits consistent with our two-tiered definition of small business that will apply to all three license groups. For very small businesses that, together with affiliates and controlling principals, have average gross revenues that are not more than $3 million for the three preceding years, we will give a 25 percent bidding credit, applicable for all three categories of licenses. Likewise, we will give small businesses that, together with affiliates and controlling principals, have average gross revenues that are not more than $15 million for the three preceding years, a bidding credit of ten percent, available for all three categories of Phase II 220 MHz licenses. While the 25 percent bidding credit is less than originally proposed for the nationwide and Regional licenses, we believe it is appropriate since we are now going to offer bidding credits

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[532] *Third Notice*, 11 FCC Rcd at 268-69 (para. 162).

[533] *Id*. at 268-69 (paras. 161-165).

[534] SMR at 21. *See also* AMTA Comments at 22 (supporting bidding credits for regional and EA licenses); U.S. MobilComm Comments at 6; Roamer Comments at 1-2; Incom Comments at 2.

[535] Comtech Comments at 17.

generally for all channel blocks. We have also had favorable results in previous auctions with bidding credits at this level or lower.[536]

f. *Installment Payments, Upfront Payments, and Down Payments*

(1) Proposal

299. In the *Third Notice*, we proposed the use of installment payments and reduced down payments for all small businesses bidding for any of the Phase II 220 MHz nationwide, Regional and EA licenses.[537] We also tentatively concluded that reduced upfront payments for small businesses would be unnecessary.[538]

(2) Comments

300. The SMR Advisory Group supports the use of installment payments and a reduced down payment to assist small businesses in participating in the Phase II 220 MHz auctions.[539]

(3) Decision

301. We will make installment payment plans available to small businesses that are winners in the 220 MHz auction. We recognize that small businesses, including those owned by women and minorities, face difficulties not encountered by other firms.[540] As we have also noted previously, allowing installment payments reduces the amount of private financing needed by prospective small business licensees and therefore mitigates the effect of limited access to capital by small businesses.[541] Licensees who qualify as small businesses or very small businesses in 220 MHz auctions will be entitled to pay their winning bid amount in quarterly installments over the term of the license with interest charges to be fixed at the time of licensing at a rate equal to the rate for ten-year U.S. Treasury obligations plus 2.5 percent. The rate for ten-year U.S. Treasury obligations will be determined by taking the coupon rate of interest on the ten-year U.S. Treasury notes most recently auctioned by the Treasury Department before licenses are conditionally granted. These licensees will be able to make interest-only payments for the first two years of the license term. Timely payment of all installments will be a condition of the license grant, and failure to make such timely payments will be grounds for revocation of the license.

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[536] *See, e.g., Competitive Bidding Sixth Report and Order*, 11 FCC Rcd 136, 161 (para. 47) (1995) (25 percent for broadband PCS); *Competitive Bidding Seventh Report and Order*, 11 FCC Rcd at 268-69 (paras. 161-65) (15 and 10 percent for 900 MHz SMR).

[537] *Third Notice*, 11 FCC Rcd at 270-71 (paras. 166-169).

[538] *Id.* at 275 (para. 180).

[539] SMR Comments at 20.

[540] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2389 (para. 230).

[541] *Id*. at 2389 (paras. 231-232).

302. We decline to adopt a second installment payment plan with a longer interest-only period for very small businesses with average gross revenues of not more than $3 million. We believe that the two-year interest-only period in the single plan we adopt here provides all small businesses with the appropriate level of financing to overcome difficulties in attracting capital. [542] Given that we are making additional financial assistance available to very small businesses in the form of a 25 percent bidding credit, we do not think a longer interest-only period is justified.

303. We also conclude that we should provide for late payment fees in connection with our installment payment plan for Phase II 220 MHz licensees. We stated in the *Third Notice* that timely payment of all installments would be a condition of the award of a license. [543] Therefore, when licensees are more than fifteen days late in their scheduled installment payments, we will charge a late payment fee equal to five percent of the amount of the past due payment. For example, if a $50,000 payment is due on June 1, then on June 16, $2,500 is due in addition to the payment. As we explained in adopting a late payment fee provision for broadband PCS F block auction winners, without such a fee licensees may not have adequate financial incentives to make installment payments on time and may attempt to maximize their cash flow at the government's expense by paying late. We note, too, that enhancing the fiscal accountability of entities receiving installment payment benefits is consistent with the purpose of the recently enacted Debt Collection Improvement Act of 1996. The five percent payment we adopt here is an approximation of late payment fees applied in typical commercial lending transactions. Payments will be applied in the following order: late charges, interest charges, and principal payments.

304. Our upfront payment rules are intended to deter speculation and ensure participation by sincere bidders only. We believe that substantial upfront payments are necessary for both large and small businesses to achieve these goals, and that it would be inappropriate to adopt reduced upfront payment provisions for small businesses participating in the Phase II 220 MHz service auction. We therefore decline to do so.

305. We also believe that small businesses should be required to pay a down payment of 20 percent, as we have required in our broadband PCS D, E, and F block auction. We believe that such a requirement is consistent with ensuring that winning bidders have the financial capability of building out their systems and will provide us with stronger assurance against defaults than a ten percent down payment. Increasing the amount of the bidder's funds at risk in the event of default discourages insincere bidding and therefore increases the likelihood that licenses are awarded to parties who are best able to serve the public. We also believe that a 20 percent down payment should cover the required payments in the unlikely event of default. Thus, small businesses will be required to bring their deposit up to ten percent of their winning bid within ten business days of the close of the auction. Prior to licensing, they will be required to pay an additional ten percent. Specific procedures for payment will be provided in a Public Notice.

g. *Partitioning*

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[542] *See D, E and F Block Report and Order*, 11 FCC Rcd at 7845 (para. 44).

[543] *Third Notice*, 11 FCC Rcd at 271 (para. 168).

(1) Proposal

306. As noted above, Congress directed the Commission to ensure that rural telephone companies have the opportunity to participate in spectrum-based services. [544] In the *Third Notice*, we proposed a partitioning scheme for rural telephone companies similar to the one adopted for broadband PCS.[545] We also proposed that rural telephone companies be defined, as in the *Competitive Bidding Fifth Report and Order*, as local exchange carriers having 100,000 or fewer access lines, including all affiliates.[546] In addition, we sought comment on whether the Phase II 220 MHz service would benefit from the broader availability of geographic partitioning and channel disaggregation.[547]

(2) Comments

307. No commenters addressed these issues.

(3) Decision

308. Upon further analysis of the partitioning issues raised in the *Third Notice*, we have concluded that we will permit any holder of an EA, Regional or nationwide Phase II 220 MHz license to partition portions of its authorization and enter into contracts with eligible parties, allowing such parties to file long-form applications for the usable channels within the partitioned area.[548] In a Fifth Notice of Proposed Rulemaking, we will propose rules implementing the partitioning decision we adopt in this Order.

309. We have decided to take this action with respect to partitioning because of our conclusion that allowing holders of EA, Regional and nationwide Phase II 220 MHz licenses to partition their geographic service areas will facilitate the provision of services in small markets and rural areas. Partitioning will also furnish providers of Phase II 220 MHz service with operational flexibility that will serve to promote the most efficient use of the spectrum and encourage participation by a wide variety of service providers.

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[544] *See* 47 U.S.C. § 309(j)(4)(D).

[545] *Third Notice*, 11 FCC Rcd at 273-74 (para. 176) (citing *Competitive Bidding Fifth Report and Order*, 9 FCC Rcd at 5597-99 (para. 151)).

[546] *Id.*

[547] *Id.* at 274 (para. 177).

[548] We have previously adopted expanded partitioning rights for broadband PCS. Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees, WT Docket No. 96-148, Implementation of Section 257 of the Communications Act -- Elimination of Market Entry Barriers, GN Docket No. 96-113, Report and Order, FCC 96-474 (released Dec. 20, 1996) (*Partitioning Report and Order*).

310. However, we will not, at this time, authorize spectrum disaggregation for the Phase II 220 MHz service. Instead, we will seek information regarding the technical feasibility and appropriateness of spectrum disaggregation for the Phase II 220 MHz service in the Fifth Notice of Proposed Rulemaking. We note, however, that a disaggregation mechanism could prove to be a useful vehicle for introducing a greater degree of flexibility with respect to the utilization of non-contiguous channels by Phase II 220 MHz licensees.

311. Providers of 220 MHz service will be permitted to acquire partitioned licenses in either of two ways: (1) by forming bidding consortia to participate in auctions, and then partitioning the licenses won among consortium members; and (2) by acquiring partitioned licenses from other licensees through private negotiation and agreement either before or after the auction. Each member of a consortium will be required to file a long-form application, following the auction, for its respective mutually agreed-upon geographic area. With regard to partitioning by small businesses, we seek comment in the Fifth Notice of Proposed Rulemaking regarding the treatment of bidding credits and installment payments. We also seek comment on other issues related to partitioning and disaggregation, such as whether to permit partitioning based on any license area defined by the parties.[549] In the event we receive applications requesting Commission consent to partitioning transfers prior to the adoption of rules based on the Fifth Notice of Proposed Rulemaking, action on such applications will be deferred.

h. *Transfer Restrictions and Unjust Enrichment Provisions*

(1) Proposal

312. The Commission's unjust enrichment provisions are integral to the success of the special provisions for designated entities in the various auctionable services. In the *Competitive Bidding Second Report and Order*, we adopted unjust enrichment provisions applicable specifically to designated entities. We established these provisions to deter speculation and participation in the licensing process by those who do not intend to offer service to the public, or who intend to use our provisions to obtain a license at a lower cost than they otherwise would have to pay, and later to sell it for a profit.[550]

313. In the *Third Notice*, we sought comment regarding the appropriate approach to preventing unjust enrichment in the Phase II 220 MHz service. We asked whether a holding period of three years after the license grant -- in which a licensee would be prohibited from voluntarily transferring or assigning its license to any other entity -- should be imposed on small businesses in the Phase II 220 MHz service. We also asked whether, in the alternative, we should allow small businesses to transfer or assign their licenses without restriction but require the

[549] See, for example, the discussion at para. 325, *infra*.

[550] *Competitive Bidding Second Report and Order*, 9 FCC Rcd at 2394 (para. 259); Section 1.2111 of the Commission's Rules, 47 C.F.R. § 1.2111.

reimbursement of bidding credits and payment of all principal due upon transfer to an ineligible entity.[551]

(2) Comments

314. No commenters addressed this issue.

(3) Decision

315. To ensure that large businesses do not become the unintended beneficiaries of measures meant for smaller firms, we will adopt unjust enrichment provisions similar to those adopted for narrowband PCS and the 900 MHz SMR service. Licensees seeking to transfer their licenses to entities which do not qualify as small businesses (or very small businesses seeking to transfer their licenses to small businesses or large companies), as a condition of approval of the transfer, must remit to the government a payment equal to a portion of the total value of the benefit conferred by the government. Thus, for example, a small business that received a bidding credit seeking to transfer or assign a license to an entity that does not qualify as a small business will be required to reimburse the government for the amount of the bidding credit, plus interest at the rate imposed for installment financing at the time the license was awarded, before the transfer will be permitted. Similarly, a very small business that received a bidding credit seeking to transfer or assign a license to a small business that qualified for a lesser bidding credit will be required to reimburse the government for the difference between the amount of its bidding credit and the lesser credit, plus interest at the rate imposed for installment financing at the time the license was awarded, before the transfer will be permitted. The amount of this payment will be reduced over time as follows: (1) a transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or, in the case of very small businesses transferring to small businesses, 100 percent of the difference between the bidding credit received by the former and the bidding credit for which the latter is eligible); (2) in year three of the license term the payment will be 75 percent; (3) in year four the payment will be 50 percent, and (4) in year five the payment will be 25 percent, after which there will be no required payment. These assessments will have to be paid to the U.S. Treasury as a condition of approval of the assignment or transfer.

316. In addition, if a licensee that qualifies for installment payments seeks to assign or transfer control of its license during its term to an entity that does not meet the small business or very small business definition, we will require payment of the remaining principal and any interest accrued through the date of assignment as a condition of the license assignment or transfer. Also, if an investor subsequently purchases an interest in the business and, as a result, the gross revenues of the business exceed the applicable financial caps, this unjust enrichment provision will apply. We will apply these payment requirements for the entire license term to ensure that small businesses will look first to other small businesses when deciding to transfer their licenses. However, we will not impose a holding period or other transfer restrictions on these licensees.

i. *Spectrum Set-Asides*

[551] *Third Notice*, 11 FCC Rcd at 275 (para. 179).

(1) Proposal

317. In the *Third Notice* we expressed our concern, based on our experience with PCS, that designated entities may have difficulty competing for Phase II 220 MHz licenses against large firms with significant financial resources. We tentatively concluded, however, that the relatively large number of licenses available and the relatively small spectrum allocations in the 220 MHz service should allow for extensive small business participation without the use of spectrum set-asides. In addition, we expressed our belief that the effectiveness of bidding credits, reduced down payments, and installment payments would not be diluted as in broadband PCS due to the smaller capital outlay anticipated for the 220 MHz service. [552]

(2) Comments

318. No commenters addressed this issue.

(3) Decision

319. Because there will be both a large number and a large variety of licenses available in the Phase II 220 MHz auction, we will not adopt an entrepreneurs' block for the service. We conclude that small businesses will have a significant opportunity to compete for Phase II 220 MHz licenses, particularly given the special provisions that we have adopted for small businesses.

[552] *Id.* at 275 (para. 181).

FIFTH NOTICE OF PROPOSED RULEMAKING

V. INTRODUCTION

320. In the Order we are adopting today we have concluded that we will permit any holder of a Phase II EA, Regional, or nationwide 220 MHz license [553] to partition portions of its authorization.[554] In the recent *Partitioning Report and Order* we expanded our rules to permit geographic partitioning and disaggregation for broadband PCS licensees, and we sought comment on geographic partitioning and spectrum disaggregation for cellular and General Wireless Communications Service (GWCS).[555] We have previously examined partitioning and disaggregation issues for other services on a service-by-service basis and we presently permit, or are seeking comment on, geographic partitioning and spectrum disaggregation for several services, *e.g.*, Multipoint Distribution Service (MDS),[556] GWCS,[557]

[553] We refer to such licensees in this Fifth Notice as ``covered Phase II licensees." Phase II licensees that are not included in this definition are those Phase II licensees that are authorized to use Public Safety or EMRS channels.

[554] See para. 308, *supra*.

[555] Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees, WT Docket No. 96-148, Implementation of Section 257 of the Communications Act --Elimination of Market Entry Barriers, GN Docket No. 96-113, Report and Order and Further Notice of Proposed Rulemaking, FCC 96-474, paras. 93-113 (released Dec. 20, 1996) (*Partitioning Report and Order*).

[556] Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, MM Docket No. 94-131, Report and Order, 10 FCC Rcd 9589, 9614-15 (paras. 46-47) (1995) (*MDS Report and Order*). Additionally, we impose unjust enrichment provisions for partitioning by small businesses to other businesses. *See* Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, MM Docket No. 94-131, Memorandum and Order on Reconsideration, 10 FCC Rcd 13821, 13833 (paras. 69-70) (1995).

[557] Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, ET Docket No. 94-32, Second Report and Order, 11 FCC Rcd 624, 665 (para. 105) (1995) (*GWCS Second Report and Order*), *recon. pending* (permitting rural telephone company partitioning).

800 MHz Specialized Mobile Radio (SMR), [558] paging,[559] 38 GHz fixed point-to-point microwave,[560] 900 MHz SMR,[561] and the Wireless Communications Service (WCS). [562]

321. We believe that it is appropriate at this time to consider whether to permit full partitioning and disaggregation in the 220 MHz service. As we indicated in the *Partitioning Report and Order*, we found partitioning and disaggregation to be an effective means of providing broadband PCS licensees with the flexibility they need to tailor their service offerings to meet market demands.[563] In addition, the *Partitioning Report and Order* concluded that partitioning and disaggregation may be used to overcome entry barriers through the creation of smaller licenses that require less capital, thereby facilitating greater participation by small businesses, rural telephone companies, and minority- and female-owned businesses. [564] Therefore, we seek comment on whether these benefits similarly justify extension of partitioning rules to Phase I nationwide licensees, and establishment of disaggregation rules for the 220 MHz service.

VI. DISCUSSION

[558] Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, First Report and Order, Eighth Report and Order, and Second Further Notice of Proposed Rule Making, 11 FCC Rcd 1463, 1576, 1578, 1580 (paras. 253, 257, 264) (1995) (*800 MHz Second FNPRM*) (requesting comment on partitioning and disaggregation).

[559] Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, WT Docket No. 96-18, Second Report and Order and Further Notice of Proposed Rulemaking, FCC 97-59, paras. 192-94 (released February 24, 1997) (*Paging Report and Order*) (permitting all geographic area paging licensees to partition to any party eligible to be a paging licensee).

[560] Amendment of the Commission's Rules Regarding the 37.0 - 38.6 GHz and 38.6 - 40.0 GHz Bands, ET Docket No. 95-183, Notice of Proposed Rulemaking and Order, 11 FCC Rcd 4930, 4942-43, 4972-73, (paras. 24, 89-90) (1995) (*38 GHz NPRM*) (proposing partitioning for rural telephone companies, and seeking comment on whether partitioning and disaggregation should be available to all licensees in the 37 GHz band).

[561] Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool, PR Docket No. 89-553, Second Order on Reconsideration and Seventh Report and Order, 11 FCC Rcd 2639, 2711-12 (paras. 177-179) (1995) (*900 MHz Second Reconsideration Order*) (adopting rural telephone company partitioning). On September 20, 1996, American Mobile Telecommunications Association, Inc., filed a Petition for Rulemaking requesting the Commission to expand its rules to permit partitioning to include all 900 MHz SMR licenses and to permit spectrum disaggregation. *See* American Mobile Telecommunications Association, Inc., Files Petition for Rulemaking to Expand Geographic Partitioning and Spectrum Disaggregation Provisions for 900 MHz SMR, Public Notice, DA 96-1654 (released Oct. 4, 1996). That Petition for Rulemaking was incorporated into the 800 MHz rulemaking proceeding, PR Docket No. 94-144, where similar partitioning and disaggregation issues are being considered. *Id.*

[562] *Wireless Communications Service Report and Order*, (paras. 96-103) (adopting partitioning and disaggregation for all licensees in the Wireless Communications Service).

[563] *Partitioning Report and Order* at para. 2.

[564] *Id.*

A. PARTITIONING AND DISAGGREGATION FOR 220 MHZ SERVICE

322. In the Order we adopt today, we have decided to allow partitioning of covered 220 MHz Phase II licenses.[565] In this Fifth Notice of Proposed Rulemaking we will seek comment as to how various requirements imposed on covered Phase II licensees (*e.g.*, construction requirements) may be modified if such licensees partition their authorization. We seek comment as to whether partitioning of 220 MHz Phase I nationwide licenses should be permitted in a manner similar to the rules for partitioning we have adopted for broadband PCS licensees. We tentatively conclude that we should not adopt partitioning for those Phase II licensees that are not covered Phase II licensees and non-nationwide Phase I licensees because such licenses are awarded on a site specific basis rather than for a geographic area. In addition, we seek comment as to whether all Phase I and Phase II 220 MHz licensees should be permitted to disaggregate their licensed spectrum. Since the 220 MHz service includes non-commercial uses, *e.g.*, use of spectrum for internal communication, by Public Safety and EMRS entities, we seek comment as to whether additional rules for partitioning and disaggregation should be adopted to address the use of the 220 MHz service for possible commercial and non-commercial services.

323. In the following paragraphs we seek comment on specific aspects of partitioning and disaggregation, which we will need to address if we decide to adopt partitioning for Phase I nationwide licensees and disaggregation for all 220 MHz licensees. For example, Phase I nationwide licensees are not currently permitted to assign or transfer a license before the licensee has constructed at least 40 percent of the proposed system. [566] We therefore seek comment as to whether a Phase I nationwide licensee should be permitted to partition or disaggregate prior to constructing at least 40 percent of its proposed system. We also seek comment as to whether there are technical or regulatory constraints unique to the 220 MHz service, such as, for example, the construction requirements for Phase I nationwide licensees, that would render partitioning or disaggregation impractical or administratively burdensome. Further, we recognize that there are special competitive bidding issues, similar to those raised in the broadband PCS context, that must be resolved if we permit partitioning and disaggregation for the 220 MHz service. We shall address those issues separately in paragraphs 343 and 344, *infra*.

B. AVAILABLE LICENSE AREA

324. In the *Partitioning Report and Order*, we found that allowing partitioning of broadband PCS licenses along any service area defined by the parties is the most logical approach.[567] We concluded that allowing the parties to define the partitioned PCS service area would allow licensees to design flexible and efficient partitioning agreements which would permit

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[565] See para. 308, *supra*.

[566] Section 90.709 of the Commission's Rules, 47 C.F.R. § 90.709.

[567] *Partitioning Report and Order* at para. 24.

marketplace forces to determine the most suitable service areas. We also found that requiring PCS partitioning along county lines was too restrictive and might discourage partitioning. [568]

325. Covered Phase II 220 MHz service areas are based on either Economic Areas or Regional Areas.[569] In addition, there are Phase I and Phase II nationwide licenses in the 220 MHz service. We tentatively conclude that a flexible approach to partitioned areas, similar to the one we adopted for broadband PCS, is appropriate for the 220 MHz service. We therefore propose to permit partitioning of Phase I nationwide and covered Phase II 220 MHz licenses based on any license area defined by the parties. We seek comment on this proposal, and in particular on whether this proposal is consistent with our licensing of the 220 MHz service, and whether there are any technical or other issues unique to the 220 MHz service that might impede the adoption of a flexible approach to defining the partitioned license area.

C. MINIMUM OR MAXIMUM DISAGGREGATION STANDARDS

326. We seek comment as to whether, if we permit disaggregation in the 220 MHz service, minimum disaggregation standards are necessary. We seek to determine whether, given the unique characteristics of the 220 MHz service, technological and administrative considerations warrant the adoption of such standards. Licensees in this service may be authorized to use as few as one relatively narrow 5 kHz channel pair to as many as 15 channel pairs (*i.e.*, in a Phase II Regional authorization). We seek comment as to whether we should adopt standards which would be flexible enough to encourage disaggregation while providing a standard which is consistent with our technical rules and by which we would be able to track disaggregated spectrum and review disaggregation proposals in an expeditious fashion.

D. COMBINED PARTITIONING AND DISAGGREGATION

327. We seek comment regarding whether combined partitioning and disaggregation should be permitted for the 220 MHz service. By ``combined" partitioning and disaggregation we refer to circumstances in which a licensee would be authorized, for example, to obtain a license for a portion of a Region with only two channels. As another example, the licensee could obtain a license consisting of a partitioned portion of one or more other licenses held by other 220 MHz service providers *and* a disaggregated portion of one or more other licenses held by other 220 MHz service providers. We tentatively conclude that we should permit such combinations in order to provide parties the flexibility they need to respond to market forces and demands for service relevant to their particular locations and service offerings.

E. CONSTRUCTION REQUIREMENTS

328. In the Order we have adopted today we require that covered Phase II licensees implementing nationwide land mobile or paging systems must construct base stations that provide coverage to a composite area of at least 750,000 square kilometers or serve at least 37.5 percent

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[568] *Partitioning Report and Order* at paras. 23-24.

[569] See para. 80, *supra*.

of the population of the United States within five years of initial license grant, and that provide coverage to at least 1,500,000 square kilometers or at least 75 percent of the population within 10 years of the grant.[570] We have permitted covered Phase II licensees implementing fixed operations as part of their nationwide system to meet five- and 10-year ``substantial service'' requirements as an alternative to meeting the above-mentioned construction requirements. [571]

329. We also have required EA and Regional licensees implementing land mobile or paging systems to construct base stations to provide coverage to at least one-third of the population of their EA or Region within five years of initial authorization and at least two-thirds of the population of their EA or Region within 10 years of initial authorization. [572] EA and Regional licensees that are offering fixed services as part of their EA and Regional system and those licensees who, because of the existence of one or more incumbent co-channel licensees in their EA or Region, can only provide service to populations outside of the areas served by these incumbents, have the option of providing a showing of substantial service. [573]

330. In the *Partitioning Report and Order*, we adopted two construction options for partitioning for broadband PCS that give the parties the flexibility to choose how to apportion the responsibility to build out the partitioned license area, while also ensuring that the spectrum is used to the same degree that would have been required had the partitioning transaction not taken place.[574] Under the first option, the partitionee certifies that it will satisfy the same construction requirements as the original licensee.[575] The partitionee then must meet the prescribed service requirements in its partitioned area while the partitioner is responsible for meeting those requirements in the area it has retained.[576]

331. Under the second option, the original licensee certifies that it has already met or will meet its five-year construction requirement and that it will meet the 10-year construction requirement for the entire market involved.[577] Because the original licensee retains the responsibility for meeting the construction requirements for the entire market, the partitionee is

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[570] See para. 158, *supra*.

[571] *Id.*

[572] See para. 163, *supra*.

[573] *Id.*

[574] *See Partitioning Report and Order* at paras. 42-43. These objectives are the same in the case of the disaggregation rules adopted in the *Partitioning Report and Order*. *See id*. at para. 62.

[575] *Id.* at para. 42.

[576] *Id.*

[577] *Id.*

permitted to comply with a less rigorous construction requirement [578] -- the partitionee must only meet a substantial service requirement for its partitioned license area at the end of the 10-year license term.[579]

332. In addition, we required that, at the five-year benchmark, broadband PCS partitionees must file supporting documentation showing compliance with the construction requirements.[580] The *Partitioning Report and Order* further provides that licensees failing to meet the service requirements will be subject to forfeiture, license cancellation, or other penalties.[581]

333. We seek comment as to whether we should adopt rules for covered Phase II licensees to establish dual construction options and attendant requirements for 220 MHz service partitioners and partitionees, similar to those we have adopted for broadband PCS. Since our Rules do not currently provide for a lesser construction requirement, we particularly seek comment as to the appropriateness of the lesser construction requirement for the second option.

334. With respect to disaggregation, the *Partitioning Report and Order* has established a flexible approach similar to the rules adopted for partitioning. [582] This approach retains the underlying five- and 10-year construction requirements for the spectrum block as a whole, but then allows either party to the disaggregation agreement to meet the construction requirements with respect to its disaggregated portion of the license. [583] Thus:[584]

> [A] . . . licensee who disaggregates a portion of its spectrum may elect to retain responsibility for meeting the five and ten-year coverage requirements, or it may negotiate a transfer of this obligation to the disaggregatee. In either case, the rules ensure that the spectrum will be developed to at least the same degree that was required prior to disaggregation.

The rules we adopted in the *Partitioning Report and Order* also provide that parties seeking Commission approval of a disaggregation agreement must certify with respect to which party will assume responsibility for complying with the applicable five- and 10-year construction

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[578] *Id.*

[579] *Id.*

[580] *Id.* at para. 43.

[581] *Id.*

[582] *Id.* at para. 62.

[583] *Id.*

[584] *Id.*

requirements.[585] Parties may also propose to share the responsibility for meeting these requirements.[586] As part of the Commission's public interest review under Section 310(d), the Commission will review each transaction to ensure that the party designated as responsible for meeting the construction requirements is a *bona fide* licensee and has the requisite ability and resources to meet the applicable requirements. If only one party agrees to take responsibility for meeting the construction requirement and later fails to comply with the requirement, then that party's license will be subject to forfeiture.[587] The license of the other party to the agreement, however, will not be affected by such a failure to comply.[588] If both parties agree to share the responsibility for meeting the construction requirements and either party later fails to do so, then both parties' licenses will be subject to forfeiture.[589]

335. We seek comment as to whether we should adopt rules for covered Phase II licensees similar to those disaggregation rules we have adopted for broadband PCS. Under such a certification approach, the disaggregating parties would be required to submit a certification, signed by both the disaggregator and disaggregatee, stating whether one or both of the parties will retain responsibility for meeting the five- and 10-year construction requirements for the 220 MHz market involved. If one party takes responsibility for meeting the construction requirements, then that party would be subject to license forfeiture for failing to meet the construction requirements, but such a failure would not affect the status of the other party's license. If both parties agree to share the responsibility for meeting the construction requirements, then both parties' licenses would be subject to forfeiture if either party fails to meet the construction requirements.

336. We are proposing rules for licensees other than covered Phase II licensees that differ from the approach we have taken in the *Partitioning Report and Order.* Phase I non-nationwide licensees and Phase II licensees authorized on Public Safety or EMRS channels are not authorized to operate within a particular geographic area, but instead are authorized to construct a single land mobile base station for base and mobile operations. Phase I non-nationwide licensees must construct their systems, having all specified base stations constructed with all channels, and place their systems in operation within eight months of the initial license grant.[590]

337. In the Order we adopted today we have concluded that Phase II licensees operating on Public Safety or EMRS channels must construct their authorized base station and place it in

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[585] *Id.* at para. 63.

[586] *Id.*

[587] *Id.*

[588] *Id.*

[589] *Id.*

[590] Section 90.725(f) of the Commission's Rules, 47 C.F.R. § 90.725(f). The construction deadline was extended as outlined at para. 22 n.17, *supra*.

operation within 12 months of initial authorization.[591] Consistent with our decision in this Order that Phase I non-nationwide licensees will be permitted to begin primary fixed or paging operations only after meeting the requirement that they construct their land mobile base station and place it in operation or commence service,[592] we propose that Phase I non-nationwide licensees be permitted to disaggregate their licensed spectrum only after they have met the applicable construction deadline. We also propose that Phase II licensees operating on Public Safety or EMRS channels should be permitted to disaggregate their licensed spectrum only after they have met the applicable construction deadline. Since the construction deadline would therefore be met before any disaggregation is allowed, no construction requirement would be imposed on a disaggregatee. We seek comment on these proposals.

338. Phase I nationwide licensees are subject to a series of construction requirements set out in Section 90.725 of our Rules at two, four, six, and 10 years after the initial license grant.[593] These construction requirements are based on the licensee constructing base stations in specific percentages of geographic areas that the licensee designated in its application, including base stations in a specific number of urban areas listed in Section 90.741 of the Commission's Rules.[594] Unlike the broadband PCS rules, which do not dictate a minimum level of spectrum usage by the original PCS licensee,[595] our construction rules for Phase I nationwide licensees require that the constructed base stations have a minimum of five nationwide channels. We tentatively conclude, therefore, that a disaggregatee obtaining spectrum from a Phase I nationwide licensee should be required to meet the same construction requirements as the original licensee. The disaggregatee would be required to meet the same two-, four-, six-, and 10-year requirements as the original licensee for the spectrum it obtains, while the original licensee would be responsible for meeting the requirements for the spectrum it retains. We seek comment on this tentative conclusion.

339. Since the construction requirements for Phase I nationwide licensees differ so markedly from those pertaining to Phase II nationwide licensees or licensees in other services such as broadband PCS or GWCS, it does not appear, as a practical matter, to be possible to have similar construction options for Phase I nationwide partitionees. For example, a Phase I partitionee may never be able to meet the requirement of Section 90.725(a)(2) that, within four years, it construct base stations in at least 28 of the 100 urban areas listed in Section 90.741, since a Phase I partitionee may not even have that many urban areas in its partitioned area. Thus, the first option adopted in the *Partitioning Report and Order*, under which the partitionee certifies that it will satisfy the same construction requirements as the original license, does not appear to be a viable mechanism in the case of Phase I nationwide licensees in the 220 MHz service.

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[591] See para. 166, *supra*.

[592] See para. 139, *supra*.

[593] Section 90.725 of the Commission's Rules, 47 C.F.R. § 90.725.

[594] Section 90.741 of the Commission's Rules, 47 C.F.R. § 90.741.

[595] *See Partitioning Report and Order* at para. 62.

340. Similarly, the original licensee may not have 28 urban areas remaining after it partitions its license. Thus, the second option adopted in the *Partitioning Report and Order*, under which the original licensee certifies that it has met or will meet all of the construction requirements, would likewise not be possible. Given the difficulties created by these construction requirements, we seek comment on whether partitioning of Phase I nationwide licenses should be permitted. If such partitioning is allowed, we seek comment on what construction requirements could be imposed on the original licensee and any partitionees. In light of the unique construction requirements imposed on Phase I nationwide licensees, we also seek comment on what type of construction requirements should be imposed on Phase I licensees and their partitionees and disaggregatees if a Phase I nationwide license is both partitioned and disaggregated.

F. LICENSE TERM

341. Phase I non-nationwide 220 MHz licenses are granted for five-year terms and Phase I nationwide 220 MHz licenses are granted for a period of 10 years. [596] In the Order we have adopted today we established a 10-year license term for both nationwide [597] and non-nationwide Phase II 220 MHz licenses. [598] We further found that all Phase I and Phase II licensees seeking renewal of their authorizations must meet the requirements for license renewal identical to those provided in Section 22.940 of our rules. [599] Therefore, 220 MHz licensees that demonstrate that they have provided substantial service during their past license terms and have substantially complied with the Commission's rules, policies, and the Communications Act, will be granted a renewal expectancy. [600]

342. In the *Partitioning Report and Order*, we found that allowing parties acquiring a partitioned license or disaggregated spectrum to ``re-start'' the license term from the date of the grant of the partial assignment application could allow parties to circumvent our established license term rules and unnecessarily delay service. [601] We seek comment as to whether our 220 MHz rules should similarly provide that parties obtaining partitioned 220 MHz licenses or disaggregated spectrum hold their license for the remainder of the original licensee's five- or 10-year license term. In addition, we seek comment as to whether 220 MHz partitionees and disaggregatees should be afforded the same renewal expectancy as other 220 MHz licensees. We tentatively conclude that limiting the license term of the partitionee or disaggregatee is necessary to ensure that there is maximum incentive for parties to pursue available spectrum as quickly as practicable.

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[596] *See* Section 90.149 of the Commission's Rules, 47 C.F.R. § 90.149. *See also CMRS Third Report and Order*, 9 FCC Rcd 8157 (para. 386) (modifying 47 C.F.R. § 90.149 (1994)).

[597] See para. 54, *supra*.

[598] See para. 133, *supra*.

[599] Section 22.940 of the Commission's Rules, 47 C.F.R. § 22.940.

[600] *See* Section 22.940(a) of the Commission's Rules, 47 C.F.R. § 22.940(a).

[601] *Partitioning Report and Order* at para. 77.

G. COMPETITIVE BIDDING ISSUES

343. Competitive bidding issues similar to those in broadband PCS arise in the context of 220 MHz service partitioning and disaggregation. Our competitive bidding rules for the covered Phase II 220 MHz service include provisions for installment payments and bidding credits for small businesses and very small businesses.[602] We also adopted rules to prevent unjust enrichment by such entities that seek to transfer licenses obtained through use of one of these special benefits.[603] We tentatively conclude that the Phase II 220 MHz service partitionees and disaggregatees that would qualify as small businesses or very small businesses should be permitted to pay their pro rata share of the remaining government obligation through installment payments. We seek comment on this tentative conclusion. We further invite comment as to the exact mechanisms for apportioning the remaining government obligation between the parties and whether there are any unique circumstances that would make devising such a scheme for the Phase II 220 MHz service more difficult than for broadband PCS. Since Phase II 220 MHz service areas are allotted on a geographic basis, in a manner similar to broadband PCS, we propose using population as the objective measure to calculate the relative value of the partitioned area and amount of spectrum disaggregated as the objective measure for disaggregation, and we seek comment on this proposal.

344. We seek comment on whether to apply unjust enrichment rules to small or very small business Phase II 220 MHz licensees that partition or disaggregate to non-small businesses. Commenters should address how to calculate unjust enrichment payments for designated entity Phase II 220 MHz service licensees paying through installment payments and those that were awarded bidding credits that partition or disaggregate to non-small businesses. We ask that commenters also address how we should calculate unjust enrichment payments in situations where a very small business partitions or disaggregates to a small business that qualifies for a lower bidding credit. Commenters should address whether the unjust enrichment payments should be calculated on a proportional basis, using population of the partitioned area and amount of spectrum disaggregated as the objective measures. We propose using methods similar to those adopted for broadband PCS for calculating the amount of the unjust enrichment payments that must be paid in such circumstances, and we seek comment on this proposal. [604]

H. LICENSING ISSUES

345. Section 90.709(d) of our Rules currently forbids partial assignment of Phase I 220 MHz licenses.[605] However, since there are existing partial assignment rules for commercial mobile

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[602] See paras. 296-303, *supra*.

[603] See paras. 312-316, *supra*.

[604] *Partitioning Report and Order* at paras. 34-35.

[605] Section 90.709(d) of the Commission's Rules, 47 C.F.R. § 90.709(d).

radio stations in Part 90,[606] we propose utilizing partial assignment procedures, similar to those adopted for broadband PCS, to review 220 MHz partitioning and disaggregation transactions. Partial assignment applications would be placed on public notice and subject to petitions to deny. The parties would be required to submit an FCC Form 490, an FCC Form 600 and, if necessary, an FCC Form 430, together as one package under cover of the FCC Form 490. We invite comment on whether any additional procedures are necessary for reviewing these applications. We also seek comment on how licensing issues should be addressed for non-commercial mobile radio stations in the 220 MHz service with respect to partial assignments.

VII. PROCEDURAL MATTERS

346. This is a non-restricted notice and comment rulemaking proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in Commission Rules.[607]

347. Pursuant to applicable procedures set forth in Section 1.415 and 1.419 of the Commission's Rules,[608] interested parties may file comments on or before **April 15, 1997**, and reply comments on or before **April 30, 1997**. To file formally in this proceeding, you must file an original and four copies of all comments, reply comments, and supporting comments. If you want each Commissioner to receive a personal copy of your comments, you must file an original plus nine copies. You should send comments and reply comments to the Office of the Secretary, Federal Communications Commission, Washington D.C. 20554. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained in the Fifth Notice of Proposed Rulemaking or the Third Report and Order should be submitted to Dorothy Conway, Federal Communications Commission, Room 234, 1919 M Street, N.W. Washington, D.C. 20554, or via the Internet to dconway@fcc.gov. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center (Room 239) of the Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554. Copies of comments and reply comments are available through the Commission's duplicating contractor: International Transcription Service, Inc. (ITS, Inc.), 2100 M Street, N.W., Suite 140, Washington, D.C. 20037, (202) 857-3800.

Initial and Final Paperwork Reduction Act of 1995 Analyses

348. This Third Report and Order and Fifth Notice of Proposed Rulemaking contains either a proposed or modified information collection. As part of its continuing effort to reduce paperwork burdens, the Commission invites the general public to take this opportunity to comment on the information collections contained in both the Third Report and Order and the Fifth Notice of Proposed Rulemaking as required by the Paperwork Reduction Act of 1995, Pub.

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606 *See* Section 90.153 of the Commission's Rules, 47 C.F.R. § 90.153.

607 *See generally* 47 C.F.R. §§ 1.1202, 1.1203, 1.1206(a).

608 47 C.F.R. §§ 1.415, 1.419.

L. No. 104-13. Public and Agency comments on the information collections contained in the Fifth Notice of Proposed Rulemaking are due 60 days after publication of the summary of the Fifth Notice of Proposed Rulemaking in the Federal Register. Public comments on the information collections contained in the Third Report and Order are due 60 days after publication of the summary of the Third Report and Order in the Federal Register. These comments should be submitted to Dorothy Conway, Federal Communications Commission, Room 234, 1919 M Street, N.W., Washington, D.C. 20554, or via the Internet to dconway@fcc.gov. Comments on the information collections contained in both the Third Report and Order and the Fifth Notice of Proposed Rulemaking should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

Initial and Final Regulatory Flexibility Act Analyses

349. As required by the Regulatory Flexibility Act of 1980, Pub. L. No. 96-354, 94 Stat. 1164, as amended by the Contract with America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847, 5 U.S.C. § 601 et seq., the Commission has prepared a Final Regulatory Flexibility Analysis of the expected impact of the rule changes in this document on small entities. The Final Regulatory Flexibility Analysis is set forth in Appendix A. In addition, as required by Section 603 of the Regulatory Flexibility Act, 5 U.S.C. § 603 an Initial Regulatory Flexibility Analysis of the expected impact on small entities of the proposals suggested in this document is contained in Appendix F. Written public comments are requested on the Initial Regulatory Flexibility Analysis. These comments must be filed in accordance with the same filing deadlines as comments on the rest of the Notice portion of this decision, but they must have a separate and distinct heading designating them as responses to the Initial Regulatory Flexibility Analysis. The Secretary shall send a copy of this Third Report and Order and Fifth Notice of Proposed Rulemaking, including the Initial and Final Regulatory Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 603(a) of the Regulatory Flexibility Act.[609]

VIII. ORDERING CLAUSES

350. Authority for issuance of this Third Report and Order is contained in Sections 4(i), 303(r), 309(j), and 332 of the Communications Act of 1934, 47 U.S.C. §§ 154(i), 303(r), 309(j), 332.

351. Accordingly, IT IS ORDERED that Part 90 of the Commission's Rules, 47 C.F.R. Part 90, IS AMENDED as set forth in Appendix B, effective 140 days after publication of this Order in the Federal Register.

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[609] Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. Section 601 *et seq.* (1980).

352. IT IS FURTHER ORDERED that the Petitions for Reconsideration filed by Columbia Cellular Corporation, PLMRS Narrowband Corp. and 360 Mobile Data Joint Venture on August 6, 1993, ARE DISMISSED as moot.

353. IT IS FURTHER ORDERED that, pursuant to 47 U.S.C. § 155(c), the Chief, Wireless Telecommunications Bureau, IS GRANTED DELEGATED AUTHORITY to implement and modify auction procedures in the Phase II 220 MHz service, including the general design and timing of an auction; the number and grouping of authorizations to be offered in any particular auction; the manner of submitting bids; the amount of minimum opening bids and bid increments; activity and stopping rules; and application and payment requirements, including the amount of upfront payments; and to announce such procedures by Public Notice.

354. IT IS FURTHER ORDERED that all pending nationwide and non-nationwide 220 MHz applications, together with the appropriate filing fees, will be returned to applicants, without prejudice.

355. IT IS FURTHER ORDERED that a Public Notice will be issued announcing the acceptance of applications for authorizations on Channels 161-170 and Channels 181-185 after 140 days after publication of this Order in the Federal Register.

356. IT IS FURTHER ORDERED that applications for temporary, secondary authorizations for geophysical telemetry operations will be accepted beginning 140 days after publication of this Order in the Federal Register.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX A

FINAL REGULATORY FLEXIBILITY ANALYSIS

As required by Section 603 of the Regulatory Flexibility Act, 5 U.S.C. § 603 (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Third Notice of Proposed Rulemaking* in this proceeding (*Third Notice*).[1] The Commission sought written public comments on the proposals in the *Third Notice*, including on the IRFA. The Commission's Final Regulatory Flexibility Analysis (FRFA) in this *220 MHz Third Report and Order* conforms to the RFA, as amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA).[2]

I. Need For and Objective of the Rules:

The rules adopted in this decision will establish a flexible regulatory scheme that will allow for efficient licensing and use of the 220 MHz service, eliminate unnecessary regulatory burdens on existing and future 220 MHz licensees, provide a wide variety of radio services to the public, enhance the competitive potential of 220 MHz services in the mobile marketplace, and continue to provide a home for the development of spectrally efficient technologies. By establishing competitive bidding procedures pursuant to § 309(j) of the Communications Act, this decision will promote economic opportunity and ensure 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. The adoption of competitive bidding rules will also permit the recovery for the public of a portion of the value of the public spectrum resource made available for commercial use and avoidance of unjust enrichment through the methods employed to award uses of that resource.

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

No issues were raised specifically in response to the IRFA. However, we have considered the significant economic impact on a substantial number of small entities through consideration of comments that pertained to issues of concern to small businesses. For example, two equipment manufacturers, SEA and Securicor, argued against allowing Phase I and Phase II licensees to aggregate their contiguous channels to create wider bandwidth channels.[3] (*See* para. 98). These

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[1] *Third Notice*, 11 FCC Rcd at 287.

[2] Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), codified at 5 U.S.C. §§ 601 *et seq*.

[3] The Commission received comments from five equipment manufacturers: Fairfield Industries (Fairfield), SEA Inc. (SEA), Securicor Radiocoms, Ltd. (Securicor), Ericsson Corporation, and E. F. Johnson Company. Of these commenters, Fairfield, SEA, and Securicor may be small businesses under the definition used in this analysis. Securicor is a corporation based in England. A sixth equipment manufacturer, Motorola, while not submitting formal comments, filed *ex parte* presentations in this proceeding.

commenters, who have developed radio equipment in the 220 MHz band using spectrally efficient technologies, argue that allowing aggregation of channels would severely jeopardize their ability to continue to develop and market their technology. The Commission decided in favor of allowing licensees to aggregate their channels, agreeing with those commenters who support allowing such aggregation because this type of flexibility will allow 220 MHz licensees to offer a wider variety of communications services and more effectively compete in the wireless marketplace. While allowing channel aggregation, the Commission agreed with SEA and Securicor that it should also require licensees and equipment manufacturers to meet a spectrum efficiency standard. In adopting a spectrum efficiency standard, the Commission sought to ensure that the 220 MHz band would continue to be a home for the development of spectrally efficient technologies.

The Commission proposed two classifications of non-nationwide 220 MHz licensing -- *i.e.*, Economic Area (EA) licenses and Regional licenses. Pagenet endorsed this proposal, noting that such assignments would be a ``complement to nationwide" licensing, and would allow ``participation by small, medium and large carriers in which local to nationwide service will be provided by a number of different licensees in each marketplace." (S *ee* para. 79). The Commission adopted this proposal. (*See* para. 80).

American Mobile Telecommunications Association (AMTA) and Comtech asked that no limit be placed on the number of channels a licensee may obtain within an EA or Region through our auction procedures. Comtech also asked that EA and Regional licensees not be required to construct a minimum number of channels at all of their base stations. The Commission adopted both of these proposals.

The Commission also adopted a proposal by Fairfield to allow for fixed operations on a secondary basis. In so doing, the Commission acknowledged the concerns of other commenters that such operations might cause interference to primary users of the band. We thus required secondary licensees to notify nearby primary users of their secondary facilities, limited secondary licensees' operating parameters beyond those initially proposed, and restricted secondary licensees from operating on public safety, Emergency Medical Radio Service (EMRS), or Federal Government 220-222 MHz channels.

A number of commenters asked that we provide greater protection to Phase I base stations than initially proposed. We decided to adopt our proposed co-channel protection criteria because we concluded that, *inter alia*, this decision would provide protection to Phase I base stations consistent with other recent Commission decisions establishing protection criteria in other mobile services. Commenters were also opposed to our proposal for limiting field strength at EA and Regional borders. We adopted our proposal in order to afford Phase II licensees the maximum degree of flexibility in designing their systems and to enable them to provide a quality signal at the borders of their service areas.

Association of Public-Safety Communications Officials-International (APCO) asked that we refrain from assigning the 125 non-nationwide channels not reserved for Public Safety or EMRS eligibles by competitive bidding in order to give public safety entities a realistic opportunity to obtain authorization for more than ten 220 MHz channels. We decided that such channels should be assigned through competitive bidding because we could not conclusively

determine the demand by public safety entities for 220 MHz channels, and because we intend to fully explore the spectrum needs of the public safety community in a future rulemaking proceeding.

A number of commenters urged the Commission to maintain a non-commercial set-aside for the 220 MHz service, arguing that there is a continuing demand for such a set-aside and that it is necessary for licensees' internal communications. Other commenters disagreed. We found that it would not be in the public interest to establish a non-commercial set-aside based in part on our continuing commitment to efficient use of the spectrum. As discussed in para. 42, we agree with those commenters who believe that it is unnecessary to set aside spectrum for exclusively internal communications, given the apparent demand for nationwide spectrum for the provision of service to the public and the fact that we are not precluding a nationwide licensee from using all or part of its spectrum for internal communications.

Commenters disagreed regarding how the Commission should treat pending applications for nationwide 220 MHz licenses. Many commenters urged the Commission to exercise its discretion to award the licenses through lotteries. Other commenters argued that the pending applications should be returned and the licenses should be awarded through auctions. We found that it would be in the public interest to return the pending applications for the 220 MHz service without prejudice and award the licenses through competitive bidding. We concluded that, because the nature of the 220 MHz service is undergoing a substantial change, it would be unfair to preclude new applicants from having the opportunity to apply for these licenses. We also noted that awarding licenses through auctions benefits the public by ensuring that licenses go to those who value them the most and to those who have an incentive to build their systems quickly, thereby speeding the provision of service to the public.

III. Description and Estimate of the Small Entities Involved:

The Commission anticipates receiving approximately 2,220 total applications for the Phase II 220 MHz service -- *i.e.*, 2,000 Public Safety applications (including 1,000 EMRS applications), 90 applications for Economic Area channels, 20 applications for Regional channels, 100 applications for secondary service, and 10 applications for nationwide channels. These applicants, many of whom may be small businesses, as well as approximately 3,800 Phase I 220 MHz licensees, many of whom may be small entities, and at least six equipment manufacturers, three of which may be small businesses, will be subject to the rules adopted in the *220 MHz Third Report and Order.*

The Commission has not developed a definition of small entities applicable to 220 MHz Phase I licensees, or equipment manufacturers for purposes of this Final Regulatory Flexibility Analysis, and since the Regulatory Flexibility Act amendments were not in effect until the record in this proceeding was closed, the Commission was unable to request information regarding the number of small businesses that are associated with the 220 MHz service. However, we have adopted criteria for defining small businesses and very small businesses for purposes of determining eligibility for auction bidding credits and installment payments. [4] We will therefore

[4] Approval from the Small Business Administration for this definition is pending.

use this definition for estimating the number of potential Phase II entities applying for auctionable spectrum that are small businesses. To estimate the number of Phase I licensees and the number of 220 MHz equipment manufacturers that are small businesses, and the number of Phase II entities applying for non-auctionable spectrum (*i.e.*, public safety and EMRS channels) we shall turn to the relevant definitions as provided by the Small Business Administration (SBA).

Phase I Licensees. There are approximately 3,800 non-nationwide Phase I licensees and 4 nationwide licensees currently authorized to operate in the 220 MHz band. To estimate the number of such entities that are small businesses, we apply the definition of a small entity under SBA rules applicable to radiotelephone companies. This definition provides that a small entity is a radiotelephone company employing fewer than 1,500 persons. [5] However, the size data provided by the SBA do not allow us to make a meaningful estimate of the number of 220 MHz providers that are small entities because they combine all radiotelephone companies with 500 or more employees.[6] We therefore use the 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of the Census, which is the most recent information available. Data from the Bureau of the Census' 1992 study indicate that only 12 out of a total 1,178 radiotelephone firms which operated during 1992 had 1,000 or more employees -- and these may or may not be small entities, depending on whether they employed more or less than 1,500 employees.[7] But 1,166 radiotelephone firms had fewer than 1,000 employees and therefore, under the SBA definition, are small entities. However, we do not know how many of these 1,166 firms are likely to be involved in the 220 MHz service.

Phase II Entities Applying for Auctionable Spectrum The *220 MHz Third Report and Order* adopts a two-tiered definition of small business for the purpose of competitive bidding. The Commission defines a ``very small business'' as an entity that, together with its affiliates and controlling principals, has average gross revenues for the three preceding years of not more than $3 million; and a ``small business'' as an entity that, together with affiliates and controlling principals, has average gross revenues for the three preceding years of not more than $15 million. For purposes of determining small business status, the Commission will attribute the gross revenues of all controlling principals in the small business applicant as well as the gross revenues of affiliates of the applicant. The Commission is not imposing specific equity requirements on the controlling principals that meet this small business definition. In order for an applicant to qualify as a small business, qualifying small business principals must maintain both *de facto* and *de jure* control of the applicant.

As noted above, the SBREFA was not in effect at the time the *Third Notice* was issued, so comment was not sought on the number of prospective Phase II applicants in the 220 MHz

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[5] 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

[6] U.S. Small Business Administration 1992 Economic Census Employment Report, Bureau of the Census, U.S. Department of Commerce, Table 3, SIC Code 4812 (radiotelephone communications industry data adopted by the SBA Office of Advocacy).

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

service which might qualify as small businesses. Therefore, the Commission cannot accurately predict the number of applicants in the 220 MHz service who will fit the description of a small business. However, using the definitions of small business and very small business we adopted for the purpose of determining eligibility for bidding credits and installment payments, the Commission can attempt to estimate the number of applicants for 220 MHz licenses that are small businesses by looking at the number of applicants in similar services that qualified as small businesses. For example, the 900 MHz SMR service utilized a definition of very small business based on gross revenues of not more than $3 million and a definition of small business based on gross revenues of not more than $15 million. A total of 128 applications were received in the 900 MHz SMR auction, and, of these applications, 71 qualified as very small businesses and an additional 30 qualified as small businesses.

Approximately 900 licenses will be made available for authorization in the 220 MHz auction. In the 900 MHz SMR auction, 1050 licenses were made available. Given that 128 qualified applications were received in the 900 MHz auction, we anticipate receiving slightly fewer, or 120 applications in the 220 MHz auction. Given that 71 applicants qualified as very small businesses and 30 applicants qualified as small businesses in the 900 MHz SMR auction, we estimate that proportionately fewer, or 65 applicants, will qualify as very small businesses, and 27 applicants will qualify as small businesses in the 220 MHz auction.

Phase II Entities Applying for Non-Auctionable Spectrum. We estimate that approximately 1,000 applications will be filed for authorization on the 220 MHz public safety channels, and we estimate that approximately 1,000 applications will be filed for authorization on the 220 MHz EMRS channels. To estimate the number of such applicants that are small entities, we apply the definition of a small entity under the SBA rules applicable to small governmental entities. The SBREFA requires that we estimate the number of governmental entities with populations of less than 50,000 for which our rules will apply.[8] According to the Census Bureau, 96 percent of the nation's counties, cities, and towns have populations of fewer than 50,000.[9] The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. We thus estimate that 96 percent of all governmental entities are small; and further estimate that, because the estimated 1,000 applications for the public safety channels will be from governmental entities, that 960 of these applications may be from small governmental entities. Some EMRS applicants will be governmental entities, while others will be non-governmental (*e.g.*, hospitals, ambulance services). Because we assume that *all* such non-governmental entities applying for EMRS licenses will be small entities, we estimate that a slightly higher percentage of applicants for EMRS licenses, or 98 percent of EMRS applicants, will be small entities. We therefore estimate that approximately 980 applications for the EMRS channels will be from small entities.

Radio Equipment Manufacturers. We anticipate that at least six radio equipment manufacturers will be affected by our decisions in this proceeding. According to the SBA's regulations, a radio and television broadcasting and communications equipment manufacturer must have 750 or fewer

[8] *See* 5 U.S.C. § 601(5) (including cities, counties, towns, townships, villages, school districts, or special districts).

[9] *See* 1992 Census of Governments, U.S. Bureau of the Census, U.S. Department of Commerce.

employees in order to qualify as a small business concern. [10] Census Bureau data indicate that there are 858 U.S. firms that manufacture radio and television broadcasting and communications equipment, and that 778 of these firms have fewer than 750 employees and would therefore be classified as small entities. [11] We do not have information that indicates how many of the six radio equipment manufacturers associated with this proceeding are among these 778 firms. However, because three of these manufacturers (Motorola, Ericsson and E.F. Johnson) are major, nationwide radio equipment manufacturers, we conclude that these manufacturers would *not* qualify as small businesses.

IV. Summary of the Projected Reporting, Recordkeeping, and Other Compliance Requirements:

The *220 MHz Third Report and Order* adopts a number of rules that will entail reporting, recordkeeping, and/or third party consultation. However, the Commission believes that these requirements are the minimum needed to ensure the integrity of the 220 MHz service. The Commission considers the effects of these requirements first on Phase II applicants and licensees and then on Phase I licensees.

Phase II Applicants. Applicants for the Phase II 220 MHz auction will be required to submit a completed FCC Form 175. Auction winners, as well as applicants for the 220 MHz public safety and EMRS channels, will be required to file a completed FCC Form 600. In addition, applicants for the 220 MHz EMRS channels, like all other EMRS applicants, must furnish a statement from the governmental body having jurisdiction over the state emergency plan indicating that the applicant is included in the emergency plan, or is otherwise supporting the application.

Phase II Licensees. Phase II licensees authorized on Channels 161-200 and Channels 1-40 will be required to coordinate among themselves to locate their base stations to avoid interference. Regional licensees operating on Channels 196-200 may operate stations at powers exceeding 2 watts ERP or at antenna heights greater than 20 feet provided that they obtain the written concurrence of all Phase I and Phase II licensees operating base stations on Channels 1-40 within 6 km of the base stations of the Regional licensees.

Phase II licensees operating secondary, fixed stations will be required to notify any co-channel primary licensees authorized in the area of their operation of the location of their secondary facilities. Phase II licensees implementing nationwide land mobile or paging systems will be required to meet construction ``benchmarks" and must submit maps and other supporting documentation to demonstrate compliance with these benchmarks five and ten years after grant of the initial license. Also, nationwide licensees implementing fixed systems, in lieu of meeting the construction benchmarks described above, may make a showing of ``substantial service" within five and ten years of the initial license grant. To comply with these requirements, such licensees must also submit maps and other supporting documents five and ten years after grant of the initial license. Regional licensees and EA licensees implementing land mobile, paging, or fixed systems

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[10] 13 C.F.R. § 121.201, (SIC) Code 3663.

[11] U.S. Dept. of Commerce, *1992 Census of Transportation, Communications and Utilities* (issued May 1995), SIC category 3663.

must also comply with 5- and 10-year construction or substantial service requirements and must also provide maps and other supporting documents to demonstrate compliance with such requirements. Preparation of maps and supporting documentation may involve engineering expertise. Failure by nationwide, EA, or Regional licensees to meet either the five- or ten-year construction requirement will result in automatic cancellation of the licensees' nationwide authorization.

Phase II licensees will not be permitted to construct their stations less than 120 km from a constructed and operating Phase I, co-channel station unless they submit a technical analysis demonstrating that the predicted 28 dBuV/m interfering contour of their base station does not overlap the predicted 38 dBuV/m service contour of the Phase I licensee's station. This technical analysis will involve engineering expertise. Phase II licensees may also locate their stations less than 120 km from the station of an existing Phase I co-channel licensee or with less 10 dB protection to such co-channel's station's 38 dBuV/m contour if the Phase II licensee obtains the written consent of the affected Phase I licensee. Finally, Phase II licensees operating in adjacent EAs or Regions may exceed the specified field strength limit at their border if all affected, co-channel EA and Regional licensees agree to the higher field strength.

Section 309(j)(4)(E) of the Communications Act directs the Commission to ``require such transfer disclosures and anti-trafficking restrictions and payment schedules as may be necessary to prevent unjust enrichment as a result of the methods employed to issue licenses and permits." [12] The Commission adopted safeguards designed to ensure that the requirements of this section are satisfied, including a transfer disclosure requirement for licenses obtained through the competitive bidding process for the 220 MHz service. An applicant seeking approval for a transfer of control or assignment of a license within three years of receiving a new license through a competitive bidding procedure must, together with its application for transfer of control or assignment, file with the Commission a statement indicating that its license was obtained through competitive bidding. Such applicant must also file with the Commission the associated contracts for sale, option agreements, management agreements, or other documents disclosing the total consideration that the applicant would receive in return for the transfer or assignment of its license.

With respect to small businesses, we have adopted unjust enrichment provisions to deter speculation and participation in the licensing process by those who do not intend to offer service to the public, or who intend to use the competitive bidding process to obtain a license at a lower cost than they would otherwise have to pay and to later sell it at a profit, and to ensure that large businesses do not become the unintended beneficiaries of measures meant to help small firms. Small business licensees seeking to transfer their licenses to entities which do not qualify as small businesses (or very small businesses seeking to transfer their licenses to small businesses or large companies), as a condition of approval of the transfer, must remit to the government a payment equal to a portion of the total value of the benefit conferred by the government.

Finally, applicants and licensees claiming eligibility for competitive bidding as a small business, a very small business, or a consortium of small businesses (or very small businesses) are

[12] 47 U.S.C. § 309(j)(4)(E).

subject to audits by the Commission. Selection for audit may be random, on information, or on the basis of other factors. Consent to such audit is part of the certification included in the short-form application (FCC Form 175).

Phase I Licensees: Phase I nationwide licensees intending to operate primary, fixed or paging operations instead of or in addition to their land mobile operations must revise their 10-year schedule for construction of their land mobile system to describe the fixed or paging system they intend to deploy. They must also certify that the financial showings and all other certifications they had previously provided in demonstrating their ability to construct and operate their nationwide land mobile system remain applicable to their planned, primary fixed or paging system, or they must revise their financial showings and provide all other relevant certifications to demonstrate their ability to construct and operate a nationwide, primary fixed or paging system. These certifications and showings may involve engineering and financial expertise. The Commission anticipates that two Phase I licensees will seek to deploy primary fixed or paging operations.

Phase I nationwide licensees intending to operate primary fixed systems will be required to comply with existing construction, recordkeeping, and reporting requirements, but, rather than constructing base stations (for base and mobile operations) and placing them in operation to meet their 4-, 6- and 10-year construction benchmarks, must demonstrate how their fixed stations are providing ``substantial service'' to the public. This demonstration of substantial service will be provided in the same form as documentation currently required for nationwide Phase I licensees providing evidence of the construction of their primary land mobile systems.

All 220 MHz Licensees. All 220 MHz licensees seeking renewal of their authorizations will be required, *inter alia*, to demonstrate that they have provided substantial service during their past license term, and submit a showing explaining why they should receive a renewal expectancy.

V. Significant Alternatives and Steps Taken by Agency to Minimize the Significant Economic Impact on a Substantial Number of Small Entities Consistent With Stated Objectives.

The Commission's chief objectives in adopting the *220 MHz Third Report and Order* are to establish a regulatory plan for the 220 MHz service that will allow for the efficient licensing and use of the service, to eliminate unnecessary regulatory burdens, to enhance the competitive potential of the 220 MHz service in the mobile services marketplace, to provide a wide variety of radio services to the public, and to continue to provide a home for the development of spectrally efficient technologies. A number of the Commission's original proposals were modified in order to minimize the significant economic impact on small entities consistent with these objectives, based on issues and suggestions raised in the public comment.

For example, the Commission made significant changes to the proposed Phase II channel band plan based on an analysis of the comments. Most of the commenters favored the assignment of larger numbers of channels to individual EA and Regional licensees than the proposed 5-channel blocks. The Commission concurred with the commenters' argument that proposed 5-channel blocks would unjustly inhibit licensees' revenue-producing ability and therefore decided to authorize 10- and 15-channel EA and Regional assignments, respectively. We concluded that

adoption of a licensing scheme that provides for 10-channel and 15-channel assignments should enable Phase II licensees, many of which are likely to be small businesses, to establish more viable radio services. Commenters were also generally opposed to the Commission's use of contiguous channel assignments in our proposed Phase II band plan after having previously adopted predominantly non-contiguous assignments in Phase I. The Commission found merit in the argument of those who emphasized the difficulties that are likely to be encountered by both Phase I licensees and Phase II licensees, many of which are likely to be small businesses, if we adopted completely inconsistent Phase II and Phase I band plans. We therefore adopted a Phase II band plan that mirrored the existing Phase I plan. We concluded that adopting a Phase II band plan patterned after the Phase I plan will benefit both Phase I and Phase II licensees because Phase I licensees will be able to more easily expand on their existing authorized channels, and Phase II licensees will be able to more easily provide protection to co-channel Phase I licensees. In addition, at the suggestion of a commenter, we decided not to require EA, Regional or nationwide licensees to construct a minimum number of channels at all of their base stations.

In order to provide licensees with maximum flexibility to employ a variety of technologies, the Commission decided to allow them to aggregate their contiguous channels. However, in so doing the Commission agreed with the views of commenters SEA and Securicor and adopted a spectrum efficiency standard. In adopting a spectrum efficiency standard, we rejected other commenters' arguments that a standard is not necessary because licensees acquiring spectrum assigned on contiguous channels through competitive bidding will have an incentive to use that spectrum as efficiently as possible, and that adoption of a particular spectrum efficiency standard could limit the types of services that licensees would be able to provide. The Commission concluded that a standard was needed to ensure that the 220 MHz band would continue to be a home for the development of spectrum efficient technologies.

The Commission also attempted, wherever possible, to offer licensees the most flexibility with a minimum regulatory burden. For example, the Commission elected to allow Phase I and Phase II licensees the flexibility to conduct paging operations on a primary basis. The commenters were divided on this issue. Commenters opposed to allowing paging on a primary basis maintained that to do so would transform the 220 MHz band into merely an additional band for the provision of paging services, and that this would be unfair to existing paging licensees in other bands. These commenters argued that there are a sufficient number of paging bands already in existence and that the 220 MHz band should continue to be used to advance the development of narrowband technology. The Commission, however, decided to allow paging on a primary basis in the 220 MHz band in order to provide additional spectrum for a rapidly growing communications service and to enable 220 MHz licensees to compete more effectively in the wireless marketplace.

The Commission also decided to allow 220 MHz licensees to conduct fixed operations on a primary basis to provide them with the flexibility to offer a wider array of communications services to the public. Similarly, the Commission decided that 220 MHz licensees conducting geophysical telemetry operations should be permitted to obtain secondary authorizations to operate their fixed facilities on a non-interference basis to licensees authorized to operate on a primary basis. In making this decision, the Commission acknowledged concerns raised by commenters about possible interference to primary operations, but concluded that the risk of

interference from secondary, geophysical telemetry operations was minimal, and that such operations should therefore be allowed.

In prescribing rules for the 220 MHz service auction, we initially proposed to begin by auctioning the nationwide licenses and the Regional licenses in one simultaneous multiple round auction. We proposed to then auction the economic area (EA) licenses in a subsequent auction. The SMR Advisory Group supported this approach. After further consideration, however, we concluded that all three categories of licenses are highly interdependent. Grouping such licenses and putting them up for bid at the same time facilitates awarding licenses to bidders who value them the most highly by providing bidders, including small businesses, with information about the prices of complementary and substitutable licenses during the course of an auction. We therefore announced our plan to hold a single, simultaneous multiple round auction for all classes of licenses. We did, however, reserve the discretion to auction each of these license groupings (nationwide, Regional, EA) separately or in different combinations (*e.g.*, nationwide and Regional together) if there are administrative reasons for doing so.

In establishing bidding procedures, the Commission proposed the use of the Milgrom-Wilson activity rule. We proposed a minimum activity level requiring bidders to be active on at least one-third of the MHz-pops for which they are eligible in Stage I, two-thirds of the MHz-pops for which they are eligible in Stage II, and 100 percent of the MHz-pops for which they are eligible in Stage III. The SMR Advisory Group and AMTA supported use of the Milgrom-Wilson activity rule. However, NTIA stated that requiring a 100 percent level of activity in Stage III may inhibit bidder flexibility and be unduly restrictive. We agree with NTIA and decided not to require a 100 percent level of activity in Stage III. Moreover, in order to enhance bidder flexibility at the end of the auction and to make the figures easier to administer, we eliminated the use of fractions. Thus, we adopted eligibility levels of 60 percent, 80 percent, and 98 percent, for Stages I, II, and III, respectively. This change will benefit all bidders, including small businesses.

In establishing auction rules for the 220 MHz service, the Commission adopted a number of provisions to support the participation of small businesses. For example, the Commission established bidding credits and an installment payment plan, designed to increase the opportunities for small businesses to become 220 MHz service providers. In addition, the Commission established rules for the partitioning of geographic area licenses, which will increase opportunities for small businesses to participate in the 220 MHz service. Through partitioning, small businesses may acquire licenses for portions of geographic areas, a less expensive alternative to acquiring a license for an entire area.

The Commission initially proposed to define small business, for purposes of eligibility for such provisions as bidding credits and installment payments as follows: for companies wishing to bid on nationwide and Regional licenses, we proposed to define small businesses as those entities with $15 million or less in average annual gross revenues for the preceding three years. For EA licenses, we proposed to define small businesses as those entities with $6 million or less in average annual gross revenues for the preceding three years. AMTA and the SMR Advisory Group agreed with this definition. We concluded, however, that while the nationwide and Regional Phase II 220 MHz licenses would have higher build-out and operational costs than would the EA licenses, it is likely that bidders will attempt to aggregate licenses across regions or EAs to establish their markets. Thus, for example, bidders may elect to aggregate EA licenses to create a

Regional market, rather than bid for the Regional license itself. In order to ensure the meaningful participation of small business entities in the auction, we adopted a two-tiered definition of small business with gross revenues limits applicable across all three categories of license. This approach will give qualifying small businesses flexibility to bid for a Regional license or, on the other hand, elect to bid for several EAs, without having to choose which type of license to bid for prior to the start of the auction. For purposes of bidding for the nationwide, Regional and EA licenses, therefore, we defined (1) a very small business as an entity that, together with its affiliates and controlling principals, has average gross revenues for the three preceding years of no more than $3 million and (2) a small business as an entity that, together with affiliates and controlling principals, has average gross revenues for the preceding three years of no more than $15 million. Defining a ``very small business'' at the $3 million threshold, rather than at the $6 million threshold, is consistent with the definitions successfully used in the 900 MHz SMR service, where build-out costs are similar to those in the 220 MHz service. Bidding credits are based upon this two-tiered approach.

We disagreed with the suggestion of Metricom that we should increase the gross revenues threshold of our small business definition to $25 million, because, based upon our experience in the 900 MHz SMR auction, such an increase would be far too inclusive. In the 900 MHz SMR auction, we established small business definitions of $15 million and $3 million. Of the 128 applicants that qualified to participate in the auction, 101 qualified for the small business or very small business bidding credits. Because we believe the cost of building out a 220 MHz system most closely resembles the cost of a 900 MHz SMR system, and because it would substantially dilute the value of the small business preferences for virtually all applicants to qualify for them, we declined to adopt the Metricom proposal.

For purposes of determining small business status, we will attribute the gross revenues of the applicant, all controlling principals of the applicant, and their affiliates. This is a much simpler approach than we utilized in broadband PCS, because it does not require a control group. We will still require, however, that in order for an applicant to qualify as a small business, qualifying small business principals must maintain ``control'' of the applicant, including both *de facto* and *de jure* control. Thus, small businesses will have less difficulty determining their eligibility. We declined to adopt Comtech's suggestion that, for determining whether an entity qualifies as a small business, revenues and assets of investors holding more than 25 percent of an applicant's voting stock and revenues and assets of all affiliates should be attributable to the applicant. Our approach is a more accurate indicator of the control of an applicant.

With respect to bidding credits, in order to ensure that small businesses have a realistic opportunity to acquire Phase II 220 MHz nationwide and Regional licenses, we proposed a 40 percent bidding credit for all qualified designated entities. For Phase II 220 MHz nationwide licenses, we proposed, *inter alia,* to offer this bidding credit on only one of the available channel blocks. For Phase II 220 MHz Regional licenses, we proposed to offer the bidding credit on all available channel blocks. Because we believed that the Phase II 220 MHz EA licenses are similar in their number and in the level of incumbency to the licenses offered in the 900 MHz SMR service, we proposed offering the same 10 percent bidding credit to qualified small businesses bidding on Phase II 220 MHz EA licenses as we did in the 900 MHz SMR auction. SMR Advisory Group supported these proposals. AMTA, U.S. MobilComm, Roamer, and Incom also supported these proposals, although they supported bidding credits solely for regional and EA

licenses. Comtech agreed with a 40 percent bidding credit for Regional licenses, but suggested this credit should be extended to all nationwide licenses as well.

We concluded, however, that small businesses are in the best position to decide which blocks of licenses to bid on. As we have stated, based upon our experience in prior auctions, it is very likely that bidders will attempt to aggregate Regional and EA licenses in the development of their bidding strategies, particularly if these licenses are auctioned together. Thus, in order to enhance bidder flexibility, we elected to establish bidding credits consistent with our two-tiered definition of small business that will apply to all three license groups. For very small businesses that, together with affiliates and controlling principals, have average gross revenues for the three preceding years of not more than $3 million, we will give a 25 percent bidding credit, applicable for all three categories of licenses. Likewise, we will give small businesses that, together with affiliates and controlling principals, have average gross revenues for the three preceding years of not more than $15 million, a bidding credit of 10 percent, available for all three categories of licenses. While the 25 percent bidding credit is less than originally proposed for the nationwide and Regional licenses, we believe it is appropriate since we are now going to offer bidding credits generally for all channel blocks. Moreover, we had favorable results -- *i.e.*, a significant number of small business applicants were winning bidders -- in previous auctions with bidding credits at this level or lower.

We initially proposed the use of installment payments and reduced down payments for all small businesses bidding for any of the Phase II 220 MHz nationwide, Regional and EA licenses. The SMR Advisory Group supported these positions. We also tentatively concluded that reduced upfront payments for small businesses would be unnecessary.

We adopted an installment payment plan for small businesses and very small businesses participating in the 220 MHz auction. We declined to provide very small businesses with a longer interest-only period than the two-year period provided for small businesses. We determined that a two-year interest-only period in the single plan we adopted provides all small businesses with the appropriate level of financing to overcome difficulties in attracting capital. Given that we are making additional financial assistance available to very small businesses in the form of a 25 percent bidding credit, we concluded that a longer interest-only period is not needed. We also concluded that small businesses should not be permitted to pay a reduced down payment. As we stated in the case of the broadband PCS D, E and F Block auction, we believe that a substantial down payment is necessary to ensure that winning bidders have the financial capability of building out their systems, and will provide us with stronger assurance against defaults than a reduced down payment. Increasing the amount of the bidder's funds at risk in the event of default discourages insincere bidding and therefore increases the likelihood that licenses are awarded to parties who are best able to serve the public. We also believe that a 20 percent down payment should cover the required payments in the unlikely event of default.

Finally, we elected not to adopt a spectrum set-aside for designated entities, including small businesses. Because there will be both a large number and a large variety of licenses available in the Phase II 220 MHz auction, we decided not to adopt an entrepreneur's block for this service. Small businesses, we concluded, will have a significant opportunity to compete for Phase II 220 MHz licenses, particularly given the special provisions adopted for small businesses.

In making its various decisions in this proceeding, the Commission considered all available alternatives. It believes that the rules it has adopted in this decision represent the best balance of providing licensees, many of whom are small businesses, with the most flexibility and the smallest regulatory burden, and enables them to offer a variety of radio services to the public and compete effectively in the mobile communications marketplace.

VI. Report to Congress

The Commission shall send a copy of this Final Regulatory Flexibility Analysis (FRFA) along with this *220 MHz Third Report and Order,* in a report to Congress pursuant to 5 U.S.C. § 801(a)(1)(A). A copy of this FRFA will also be published in the *Federal Register.*

APPENDIX B

REVISIONS TO COMMISSION RULES

Parts 2 and 90 of Title 47 of the Code of Federal Regulations are amended as follows:

PART 2 -- FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for Part 2 continues to read as follows:

AUTHORITY: Sections 4, 302, 303, and 307 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154, 302, 303, and 307, unless otherwise noted.

2. Section 2.106, the Table of Frequency Allocations, is amended as follows:

a. Revise entries for 220-222 MHz;

b. Remove international footnote 625; and

c. Add United States footnote US335.

§ 2.106 Table of Frequency Allocations.

* * * * *

International table			United States table		FCC use designators	
Region 1 -- allocation MHz	Region 2 -- allocation MHz	Region 3 -- allocation MHz	Government	Non-Government	Rule part(s)	Special-use frequencies
			Allocation MHz	Allocation MHz		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
220 - 222 BROADCASTING 621 623 628 629	220 - 222 AMATEUR FIXED MOBILE Radiolocation 627	220 - 222 FIXED MOBILE BROADCASTING 626	220 - 222 FIXED LAND MOBILE Radiolocation 627 G2 US335	220 - 222 FIXED LAND MOBILE 627 US335	PRIVATE LAND MOBILE (90)	
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *

UNITED STATES (US) FOOTNOTES

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US335 The primary Government and non-Government allocations for the various segments of the 220-222 MHz band are divided as follows: (1) the 220.0-220.55/221.0-221.55, 220.6-220.8/221.6-221.8, 220.85-220.90/221.85-221.90 and 220.925-221.0/221.925-222.0 MHz bands (Channels 1-110, 121-160, 171-180 and 186-200, respectively) are available for exclusive non-Government use; (2) the 220.55-220.60/221.55-221.60 MHz bands (Channels 111-120) are available for exclusive Government use; and (3) the 220.80-220.85/221.80-221.85 and 220.900-220.925/221.900-221.925 MHz bands (Channels 161-170 and 181-185, respectively) are available for shared Government and non-Government use. The exclusive non-Government band segments are also available for temporary fixed geophysical telemetry operations on a secondary basis to the fixed and mobile services.

* * * * *

PART 90 - PRIVATE LAND MOBILE RADIO SERVICES

1. The authority citation for Part 90 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 303, 309 and 332, unless otherwise noted.

2. Section 90.7 is amended by revising the definitions for ``EA-based or EA license" and ``Economic Areas (EAs)," and by adding definitions for ``Geophysical Telemetry," ``Regional Economic Area Groupings (REAGs)," ``Regional License," and ``220 MHz Service" in alphabetical order to read as follows:

Section 90.7 Definitions.

* * * * *

EA-based or EA license. A license authorizing the right to use a specified block of SMR and 220-222 MHz spectrum within one of 175 Economic Areas (EAs) as defined by the Department of Commerce Bureau of Economic Analysis. The EA Listings and the EA Map are available for public inspection at the Wireless Telecommunications Bureau's public reference room, Room 5608, 2025 M St. NW, Washington, DC 20554 and Office of Operations -- Gettysburg, 1270 Fairfield Road, Gettysburg, PA 17325.

Economic Areas (EAs). A total of 175 licensing regions based on the United States Department of Commerce Bureau of Economic Analysis Economic Areas (see 60 FR 13114 (March 10, 1995)) defined as of February 1995, with the following exceptions:

(1) Guam and Northern Mariana Islands are licensed as a single EA-like area (identified as EA 173 in the 220 MHz Service);

(2) Puerto Rico and the U.S. Virgin Islands are licensed as a single EA-like area (identified as EA 174 in the 220 MHz Service); and

(3) American Samoa is licensed as a single EA-like area (identified as EA 175 in the 220 MHz Service).

* * * * *

Geophysical Telemetry. Telemetry involving the simultaneous transmission of seismic data from numerous locations to a central receiver and digital recording unit.

* * * * *

Regional Economic Area Groupings (REAGs). The six geographic areas for Regional licensing in the 220-222 MHz band, based on the United States Department of Commerce Bureau of Economic Analysis Economic Areas (see 60 FR 13114 (March 10, 1995)) defined as of February 1995, and specified as follows:

REAG 1 (Northeast): REAG 1 consists of the following EAs: EA 001 (Bangor, ME) through EA 011 (Harrisburg-Lebanon-Carlisle, PA); and EA 054 (Erie, PA).

REAG 2 (Mid-Atlantic): REAG 2 consists of the following EAs: EA 012 (Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD) through EA 026 (Charleston-North Charleston, SC); EA 041 (Greenville-Spartanburg-Anderson, SC-NC); EA 042 (Asheville, NC); EA 044 (Knoxville, TN) through EA 053 (Pittsburgh, PA-WV); and EA 070 (Louisville, KY-IN).

REAG 3 (Southeast): REAG 3 consists of the following EAs: EA 027 (Augusta-Aiken, GA-SC) through EA 040 (Atlanta, GA-AL-NC); EA 043 (Chattanooga, TN-GA); EA 069 (Evansville-Henderson, IN-KY-IL); EA 071 (Nashville, TN-KY) through EA 086 (Lake Charles, LA); EA 088 (Shreveport-Bossier City, LA-AR) through EA 090 (Little Rock-North Little Rock, AR); EA 095 (Jonesboro, AR-MO); EA 096 (St. Louis, MO-IL); and EA 174 (Puerto Rico and the U.S. Virgin Islands).

REAG 4 (Great Lakes): REAG 4 consists of the following EAs: EA 055 Cleveland-Akron, OH-PA) through EA 068 (Champaign-Urbana, IL); EA 097 (Springfield, IL-MO); and EA 100 (Des Moines, IA-IL-MO) through EA 109 (Duluth-Superior, MN-WI).

REAG 5 (Central/Mountain): REAG 5 consists of the following EAs: EA 087 (Beaumont-Port Arthur, TX); EA 091 (Forth Smith, AR-OK) through EA 094 (Springfield, MO); EA 098 (Colombia, MO); EA 099 (Kansas City, MO-KS); EA 110 (Grand Forks, ND-MN) through EA 146 (Missoula, MT); EA 148 (Idaho Falls, ID-WY); EA 149 (Twin Falls, ID); EA 152 (Salt Lake City-Ogden, UT-ID); and EA 154 (Flagstaff, AZ-UT) through EA 159 (Tucson, AZ).

REAG 6 (Pacific): REAG 6 consists of the following EAs: EA 147 (Spokane, WA-ID); EA 150 (Boise City, ID-OR); EA 151 (Reno, NV-CA); EA 153 (Las Vegas, NV-AZ-UT); EA 160 (Los Angeles-Riverside-Orange County, CA-AZ) through EA 173 (Guam and the Northern Mariana Islands); and EA 175 (American Samoa).

Regional License. A license authorizing the right to use a specified block of 220-222 MHz spectrum within one of six Regional Economic Area Groupings (REAGs).

* * * * *

220 MHz Service. The radio service for the licensing of frequencies in the 220-222 MHz band.

* * * * *

3. Section 90.41(a) is revised to read as follows:

Section 90.41 Disaster relief organizations.

(a) Eligibility. Organizations established for disaster relief purposes having an emergency radio communications plan are eligible to hold authorizations to operate radio stations for the transmission of communications relating to the safety of life or property, the establishment and maintenance of temporary relief facilities, and the alleviation of emergency situations during periods of actual or impending emergency, or disaster, and until substantially normal conditions are restored. In addition, the stations may be used for training exercises, incidental to the emergency communications plan, and for operational communications of the disaster relief organization or its chapter affiliates.

* * * * *

4. Section 90.137 is amended by revising paragraph (a)(3) to read as follows:

Section 90.137 Applications for operation at temporary locations.

(a) * * *

(3) Applications for operation at temporary locations exceeding 180 days must be accompanied by evidence of frequency coordination, except that applications for operation at temporary locations exceeding 180 days by applicants using 220-222 MHz spectrum for geophysical telemetry operations need not be accompanied by evidence of frequency coordination.

* * * * *

5. Section 90.203 is amended by adding paragraph (k) to read as follows:

Section 90.203 Type acceptance required.

* * * * *

(k) (1) For transmitters operating on frequencies in the 220-222 MHz band, type acceptance will only be granted for equipment with channel bandwidths up to 5 kHz, except that type acceptance will be granted for equipment operating on 220-222 MHz band Channels 1 through 160 (220.0025 through 220.7975/221.0025 through 221.7975), 171 through 180 (220.8525 through 220.8975/221.8525 through 221.8975), and 186 through 200 (220.9275 through 220.9975/221.9275 through 221.9975) with channel bandwidths greater than 5 kHz if the equipment meets the following spectrum efficiency standard: applications for Part 90 type acceptance of transmitters designed to operate on frequencies in the 220-222 MHz band must include a statement that the equipment meets a spectrum efficiency standard of at least one voice channel per 5 kHz of channel bandwidth (for voice communications), and a data rate of at least 4,800 bits per second per 5 kHz of channel bandwidth (for data communications). Type acceptance for transmitters operating on 220-222 MHz band Channels 1 through 160 (220.0025 through 220.7975/221.0025 through 221.7975), 171 through 180 (220.8525 through 220.8975/221.8525 through 221.8975), and 186 through 200 (220.9275 through 220.9975/221.9275 through 221.9975) with channel bandwidths greater than 5 kHz will be granted without the requirement that a statement be included that the equipment meets the spectrum efficiency standard if the requests for type acceptance of such transmitters are filed after December 31, 2001.

(2) Type acceptance may be granted on a case-by-case basis by the Commission's Equipment Authorization Division for equipment operating on 220-222 MHz band Channels 1 through 160 (220.0025 through 220.7975/221.0025 through 221.7975), 171 through 180 (220.8525 through 220.8975/221.8525 through 221.8975), and 186 through 200 (220.9275 through 220.9975/221.9275 through 221.9975) with channel bandwidths greater than 5 kHz and not satisfying the spectrum efficiency standard identified in paragraph (k)(1) of this section, if requests for Part 90 type acceptance of such transmitters are accompanied by a technical analysis that satisfactorily demonstrates that the transmitters will provide more spectral efficiency than that which would be provided by use of the spectrum efficiency standard.

6. Section 90.701 is revised to read as follows:

Section 90.701 Scope.

(a) Frequencies in the 220-222 MHz band are available for land mobile and fixed use for both Government and non-Government operations. This subpart sets out the regulations governing the licensing and operation of non-Government systems operating in the 220-222 MHz band. It includes eligibility requirements, application procedures, and operational and technical standards for stations licensed in these bands. The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in this part; however, in case of conflicts, the provisions of this subpart shall govern with respect to licensing and operation in this frequency band.

(b) (1) Licensees granted initial authorizations for operations in the 220-222 MHz band from among applications filed on or before May 24, 1991 are referred to in this subpart as ``Phase I'' licensees;

(2) Applicants that filed initial applications for operations in the 220-222 MHz band on or before May 24, 1991 are referred to in this subpart as ``Phase I'' applicants; and

(3) All assignments, operations, stations, and systems of licensees granted authorizations from among applications filed for operations in the 220-222 MHz band on or before May 24, 1991 are referred to in this subpart as ``Phase I'' assignments, operations, stations, and systems, respectively.

(c) (1) Licensees granted initial authorizations for operations in the 220-222 MHz band from among applications filed after May 24, 1991 are referred to in this subpart as ``Phase II'' licensees;

(2) Applicants that filed initial applications for operations in the 220-222 MHz band after May 24, 1991 are referred to in this subpart as ``Phase II'' applicants; and

(3) All assignments, operations, stations, and systems of licensees granted authorizations from among applications filed for operations in the 220-222 MHz band after May 24, 1991 are referred to in this subpart as ``Phase II'' assignments, operations, stations, and systems, respectively.

(d) The rules in this subpart apply to both Phase I and Phase II licensees, applicants, assignments, operations, stations, and systems, unless otherwise specified.

7. Section 90.705 is revised to read as follows:

Section 90.705 Forms to be used.

Phase II applications for EA, Regional, or Nationwide radio facilities under this subpart must be prepared in accordance with Section 90.1009 and 90.1013. Phase II applications for radio facilities operating on public safety/mutual aid channels (Channels 161 through 170) or Emergency Medical Radio Service channels (Channels 181 through 185) under this subpart must be prepared on FCC Form 600 and submitted or filed in accordance with Section 90.127.

8. Paragraphs (a) and (c) of Section 90.709 are revised and paragraph (e) is added to read as follows:

Section 90.709 Special limitations on amendment of applications and on assignment or transfer of authorizations licensed under this subpart.

(a) Except as indicated in paragraph (b) of this section, the Commission will not consent to the following:

(1) Any request to amend an application so as to substitute a new entity as the applicant;

(2) Any application to assign or transfer a license for a Phase I, non-nationwide system prior to the completion of construction of facilities; or

(3) Any application to transfer or assign a license for a Phase I nationwide system before the licensee has constructed at least 40 percent of the proposed system pursuant to the provisions of Section 90.725(a) or Section 90.725(h), as applicable.

* * * * *

(c) The assignee or transferee of a Phase I nationwide system is subject to the construction benchmarks and reporting requirements of Section 90.725. The assignee or transferee of a Phase I nationwide system is not subject to the entry criteria described in Section 90.713.

* * * * *

(e) The assignee or transferee of a Phase II system is subject to the provisions of Section 90.1017 and Section 1.2111(a) of this chapter.

9. Section 90.711 is revised to read as follows:

Section 90.711 Processing of Phase II applications.

(a) Phase II applications for authorizations on Channels 166 through 170 and Channels 181 through 185 will be processed on a first-come, first-served basis. When multiple applications are filed on the same day for these frequencies in the same geographic area, and insufficient frequencies are available to grant all applications (*i.e.*, if all applications were granted, violation of the station separation provisions of Sec. 90.723(i) would result), these applications will be considered mutually exclusive and will be subject to random selection procedures pursuant to Section 1.972 of this chapter.

(1) All applications will first be considered to determine whether they are substantially complete and acceptable for filing. If so, they will be assigned a file number and put in pending status. If not, they will be dismissed.

(2) Except as otherwise provided in this section, all applications in pending status will be processed in the order in which they are received, determined by the date on which the application was received by the Commission in its Gettysburg, Pennsylvania office (or the address set forth at Section 1.1102 of this chapter for applications requiring the fees established by part 1, subpart G of this chapter).

(3) Each application that is accepted for filing will then be reviewed to determine whether it can be granted. Frequencies will be assigned by the Commission pursuant to the provisions of Section 90.723.

(4) An application which is dismissed will lose its place in the processing line.

(5) If an application is returned for correction and resubmitted and received by the Commission within 60 days from the date on which it was returned to the applicant, it will retain its place in the processing line. If it is not received within 60 days, it will lose its place in the

processing line.

(b) All applications for Channels 161 through 165 that comply with the applicable rules of this part shall be granted. Licensees operating on such channels shall cooperate in the selection and use of frequencies and resolve any instances of interference in accordance with the provisions of Section 90.173.

(c) Phase II applications for authorization on all non-Government channels other than Channels 161 through 170 and 181 through 185 shall be processed in accordance with the provisions of Subpart W of this part.

10. Section 90.713 is revised to read as follows:

Section 90.713 Entry criteria.

(a) As set forth in Section 90.717, four 5-channel blocks are available for nationwide, commercial use to non-Government, Phase I applicants. Applicants for these nationwide channel blocks must comply with paragraphs (b), (c), and (d) of this section.

(b) (1) An applicant must include certification that, within ten years of receiving a license, it will construct a minimum of one base station in a least 70 different geographic areas designated in the application; that base stations will be located in a minimum of 28 of the 100 urban areas listed in Section 90.741; and that each base station will have all five assigned nationwide channels constructed and placed in operation (regularly interacting with mobile and/or portable units).

(2) An applicant must include certification that it will meet the construction requirements set forth in Section 90.725.

(3) An applicant must include a ten-year schedule detailing plans for construction of the proposed system.

(4) An applicant must include an itemized estimate of the cost of constructing 40 percent of the system and operating the system during the first four years of the license term.

(5) An applicant must include proof that the applicant has sufficient financial resources to construct 40 percent of the system and operate the proposed land mobile system for the first four years of the license term; *i.e.*, that the applicant has net current assets sufficient to cover estimated costs or a firm financial commitment sufficient to cover estimated costs.

(c) An applicant relying on personal or internal resources for the showing required in paragraph (b) of this section must submit independently audited financial statements certified within one year of the date of the application showing net current assets sufficient to meet estimated construction and operating costs. An applicant must also submit an unaudited balance sheet, current within 60 days of the date of submission, that clearly shows the continued availability of sufficient net current assets to construct and operate the proposed system, and a certification by the applicant or an officer of the applicant organization attesting to the validity of the balance sheet.

(d) An applicant submitting evidence of a firm financial commitment for the showing required in paragraph (b) of this section must obtain the commitment from a bona fide commercially acceptable source, *e.g.*, a state or federally chartered bank or savings and loan institution, other recognized financial institution, the financial arm of a capital equipment supplier, or an investment banking house. If the lender is not a state or federally chartered bank or savings and loan institution, other recognized financial

institution, the financial arm of a capital equipment supplier, or an investment banking house, the lender must also demonstrate that it has funds available to cover the total commitments it has made. The lender's commitment shall contain a statement that the lender:

(1) Has examined the financial condition of the applicant including an audited financial statement, and has determined that the applicant is creditworthy;

(2) Has examined the financial viability of the proposed system for which the applicant intends to use the commitment; and

(3) Is willing, if the applicant is seeking a Phase I, commercial nationwide license, to provide a sum to the applicant sufficient to cover the realistic and prudent estimated costs of construction of 40 percent of the system and operation of the system for the first four years of the license term.

(e) A Phase II applicant for authorization in a geographic area for Channels 166 through 170 in the public safety/mutual aid category may not have any interest in another pending application in the same geographic area for Channels 166 through 170 in the public safety/mutual aid category, and a Phase II applicant for authorization in a geographic area for channels in the Emergency Medical Radio Service (EMRS) category may not have any interest in another pending application in the same geographic area for channels in the EMRS category.

11. Section 90.717 is revised to read as follows:

Section 90.717 Channels available for nationwide systems in the 220-222 MHz band.

(a) Channels 51-60, 81-90, and 141-150 are 10-channel blocks available to non-Government applicants only for nationwide Phase II systems.

(b) Channels 21-25, 26-30, 151-155, and 156-160 are 5-channel blocks available to non-Government applicants only for nationwide, commercial Phase I systems.

(c) Channels 111-115 and 116-120 are 5-channel blocks available for Government nationwide use only.

12. Section 90.719 is revised to read as follows:

Section 90.719 Individual channels available for assignment in the 220-222 MHz band.

(a) Channels 171 through 200 are available to both Government and non-Government Phase I applicants, and may be assigned singly or in contiguous channel groups.

(b) Channels 171 through 180 are available for any use by Phase I applicants consistent with this subpart.

(c) Channels 181 through 185 are set aside for Phase II Emergency Medical Radio Service (EMRS) use under subpart B of this part.

(d) Channels 161 through 170 and 181 through 185 are the only 220-222 MHz channels available to Phase II non-nationwide, Government users.

13. Section 90.720 is revised to read as follows:

Section 90.720 Channels available for public safety/mutual aid.

(a) Part 90 licensees whose licenses reflect a two-letter radio service code beginning with the letter ``P" (except for licensees whose licenses reflect a two-letter radio service code beginning with the letters ``PS" and are not eligible under Sections 90.35, 90.37, 90.41, and 90.45) are authorized by this rule to use mobile and/or portable units on Channels 161-170 throughout the United States, its territories, and possessions to transmit:

(1) Communications relating to the immediate safety of life;

(2) Communications to facilitate interoperability among public safety entities and Special Emergency Radio Service (SERS) entities eligible under Sections 90.35, 90.37, 90.41 and 90.45; or

(3) Communications on behalf of and by members of organizations established for disaster relief purposes having an emergency radio communications plan (*i.e.*, licensees eligible under Section 90.41) for the transmission of communications relating to the safety of life or property, the establishment and maintenance of temporary relief facilities, and the alleviation of emergency conditions during periods of actual or impending emergency, or disaster, until substantially normal conditions are restored; for limited training exercises incidental to an emergency radio communications plan, and for necessary operational communications of the disaster relief organization or its chapter affiliates.

(b) Any Government entity and any non-Government entity eligible to obtain a license under Subpart B of this part or eligible to obtain a license under Sections 90.35, 90.37, 90.41 and 90.45 is also eligible to obtain a license for base/mobile operations on Channels 161 through 170. Base/mobile or base/portable communications on these channels that do not relate to the immediate safety of life or to communications interoperability among public safety entities and the above- specified SERS entities, may only be conducted on a secondary non-interference basis to such communications.

14. Section 90.721 is revised to read as follows:

Section 90.721 Other channels available for non-nationwide systems in the 220-222 MHz band.

(a) The channel groups listed in the following Table are available to both Government and non-Government Phase I applicants for trunked operations or operations of equivalent or greater efficiency for non-commercial or commercial operations.

Table 1--Phase I Trunked Channel Groups

Group No.	Channel Nos.
1	1-31-61-91-121
2	2-32-62-92-122
3	3-33-63-93-123
4	4-34-64-94-124
5	5-35-65-95-125
6	6-36-66-96-126
7	7-37-67-97-127
8	8-38-68-98-128
9	9-39-69-99-129
10	10-40-70-100-130
11	11-41-71-101-131
12	12-42-72-102-132
13	13-43-73-103-133
14	14-44-74-104-134
15	15-45-75-105-135
16	16-46-76-106-136
17	17-47-77-107-137
18	18-48-78-108-138
19	19-49-79-109-139
20	20-50-80-110-140

(b) The channels listed in the following Table are available to non-Government applicants for Phase II assignments in Economic Areas (EAs) and Regional Economic Area Groupings (REAGs) (see Sections 90.761 and 90.763).

Table 2

Phase II EA and Regional Channel Assignments

Assignment	Assignment Area	Group Nos. (from Table 1)	Channel Nos.
A	EA	2 and 13	
B	EA	3 and 16	
C	EA	5 and 18	
D	EA	8 and 19	
E	EA		171-180
F	REAG	1, 6, and 11	
G	REAG	4, 9, and 14	
H	REAG	7, 12, and 17	
I	REAG	10, 15, and 20	
J	REAG		186-200

15. Section 90.723 is revised to read as follows:

Section 90.723 Selection and assignment of frequencies.

(a) Phase II applications for frequencies in the 220-222 MHz band shall specify whether their intended use is for 10-channel nationwide systems, 10-channel EA systems, 15-channel Regional systems, public safety/mutual aid use, or EMRS use. Phase II applicants for frequencies for public safety/mutual aid use or EMRS use shall specify the number of frequencies requested. All frequencies in this band will be assigned by the Commission.

(b) Phase II channels will be assigned pursuant to Sections 90.717, 90.719, 90.720, 90.721, 90.761 and 90.763.

(c) Phase II applicants for public safety/mutual aid and EMRS channels will be assigned only the number of channels justified to meet their requirements.

(d) Phase I base or fixed station receivers utilizing 221-222 MHz frequencies assigned from Sub-band A as designated in Section 90.715(b) will be geographically separated from those Phase I base or fixed station transmitters utilizing 220-221 MHz frequencies removed 200 kHz or less and assigned from Sub-band B as follows:

Geographic Separation of Sub-Band A
Base or Fixed Station Receivers and Sub-Band B
Base or Fixed Station Transmitters

Separation distance (kilometers)	Effective radiated power (watts)/1/
0.0-0.3	(/2/)
0.3-0.5	5
0.5-0.6	10
0.6-0.8	20
0.8-2.0	25
2.0-4.0	50
4.0-5.0	100
5.0-6.0	200
Over 6.0	500

/1/ Transmitter peak envelope power shall be used to determine effective radiated power.

/2/ Stations separated by 0.3 km or less shall not be authorized. This table does not apply to the low-power channels 196-200. See Section 90.729(c).

(e) Phase II licensees authorized on 220-221 MHz frequencies assigned from Sub-band B will be required to geographically separate their base station or fixed station transmitters from the base station or fixed station receivers of Phase I licensees authorized on 221-222 MHz frequencies 200 kHz removed or less in Sub-band A in accordance with the Table in paragraph (d) of this section.

(f) Phase II licensees with base or fixed stations transmitting on 220-221 MHz frequencies assigned from Sub-band B and Phase II licensees with base or fixed station stations receiving on Sub-band A 221-222 MHz frequencies, if such transmitting and receiving frequencies are 200 kHz or less removed from one another, will be required to coordinate the location of their base stations or fixed stations to avoid interference and to cooperate to resolve any instances of interference in accordance with the provisions of Section 90.173(b).

(g) A mobile station is authorized to transmit on any frequency assigned to its associated base station. Mobile units not associated with base stations (see Section 90.720(a)) must operate on ``mobile" channels.

(h) A licensee's fixed station is authorized to transmit on any of the licensee's assigned base station frequencies or mobile station frequencies.

(i) Except for nationwide assignments, the separation of co-channel Phase I base stations, or fixed stations transmitting on base station frequencies, shall be 120 kilometers. Except for Phase I licensees seeking license modification in accordance with the provisions of Sections 90.751 and 90.753, shorter separations between such stations will be considered by the Commission on a case-by-case basis upon submission of a technical analysis indicating that at least 10 dB protection will be provided to an existing Phase I station's predicted 38 dBu signal level contour. The existing Phase I station's predicted 38 dBu signal level contour shall be calculated using the F(50,50) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential. The 10 dB protection to the existing Phase I station's predicted 38 dBu signal level contour shall be calculated using the F(50,10) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10a) of this chapter, with a 9 dB correction factor for antenna height differential.

16. Section 90.725 is amended by revising the section heading and paragraphs (f) and (h) to read as follows:

Sec. 90.725 Construction requirements for Phase I licensees.

* * * * *

(f) Licensees authorized Phase I non-nationwide systems, or authorized on Channels 161 through 170 or Channels 181 through 185, must construct their systems (*i.e.*, have all specified base stations constructed with all channels) and place their systems in operation, or commence service in accordance with the provisions of Section 90.167, within twelve months of the initial license grant date. Authorizations for systems not constructed and placed in operation, or having commenced service, within twelve months from the date of initial license grant cancel automatically.

* * * * *

(h) The requirements and conditions of paragraphs (a) through (e) and paragraph (g) of this section apply to nationwide licensees that construct and operate stations for fixed or paging operations on a primary basis instead of, or in addition to, stations for land mobile operations on a primary basis except that, in satisfying the base station construction and placed in operation requirements of paragraph (a) of this section and the system progress report requirements of paragraphs (d) and (e) of this section, licensees operating stations for fixed operation on a primary basis instead of, or in addition to, stations for land mobile or paging operations on a primary basis in a given geographic area may demonstrate how such fixed stations are providing substantial service to the public in those geographic areas.

17. The section heading of Section 90.727 is revised to read as follows:

Section 90.727 Extended implementation schedules for Phase I licensees.

* * * * *

18. Section 90.729 is revised to read as follows:

Section 90.729 Limitations on power and antenna height.

(a) The permissible effective radiated power (ERP) with respect to antenna heights for land mobile, paging, or fixed stations transmitting on frequencies in the 220-221 MHz band shall be determined from the following Table. These are maximum values and applicants are required to justify power levels requested.

ERP vs. Antenna Height Table /2/

Antenna height above average terrain (HAAT), meters	Effective radiated power, watts /1/
Up to 150	500
150 to 225	250
225 to 300	125
300 to 450	60
450 to 600	30
600 to 750	20
750 to 900	15
900 to 1050	10
Above 1050	5

/1/ Transmitter PEP shall be used to determine ERP.

/2/ These power levels apply to stations used for land mobile, paging, and fixed operations.

(b) The maximum permissible ERP for mobile units is 50 watts. Portable units are considered as mobile units. Licensees operating fixed stations or paging base stations transmitting on frequencies in the 221-222 MHz band may not operate such fixed stations or paging base stations at power levels greater than 50 watts ERP, and may not transmit from antennas that are higher than 7 meters above ground, except that transmissions from antennas that are higher than 7

meters above ground will be permitted if the effective radiated power of such transmissions is reduced below 50 watts ERP by 20 $\log_{10}$(h/7) dB, where h is the height of the antenna above ground, in meters.

(c) Base station and fixed station transmissions on base station transmit Channels 196-200 are limited to 2 watts ERP and a maximum antenna height of 6.1 meters (20 ft) above ground. Licensees authorized on these channels may operate at power levels above 2 watts ERP or with a maximum antenna height greater than 6.1 meters (20 ft) above ground if:

(1) They obtain the concurrence of all Phase I and Phase II licensees with base stations or fixed stations receiving on base station receive Channels 1-40 and located within 6 km of their base station or fixed station; and

(2) Their base station or fixed station is not located in the United States/Mexico or United States/Canada border areas.

19. Section 90.731 is removed.

20. Section 90.733 is amended by removing paragraph (d), revising paragraphs (a)(1), and (c) and adding new paragraphs (d), (e), (f), (g), (h), and (i) to read as follows:

Section 90.733 Permissible operations.

(a) * * *

(1) (i) For government and non-government land mobile operations, *i.e.*, for base/mobile and mobile relay transmissions, on a primary basis; or

(ii) For the following operations instead of or in addition to a licensee's land mobile operations: one-way or two-way paging operations on a primary basis by all non-Government Phase II licensees, fixed operations on a primary basis by all non-Government Phase II licensees and all Government licensees, one-way or two-way paging or fixed operations on a primary basis by all non-Government Phase I licensees, except that before a non-Government Phase I licensee may operate one-way or two-way paging or fixed systems on a primary basis instead of or in addition to its land mobile operations, it must meet the following requirements:

(A) A nationwide Phase I licensee must;

(1) Meet its two-year benchmark for the construction of its land mobile system base stations as prescribed in Section 90.725(a); and

(2) Provide a new 10-year schedule, as required in Section 90.713(b)(3), for the construction of the fixed and/or paging system it intends to construct instead of, or in addition to, its nationwide land mobile system; and

(3) Certify that the financial showings and all other certifications provided in demonstrating its ability to construct and operate its nationwide land mobile system, as required in Sections 90.713(b), (c) and (d), remain applicable to the nationwide system it intends to construct consisting of fixed and/or paging operations on a primary basis instead of, or in addition to, its land mobile operations; or

(4) In lieu of providing the requirements of paragraph (a)(1)(ii)(A)(3) of this section, provide the financial showings and all other certifications required in Sections 90.713(b), (c) and (d) to demonstrate its ability to construct and operate a nationwide system

consisting of fixed and/or paging operations on a primary basis instead of, or in addition to, its land mobile operations.

(B) A non-nationwide Phase I licensee must first meet the requirement to construct its land mobile base station and place it in operation, or commence service (in accordance with Section 90.167) as prescribed in Sections 90.725(f) or 90.727, as applicable.

* * * * *

(c) For operations requiring less than a 4 kHz bandwidth, more than a single emission may be utilized within the authorized bandwidth. In such cases, the frequency stability requirements of Section 90.213 do not apply, but the out-of-band emission limits of Section 90.210(f) must be met.

(d) Licensees, except for licensees authorized on Channels 161 through 170 and 181 through 185, may combine any number of their authorized, contiguous channels to form channels wider than 5 kHz. In so doing, licensees must comply with the following spectrum efficiency standard, which will remain in effect through December 31, 2001:

(1) For voice communications, licensees must employ equipment that provides at least one voice channel per 5 kHz of channel bandwidth; and

(2) For data communications, licensees must employ equipment that operates at a data rate of at least 4,800 bits per second per 5 kHz of channel bandwidth.

(3) Licensees authorized on channels other than Channels 161 through 170 and 181 through 185 may combine any number of their authorized, contiguous channels to form channels wider than 5 kHz <u>without</u> complying with the spectrum efficiency standard identified in paragraphs (d)(1) and (d)(2) of this section if they operate with equipment that has been granted type acceptance in accordance with the provisions of Section 90.203(k)(2).

(e) In combining authorized contiguous channels to form channels wider than 5 kHz, the emission limits in Section 90.210(f) must be met only at the outermost edges of the contiguous channels. Transmitters shall be tested to confirm compliance with this requirement with the transmission located as close to the band edges as permitted by the design of the transmitter. The frequency stability requirements in Section 90.213 shall apply only to the outermost of the contiguous channels authorized to the licensee. However, the frequency stability employed for transmissions operating inside the outermost contiguous channels must be such that the emission limits in Section 90.210(f) are met over the temperature and voltage variations prescribed in Section 2.995 of this chapter.

(f) A Phase I non-nationwide licensee operating a paging base station, or a fixed station transmitting on frequencies in the 220-221 MHz band, may only operate such stations at the coordinates of the licensee's authorized land mobile base station.

(g) The transmissions of a Phase I non-nationwide licensee's paging base station, or fixed station transmitting on frequencies in the 220-221 MHz band, must meet the requirements of Sections 90.723(d) and (i), and 90.729, and such a station must operate at the effective radiated power and antenna height-above-average-terrain prescribed in the licensee's land mobile base station authorization.

(h) Licensees using 220-222 MHz spectrum for geophysical telemetry operations are authorized to operate fixed stations on a secondary, non-interference basis to licensees operating in the 220-222 MHz band on a primary basis under the conditions that such licensees:

(1) Provide notification of their operations to co-channel non-nationwide Phase I licensees with an authorized base station, or fixed station transmitting on frequencies in the 220-221 MHz band, located within 45 km of the secondary licensee's station, to co-channel, Phase II EA or Regional licensee authorized to operate in the EA or REAG in which the secondary licensee's station is located, and to co-channel Phase I or Phase II nationwide licensees;

(2) Operate only at temporary locations in accordance with the provisions of Section 90.137;

(3) Not transmit at a power level greater than one watt ERP;

(4) Not transmit from an antenna higher than 2 meters (6.6 feet) above ground; and

(5) Not operate on Channels 111 through 120, 161 through 170, or 181 through 185.

(i) All licensees constructing and operating base stations or fixed stations on frequencies in the 220-222 MHz band must:

(1) Comply with any rules and international agreements that restrict use of their authorized frequencies, including the provisions of § 90.715 relating to U.S./Mexican border areas;

(2) Comply with the provisions of Section 17.6 of this chapter with regard to antenna structures; and

(3) Comply with the provisions of §§ 1.1301 through 1.1319 of this chapter with regard to actions that may or will have a significant impact on the quality of the human environment.

21. Paragraph (d) of Section 90.735 is revised to read as follows:

Section 90.735 Station identification.

* * * * *

(d) Digital transmissions may also be identified by digital transmission of the station call sign. A licensee that identifies its station in this manner must provide the Commission, upon its request, information (such as digital codes and algorithms) sufficient to decipher the data transmission to ascertain the call sign transmitted.

22. The section heading of Section 90.737 is revised to read as follows:

Section 90.737 Supplemental reports required of Phase I licensees.

* * * * *

23. Section 90.739 is revised to read as follows:

Section 90.739 Number of systems authorized in a geographical area.

(a) No licensee will be authorized more than one Phase I system in the 220-222 MHz band in a single category (*i.e.*, one nationwide system, one 5-channel trunked system, one data-only local system of 1 to 5 channels, one unrestricted non-trunked local system of 1 to 5 channels, or one public safety/mutual aid local system of 1 to 5 channels) within 64 kilometers (40 miles) of an existing system authorized to that licensee in the same category, unless the licensee can demonstrate that the additional system is justified on the basis of its communications requirements.

(b) There is no limit on the number of Phase II nationwide, EA or Regional licenses that may be authorized to a single licensee.

24. The section heading and introductory paragraph of Section 90.741 are revised to read as follows:

Section 90.741 Urban areas for Phase I nationwide systems.

Licensees of Phase I nationwide systems must construct base stations, or fixed stations transmitting on frequencies in the 220-221 MHz band, in a minimum of 28 of the urban areas listed in the following Table within ten years of initial license grant. A base station, or fixed station, is considered to be within one of the listed urban areas if it is within 60 kilometers (37.3 miles) of the specified coordinates.

* * * * *

25. A new Section 90.743 is added to read as follows:

Section 90.743 Renewal expectancy.

(a) All licensees seeking renewal of their authorizations at the end of their license term must file a renewal application in accordance with the provisions of Section 90.149. Licensees must demonstrate, in their application, that:

(1) They have provided ``substantial'' service during their past license term. ``Substantial'' service is defined in this rule as service that is sound, favorable, and substantially above a level of mediocre service that just might minimally warrant renewal; and

(2) They have substantially complied with applicable FCC rules, policies, and the Communications Act of 1934, as amended.

(b) In order to establish its right to a renewal expectancy, a renewal applicant must submit a showing explaining why it should receive a renewal expectancy. At a minimum, this showing must include:

(1) A description of its current service in terms of geographic coverage and population served;

(2) For an EA, Regional, or nationwide licensee, an explanation of its record of expansion, including a timetable of the construction of new stations to meet changes in demand for service;

(3) A description of its investments in its system;

(4) Copies of all FCC orders finding the licensee to have violated the Communications Act or any FCC rule or policy; and

(5) A list of any pending proceedings that relate to any matter described in this paragraph.

(c) Phase I non-nationwide licensees have license terms of 5 years, and therefore must meet these requirements 5 years from the date of initial authorization in order to receive a renewal expectancy. Phase I nationwide licensees and all Phase II licensees have license terms of 10 years, and therefore must meet these requirements 10 years from the date of initial authorization in order to receive a renewal expectancy.

26. Section 90.751 is revised to read as follows:

Section 90.751 Minor modifications of Phase I, non-nationwide licenses.

Phase I non-nationwide licensees will be given an opportunity to seek modification of their license to relocate their initially authorized base station, *i.e.*, locate their base station at a site other than its initially authorized location. The conditions under which modifications will be granted and the procedures for applying for license modifications are described in Sections 90.753, 90.755, and 90.757. For CMRS licensees, these modifications will be treated as minor modifications in accordance with Section 90.164.

27. A new centered heading is added following Section 90.757 to read as follows:

POLICIES GOVERNING THE LICENSING AND USE OF PHASE II EA, REGIONAL AND NATIONWIDE SYSTEMS.

28. A new Section 90.761 is added to read as follows:

Section 90.761 EA and Regional licenses.

(a) EA licenses for spectrum blocks listed in Table 2 of Section 90.721(b) are available in 175 Economic Areas (EAs) as defined in Section 90.7.

(b) Regional licenses for spectrum blocks listed in Table 2 of Section 90.721(b) are available in six Regional Economic Area Groupings (REAGs) as defined in Section 90.7.

29. A new Section 90.763 is added to read as follows:

Section 90.763 EA, Regional and Nationwide system operations.

(a) A nationwide licensee authorized pursuant to Section 90.717(a) may construct and operate any number of land mobile or paging base stations, or fixed stations, anywhere in the Nation, and transmit on any of its authorized channels, provided that the licensee complies with the requirements of Section 90.733(i).

(b) An EA or Regional licensee authorized pursuant to Section 90.761 may construct and operate any number of land mobile or paging base stations, or fixed stations, anywhere within its authorized EA or REAG, and transmit on any of its authorized channels, provided that:

(1) The licensee affords protection to all authorized co-channel Phase I non-nationwide base stations as follows:

(i) The EA or Regional licensee must locate its land mobile or paging base stations, or fixed stations transmitting on base station transmit frequencies, at least 120 km from the land mobile or paging base stations, or fixed stations transmitting on base station transmit frequencies, of co-channel Phase I licensees, except that separations of less than 120 km shall be considered on a case-by-case basis upon submission by the EA or Regional licensee of;

(A) A technical analysis demonstrating at least 10 dB protection to the predicted 38 dBu service contour of the co-channel Phase I licensee, i.e., demonstrating that the predicted 28 dBu interfering contour of the EA or Regional licensee's base station or fixed station does not overlap the predicted 38 dBu service contour of the co-channel Phase I licensee's base station or fixed station; or

(B) A written letter from the co-channel Phase I licensee consenting to a separation of less than 120 km, or to less than 10 dB protection to the predicted 38 dBu service contour of the licensee's base station or fixed station.

(ii) The Phase I licensee's predicted 38 dBu service contour referred to in paragraph (a)(1)(i) of this section is calculated using the F(50,50) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential, and is based on the licensee's authorized effective radiated power and antenna height-above-average-terrain. The EA or Regional licensee's predicted 28 dBu interfering contour referred to in paragraph (a)(1)(i) of this section is calculated using the F(50,10) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10a) of this chapter, with a 9 dB correction factor for antenna height differential.

(2) The licensee complies with the requirements of Section 90.733(i).

(3) The licensee limits the field strength of its base stations, or fixed stations operating on base station transmit frequencies, in accordance with the provisions of § 90.771.

(4) The licensee notifies the Commission within 30 days of the completion of the addition, removal, relocation or modification of any of its facilities within its authorized area of operation.

Such notification must be made by submitting an FCC Form 600, and must include the appropriate filing fee, if any.

(c) In the event that the authorization for a co-channel Phase I base station, or fixed station transmitting on base station transmit frequencies, within an EA or Regional licensee's border is terminated or revoked, the EA or Regional licensee's channel obligations to such stations will cease upon deletion of the facility from the Commission's official licensing records, and the EA or Regional licensee then will be able to construct and operate without regard to the previous authorization.

30. A new Section 90.765 is added to read as follows:

Section 90.765 Licenses term for Phase II licenses.

Nationwide licenses authorized pursuant to Section 90.717(a), EA and Regional licenses authorized pursuant to Section 90.761, and non-nationwide licenses authorized pursuant to Section 90.720 and Section 90.719(c) will be issued for a term not to exceed ten years.

31. A new Section 90.767 is added to read as follows:

Section 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:

(1) At least one-third of the population of its EA or REAG within five years of the issuance of its initial license; and

(2) At least two-thirds of the population of its EA or REAG within ten years of the issuance of its initial license.

(b) EA and Regional licensees offering fixed services as part of their system, and EA and Regional licensees that have one or more incumbent, co-channel Phase I licensees authorized within their EA or REAG may meet the construction requirements of paragraph (a) of this section by demonstrating an appropriate level of substantial service at their five- and ten-year benchmarks.

(c) Licensees must submit maps or other supporting documents to demonstrate compliance with the construction requirements of paragraphs (a) and (b) of this section.

(d) Failure by an EA or Regional licensee to meet the construction requirements of paragraph (a) or (b) 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.

(e) 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) or (b) of this section, as applicable.

(f) 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.

32. A new Section 90.769 is added to read as follows:

Section 90.769 Construction and implementation of 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:

(1) 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

(2) 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.

(b) Nationwide licensees offering fixed services as part of their system may meet the construction requirements of paragraph (a) of this section by demonstrating an appropriate level of substantial service at their five- and ten-year benchmarks.

(c) Licensees must submit maps or other supporting documents to demonstrate compliance with the construction requirements of paragraphs (a) and (b) of this section.

(d) Failure by a nationwide licensee to meet the construction requirements of paragraphs (a) or (b) 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.

(e) 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.

33. A new Section 90.771 is added to read as follows:

Section 90.771 Field strength limits.

(a) The transmissions from base stations, or fixed stations transmitting on base station transmit frequencies, of EA and Regional licensees may not exceed a predicted 38 dBu field strength at their EA or REAG border. The predicted 38 dBu field strength is calculated using the F(50,50) field strength chart for Channels 7-13 in Section 73.699 (Fig. 10) of this chapter, with a 9 dB correction factor for antenna height differential.

(b) Licensees will be permitted to exceed the predicted 38 dBu field strength required in paragraph (a) of this section if all affected, co-channel EA and Regional licensees agree to the higher field strength.

(c) EA and Regional licensees must coordinate to minimize interference at or near their EA and REAG borders, and must cooperate to resolve any instances of interference in accordance with the provisions of Section 90.173(b).

34. A new Subpart W consisting of Sections 90.1001 through 90.1025 is added to Part 90 to read as follows:

§ 90.1001 220 MHz service subject to competitive bidding.
§ 90.1003 Competitive bidding design for the 220 MHz service.
§ 90.1005 Competitive bidding mechanisms.
§ 90.1007 Withdrawal, default and disqualification payments.
§ 90.1009 Bidding application (FCC Form 175 and 175-S Short-form).
§ 90.1011 Submission of upfront payments and down payments.
§ 90.1013 Long-form application (FCC Form 600).
§ 90.1015 License grant, denial, default, and disqualification.
§ 90.1017 Bidding credits, down payments, and installment payments for small businesses and very small businesses.
§ 90.1019 Eligibility for partitioned licenses.
§ 90.1021 Definitions concerning competitive bidding process.
§ 90.1023 Certifications, disclosures, records maintenance and audits.
§ 90.1025 Petitions to deny and limitations on settlements.

SUBPART W -- COMPETITIVE BIDDING PROCEDURES FOR THE 220 MHz SERVICE

§ 90.1001 220 MHz service subject to competitive bidding.

Mutually exclusive initial applications for 220 MHz geographic area licenses are subject to competitive bidding procedures. The procedures set forth in part 1, subpart Q, of this chapter will apply unless otherwise provided in this part.

§ 90.1003 Competitive bidding design for the 220 MHz service.

A simultaneous multiple round auction will be used to choose from among mutually exclusive initial applications for 220 MHz geographic area licenses, unless the Commission specifies otherwise by Public Notice prior to the competitive bidding procedure.

§ 90.1005 Competitive bidding mechanisms.

(a) Sequencing. The Commission will establish and may vary the sequence in which 220 MHz geographic area licenses are auctioned.

(b) Grouping. The Commission will determine which licenses will be auctioned simultaneously or in combination.

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

(d) Stopping Rules. The Commission may establish stopping rules before or during an auction in order to terminate the auction within a reasonable time.

(e) Activity Rules. The Commission may establish activity rules which require a minimum amount of bidding activity. In the event that the Commission establishes an activity rule in connection with a simultaneous multiple round auction, each bidder may request waivers of such rule during the auction. The Commission may, by public announcement either before or during the auction, specify or vary the number of waivers available to each bidder.

§ 90.1007 Withdrawal, default and disqualification payments.

The Commission will impose payments on bidders who withdraw high bids during the course of an auction, who default on payments due after an auction terminates, or who are disqualified. When the Commission conducts a simultaneous multiple round auction, payments will be calculated as set forth in §§ 1.2104(g) and 1.2109 of this chapter. When the amount of such a payment cannot be determined, a deposit of up to 20 percent of the amount bid on the license will be required.

§ 90.1009 Bidding application (FCC Form 175 and 175-S Short-form).

Each applicant to participate in competitive bidding for 220 MHz geographic area licenses must submit an application (FCC Forms 175 and 175-S) pursuant to the provisions of § 1.2105 of this chapter.

§ 90.1011 Submission of upfront payments and down payments.

(a) The Commission will require applicants to submit an upfront payment prior to the start of a 220 MHz service auction. The amount of the upfront payment for each geographic area license auctioned and the procedures for submitting it will be set forth by the Wireless Telecommunications Bureau in a Public Notice in accordance with § 1.2106 of this chapter.

(b) Each winning bidder in a 220 MHz service auction, except those that qualify as small businesses or very small businesses pursuant to § 90.1021(b)(1) or § 90.1021(b)(2), must submit a down payment to the Commission in an amount sufficient to bring its total deposits up to 20 percent of its winning bid within ten (10) business days following the release of a Public Notice announcing the close of bidding. Small businesses and very small businesses must submit a down payment to the Commission in accordance with § 90.1017(c).

§ 90.1013 Long-form application (FCC Form 600).

Each successful bidder for a 220 MHz geographic area license must submit a long-form application (FCC Form 600) within ten (10) business days after being notified by Public Notice that it is the winning bidder. Applications for 220 MHz geographic area licenses on FCC Form 600 must be submitted in accordance with § 1.2107 of this chapter, all applicable procedures set forth in the rules in this part, and any applicable Public Notices that the Commission may issue in connection with an auction. After an auction, the Commission will not accept long-form applications for 220 MHz geographic area licenses from anyone other than the auction winners and parties seeking partitioned licenses pursuant to agreements with auction winners under § 90.1019 of this chapter.

§ 90.1015 License grant, denial, default, and disqualification

(a) Each winning bidder, except those eligible for installment payments, will be required to pay the full balance of its winning bid within ten (10) business days following Public Notice that the Commission is prepared to award the license.

(b) A bidder that withdraws its bid subsequent to the close of bidding, defaults on a payment due, or is disqualified, is subject to the payments specified in § 1.2104(g), § 1.2109, and § 90.1007 of this chapter, as applicable.

§ 90.1017 Bidding credits, down payments, and installment payments for small businesses and very small businesses.

(a) Bidding Credits. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in § 90.1021(b)(1) or § 90.1021(b)(4) may use a bidding credit of 10 percent to lower the cost of its winning bid. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in § 90.1021(b)(2) or § 90.1021(b)(4) may use a bidding credit of 25 percent to lower the cost of its winning bid.

(b) Unjust Enrichment - Bidding Credits

(1) If a small business or very small business (as defined in §§ 90.1021(b)(1) and 90.1021(b)(2), respectively) that utilizes a bidding credit under this section seeks to transfer control or assign an authorization to an entity that is not a small business or a very small business, or seeks to make any other change in ownership that would result in the licensee losing eligibility as a small business or very small business, the small business or very small business must seek Commission approval and reimburse the U.S. government for the amount of the bidding credit, plus interest at the rate imposed for installment financing at the time the license was awarded, as a condition of approval of the assignment, transfer, or other ownership change.

(2) If a very small business (as defined in § 90.1021(b)(2)) that utilizes a bidding credit under this section seeks to transfer control or assign an authorization to a small business meeting the eligibility standards for a lower bidding credit, or seeks to make any other change in ownership that would result in the licensee qualifying for a lower bidding credit under this section, the licensee must seek Commission approval and reimburse the U.S. government for the

difference between the amount of the bidding credit obtained by the licensee and the bidding credit for which the assignee, transferee, or licensee is eligible under this section, plus interest at the rate imposed for installment financing at the time the license was awarded, as a condition of the approval of such assignment, transfer, or other ownership change.

(3) The amount of payments made pursuant to paragraphs (b)(1) and (b)(2) of this section will be reduced over time as follows: A transfer in the first two years of the license term will result in a forfeiture of 100 percent of the value of the bidding credit (or the difference between the bidding credit obtained by the original licensee and the bidding credit for which the post-transfer licensee is eligible); in year 3 of the license term the payment will be 75 percent; in year 4 the payment will be 50 percent; and in year 5 the payment will be 25 percent, after which there will be no assessment.

(c) Down Payments. Winning bidders in a 220 MHz service auction that qualify as small businesses under § 90.1021(b)(1) or very small businesses under § 90.1021(b)(2) must submit a down payment to the Commission in an amount sufficient to bring their total deposits up to 20 percent of their winning bids. Small businesses and very small businesses must bring their deposit up to 10 percent of their winning bids within ten (10) business days following a Public Notice announcing the close of bidding. Prior to licensing, by a date and time to be specified by Public Notice, they must pay an additional 10 percent.

(d) Installment Payments

(1) Each licensee that qualifies as a small business under § 90.1021(b)(1) or as a very small business under § 90.1021(b)(2) may pay the remaining 80 percent of the net auction price for the license in installment payments over the term of the geographic area license. Interest charges shall be fixed at the time of licensing at a rate equal to the rate for ten-year U.S. Treasury obligations plus 2.5 percent. An eligible licensee may make interest-only payments for two years. Payments of interest and principal shall be amortized over the remaining eight years of the license term.

(2) Late installment payment. Any licensee that submits a scheduled installment payment more than fifteen days late will be charged a late payment fee equal to five percent of the amount of the past due payment.

(3) Payments will be applied in the following order: late charges, interest charges, principal payments.

(e) Unjust Enrichment - Installment Payments

(1) If a licensee that utilizes installment financing under this section seeks to assign or transfer control of its license to an entity not meeting the eligibility standards for installment financing, the licensee must seek Commission approval and make full payment of the remaining unpaid principal and unpaid interest accrued through the date of assignment or transfer as a condition of Commission approval.

(2) If a licensee that utilizes installment financing under this section seeks to make any change in ownership structure that would result in the licensee losing eligibility for installment payments, the licensee shall first seek Commission approval before making such a change in ownership structure and must make full payment of the remaining unpaid principal and unpaid interest accrued through the date of such change in ownership structure as a condition of Commission approval.

§ 90.1019 Eligibility for partitioned licenses.

If partitioned licenses are being applied for in conjunction with a license(s) to be awarded through competitive bidding procedures --

(a) The applicable procedures for filing short-form applications and for submitting upfront payments and down payments contained in this chapter shall be followed by the applicant, who must disclose as part of its short-form application all parties to agreement(s) with or among other entities to partition the license pursuant to this section, if won at auction (see 47 CFR § 1.2105(a)(2)(viii));

(b) Each party to an agreement to partition the license must file a long-form application (FCC Form 600) for its respective, mutually agreed-upon geographic license area together with the application for the remainder of the geographic license area filed by the auction winner.

(c) If the partitioned license is being applied for as a partial assignment of the geographic area license following grant of the initial license, request for authorization for partial assignment of a license shall be made pursuant to § 90.153.

§ 90.1021 Definitions concerning competitive bidding process.

(a) Scope. The definitions in this section apply to §§ 90.1001 through 90.1025, unless otherwise specified in those sections.

(b) Small Business; Very Small Business; Consortium of Small Businesses or Very Small Businesses.

(1) A small business is 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.

(2) 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.

(3) For purposes of determining whether an entity meets either of the definitions set forth in paragraph (b)(1) or (b)(2) of this section, the gross revenues of the entity, its affiliates, and controlling principals shall be considered on a cumulative basis and aggregated.

(4) A consortium of small businesses (or a consortium of very small businesses) is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (b)(1) of this section

or each of which individually satisfies the definition in paragraph (b)(2) of this section. Where an applicant (or licensee) is a consortium of small businesses (or very small businesses), the gross revenues of each small business (or very small business) shall not be aggregated.

(c) Gross Revenues. Gross revenues shall mean all income received by an entity, whether earned or passive, before any deductions are made for costs of doing business (e.g., cost of goods sold). Gross revenues are evidenced by audited financial statements for the relevant number of calendar or fiscal years preceding the filing of the applicant's short-form application (FCC Form 175). If an entity was not in existence for all or part of the relevant period, gross revenues shall be evidenced by the audited financial statements of the entity's predecessor-in-interest or, if there is no identifiable predecessor-in-interest, unaudited financial statements certified by the applicant as accurate. When an applicant does not otherwise use audited financial statements, its gross revenues may be certified by its chief financial officer or its equivalent.

(d) Affiliate.

(1) Basis for Affiliation. An individual or entity is an affiliate of an applicant if such individual or entity:

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

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

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

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

(2) Nature of control in determining affiliation.

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

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

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

(iii) Control can arise through management positions if the voting stock is so widely distributed that no effective control can be established.

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

(3) Identity of interest between and among persons.

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

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

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

(A) The family members are estranged,

(B) The family ties are remote, or

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

Example for paragraph (d)(3)(ii). A owns a controlling interest in Corporation X. A's sister-in-law, B, has a controlling interest in a 220 MHz service geographic area license application. Because A and B have a presumptive kinship affiliation, A's interest in Corporation X is attributable to B, and thus to the applicant, unless B rebuts the presumption with the necessary showing.

(4) Affiliation through stock ownership.

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

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

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

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

Example 1 for paragraph (d)(5). If company B holds an option to purchase a controlling interest in company A, who holds a controlling interest in a 220 MHz service geographic area license application, the situation is treated as though company B had exercised its rights and had become owner of a controlling interest in company A. The gross revenues of company B must be taken into account in determining the size of the applicant.

Example 2 for paragraph (d)(5). If a large company, BigCo, holds 70% (70 of 100 outstanding shares) of the voting stock of company A, who holds a controlling interest in a 220 MHz service geographic area license application, and gives a third party, SmallCo, an option to purchase 50 of the 70 shares owned by BigCo, BigCo will be deemed to be an affiliate of company A, and thus the applicant, until SmallCo actually exercises its options to purchase such shares. In order to prevent BigCo from circumventing the intent of the rule, which requires such options to be considered on a fully diluted basis, the option is not considered to have present effect in this case.

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

(6) Affiliation under voting trusts.

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

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

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

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

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

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

(10) Affiliation under joint venture arrangements.

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

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

§ 90.1023 Certifications, disclosures, records maintenance and audits.

(a) Short-Form Applications: Certifications and Disclosure. In addition to certifications and disclosures required in part 1, subpart Q, of this chapter, each applicant for a 220 MHz service geographic area license which qualifies as a small business, very small business, consortium of small businesses, or consortium of very small businesses, shall append the following information as an exhibit to its FCC Form 175:

(1) The identity of the applicant's affiliates and controlling principals, and, if a consortium of small businesses (or consortium of very small businesses), the members of the joint venture; and

(2) The applicant's gross revenues, computed in accordance with § 90.1021.

(b) Long-Form Applications: Certifications and Disclosure .
In addition to the requirements in § 90.1013, each applicant submitting a long-form application for a 220 MHz service geographic area license and qualifying as a small business or very small business shall, in an exhibit to its long-form application:

(1) Disclose separately and in the aggregate the gross revenues, computed in accordance with § 90.1021, for each of the following: the applicant, the applicant's affiliates, the applicant's controlling principals, and, if a consortium of small businesses (or consortium of very small businesses), the members of the joint venture;

(2) List and summarize all agreements or other instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility as a small business or very small business under §§ 90.1017 through 90.1023, including the establishment of de facto and de jure control; such agreements and instruments include, but are not limited to, articles of incorporation and bylaws, shareholder agreements, voting or other trust agreements, franchise agreements, and any other relevant agreements including letters of intent, oral or written; and

(3) List and summarize any investor protection agreements, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to appoint members to boards of directors or management committees.

(c) Records Maintenance. All winning bidders qualifying as small businesses or very small businesses shall maintain at their principal place of business an updated file of ownership, revenue, and asset information, including any documents necessary to establish eligibility as a small business or very small business and/or consortium of small businesses (or consortium of very small businesses) under § 90.1021. Licensees (and their successors-in-interest) shall maintain such files for the term of the license. Applicants that do not obtain the license(s) for which they applied shall maintain such files until the grant of such license(s) is final, or one year from the date of the filing of their short-form application (FCC Form 175), whichever is earlier.

(d) Audits.

(1) Applicants and licensees claiming eligibility as a small business or very small business or consortium of small businesses (or consortium of very small businesses) under §§ 90.1017 through 90.1023 shall be subject to audits by the Commission. Selection for audit may be random, on information, or on the basis of other factors.

(2) Consent to such audits is part of the certification included in the short-form application (FCC Form 175). Such consent shall include consent to the audit of the applicant's or licensee's books, documents and other material (including accounting procedures and practices) regardless of form or type, sufficient to confirm that such applicant's or licensee's representations are, and

remain, accurate. Such consent shall include inspection at all reasonable times of the facilities, or parts thereof, engaged in providing and transacting business, or keeping records regarding licensed 220 MHz service, and shall also include consent to the interview of principals, employees, customers and suppliers of the applicant or licensee.

(e) Definitions. The terms affiliate, small business, very small business, consortium of small businesses (or consortium of very small businesses), and gross revenues used in this section are defined in § 90.1021.

§ 90.1025 Petitions to deny and limitations on settlements.

(a) Procedures regarding petitions to deny long-form applications in the 220 MHz service will be governed by §§ 1.2108(b) through 1.2108(d) and § 90.163 of this chapter.

(b) The consideration that an individual or an entity will be permitted to receive for agreeing to withdraw an application or a petition to deny will be limited by the provisions set forth in § 90.162 and § 1.2105(c) of this chapter.

APPENDIX C

LIST OF PARTIES FILING COMMENTS AND REPLY COMMENTS

The following is the list of parties filing comments and reply comments in this proceeding

COMMENTS

Puerto Rico Telephone Company
Fairfield Industries, Inc. (Fairfield)
Association of Public-Safety Communications Officials-International, Inc. (APCO)
Airborne Freight Corporation (Airborne)
Echo Group L.P. (Echo)
Pagemart Operations, Inc. (Pagemart)
Fleet Maintenance, Inc. (Fleet)
Columbia Cellular Corporation (Columbia)
SMR Advisory Group (SMR)
SEA Inc. (SEA)
Roamer One, Inc. (Roamer)
Personal Communications Industry Association (PCIA)
Industrial Telecommunications Association, Inc. (ITA)
Ericsson Corporation (Ericsson)
PLMRS Narrowband Corp. (PLMRS)
E.F. Johnson Company (Johnson)
Comtech Communications, Inc. (Comtech)
Incom Communications Corporation (Incom)
American Mobile Telecommunications Association, Inc. (AMTA)
UTC, The Telecommunications Association (UTC)
Metricom, Inc. (Metricom)
Global Cellular Communications, Inc. (Global)
360 Mobile Data Joint Venture (360 Mobile)
Overall Wireless Communications Corporation (Overall Wireless)
Pronet Inc. (Pronet)
Securicor Radiocoms, Ltd. (Securicor)
U.S. Mobilcomm, Inc. (U.S. Mobilcomm)
U.S. Central, Inc. (U. S. Central)
Michael R. Kelley d/b/a/ Shannondale Wireless (Kelley)
Suncom Mobile & Data, Inc. (Suncom)
Mtel Technologies, Inc. (Mtel)
Washington Legal Foundation (WLF)
Paging Network, Inc. (Pagenet)

REPLY COMMENTS

Securicor
Pronet
Suncom
Mtel
Global
Incom
Comtech
Fairfield
SEA
SMR
Metricom
Columbia
Pagenet
US Mobil
AMTA

APPENDIX D

CODES AND NAMES FOR ECONOMIC AREAS (EAs)

Codes from 001 to 172 are assigned to the new EAs in approximate geographic order, beginning with 001 in northern Maine, continuing south to Florida, then north to the Great Lakes, and continuing in a serpentine pattern to the West Coast. Except for the Western Oklahoma EA (126), the Northern Michigan EA (058), and the 17 EAs that mainly correspond to consolidated metropolitan statistical areas (CMSAs), each EA is named for the metropolitan area or city that is the node of its largest component economic area (CEA) and that is usually, but not always, the largest metropolitan area or city in the EA. Each CEA consists of a single economic node and the surrounding counties that are economically related to the node. The following list provides EA codes and names. EA boundaries and codes are shown on the map following the list.

EA Code	Name
001	Bangor, ME
002	Portland, ME
003	Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH
004	Burlington, VT
005	Albany-Schenectady-Troy, NY
006	Syracuse, NY
007	Rochester, NY
008	Buffalo-Niagara Falls, NY
009	State College, PA
010	New York-No. New Jersey-Long Island, NY-NJ-CT-PA
011	Harrisburg-Lebanon-Carlisle, PA
012	Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD
013	Washington-Baltimore, DC-MD-VA-WV
014	Salisbury, MD
015	Richmond-Petersburg, VA
016	Staunton, VA
017	Roanoke, VA
018	Greensboro-Winston-Salem-High Point, NC
019	Raleigh-Durham-Chapel Hill, NC
020	Norfolk-Virginia Beach-Newport News, VA-NC
021	Greenville, NC
022	Fayetteville, NC
023	Charlotte-Gastonia-Rock Hill, NC-SC
024	Columbia, SC
025	Wilmington, NC
026	Charleston-North Charleston, SC
027	Augusta-Aiken, GA-SC
028	Savannah, GA
029	Jacksonville, FL
030	Orlando, FL

031 Miami-Fort Lauderdale, FL
032 Fort Myers-Cape Coral, FL
033 Sarasota-Bradenton, FL
034 Tampa-St. Petersburg-Clearwater, FL
035 Tallahassee, FL
036 Dothan, AL
037 Albany, GA
038 Macon, GA
039 Columbus, GA-AL
040 Atlanta, GA
041 Greenville-Spartanburg-Anderson, SC
042 Asheville, NC
043 Chattanooga, TN-GA
044 Knoxville, TN
045 Johnson City-Kingsport-Bristol, TN-VA
046 Hickory-Morganton, NC
047 Lexington, KY
048 Charleston, WV
049 Cincinnati-Hamilton, OH-KY-IN
050 Dayton-Springfield, OH
051 Columbus, OH
052 Wheeling, WV-OH
053 Pittsburgh, PA
054 Erie, PA
055 Cleveland-Akron, OH
056 Toledo, OH
057 Detroit-Ann Arbor-Flint, MI
058 Northern Michigan, MI
059 Green Bay, WI
060 Appleton-Oshkosh-Neenah, WI
061 Traverse City, MI
062 Grand Rapids-Muskegon-Holland, MI
063 Milwaukee-Racine, WI
064 Chicago-Gary-Kenosha, IL-IN-WI
065 Elkhart-Goshen, IN
066 Fort Wayne, IN
067 Indianapolis, IN
068 Champaign-Urbana, IL
069 Evansville-Henderson, IN-KY
070 Louisville, KY-IN
071 Nashville, TN
072 Paducah, KY
073 Memphis, TN-AR-MS
074 Huntsville, AL
075 Tupelo, MS
076 Greenville, MS
077 Jackson, MS

078 Birmingham, AL
079 Montgomery, AL
080 Mobile, AL
081 Pensacola, FL
082 Biloxi-Gulfport-Pascagoula, MS
083 New Orleans, LA
084 Baton Rouge, LA
085 Lafayette, LA
086 Lake Charles, LA
087 Beaumont-Port Arthur, TX
088 Shreveport-Bossier City, LA
089 Monroe, LA
090 Little Rock-North Little Rock, AR
091 Fort Smith, AR-OK
092 Fayetteville-Springdale-Rogers, AR
093 Joplin, MO
094 Springfield, MO
095 Jonesboro, AR
096 St. Louis, MO-IL
097 Springfield, IL
098 Columbia, MO
099 Kansas City, MO-KS
100 Des Moines, IA
101 Peoria-Pekin, IL
102 Davenport-Moline-Rock Island, IA-IL
103 Cedar Rapids, IA
104 Madison, WI
105 La Crosse, WI-MN
106 Rochester, MN
107 Minneapolis-St. Paul, MN-WI
108 Wausau, WI
109 Duluth-Superior, MN-WI
110 Grand Forks, ND-MN
111 Minot, ND
112 Bismarck, ND
113 Fargo-Moorhead, ND-MN
114 Aberdeen, SD
115 Rapid City, SD
116 Sioux Falls, SD
117 Sioux City, IA-NE
118 Omaha, NE-IA
119 Lincoln, NE
120 Grand Island, NE
121 North Platte, NE
122 Wichita, KS
123 Topeka, KS
124 Tulsa, OK

125 Oklahoma City, OK
126 Western Oklahoma, OK
127 Dallas-Fort Worth, TX
128 Abilene, TX
129 San Angelo, TX
130 Austin-San Marcos, TX
131 Houston-Galveston-Brazoria, TX
132 Corpus Christi, TX
133 McAllen-Edinburg-Mission, TX
134 San Antonio, TX
135 Odessa-Midland, TX
136 Hobbs, NM
137 Lubbock, TX
138 Amarillo, TX
139 Santa Fe, NM
140 Pueblo, CO
141 Denver-Boulder-Greeley, CO
142 Scottsbluff, NE
143 Casper, WY
144 Billings, MT
145 Great Falls, MT
146 Missoula, MT
147 Spokane, WA
148 Idaho Falls, ID
149 Twin Falls, ID
150 Boise City, ID
151 Reno, NV
152 Salt Lake City-Ogden, UT
153 Las Vegas, NV-AZ
154 Flagstaff, AZ
155 Farmington, NM
156 Albuquerque, NM
157 El Paso, TX
158 Phoenix-Mesa, AZ
159 Tucson, AZ
160 Los Angeles-Riverside-Orange County, CA
161 San Diego, CA
162 Fresno, CA
163 San Francisco-Oakland-San Jose, CA
164 Sacramento-Yolo, CA
165 Redding, CA
166 Eugene-Springfield, OR
167 Portland-Salem, OR-WA
168 Pendleton, OR
169 Richland-Kennewick-Pasco, WA
170 Seattle-Tacoma-Bremerton, WA
171 Anchorage, AK

172 Honolulu, HI
173 Guam and the Northern Mariana Islands
174 Puerto Rico and the United States Virgin Islands
175 American Samoa

APPENDIX E

REGIONAL ECONOMIC AREA GROUPINGS (REAGs)

The six geographic areas for Regional 220 MHz licensing are referred to as Regional Economic Area Groupings (REAGs), and are defined as follows:

REAG 1 (Northeast): REAG 1 consists of the following EAs: EA 001 (Bangor, ME) through EA 011 (Harrisburg-Lebanon-Carlisle, PA); and EA 054 (Erie, PA).

REAG 2 (Mid-Atlantic): REAG 2 consists of the following EAs: EA 012 (Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD) through EA 026 (Charleston-North Charleston, SC); EA 041 (Greenville-Spartanburg-Anderson, SC-NC); EA 042 (Asheville, NC); EA 044 (Knoxville, TN) through EA 053 (Pittsburgh, PA-WV); and EA 070 (Louisville, KY-IN).

REAG 3 (Southeast): REAG 3 consists of the following EAs: EA 027 (Augusta-Aiken, GA-SC) through EA 040 (Atlanta, GA-AL-NC); EA 043 (Chattanooga, TN-GA); EA 069 (Evansville-Henderson, IN-KY-IL); EA 071 (Nashville, TN-KY) through EA 086 (Lake Charles, LA); EA 088 (Shreveport-Bossier City, LA-AR) through EA 090 (Little Rock-North Little Rock, AR); EA 095 (Jonesboro, AR-MO); EA 096 (St. Louis, MO-IL); and EA 174 (Puerto Rico and the U.S. Virgin Islands).

REAG 4 (Great Lakes): REAG 4 consists of the following EAs: EA 055 Cleveland-Akron, OH-PA) through EA 068 (Champaign-Urbana, IL); EA 097 (Springfield, IL-MO); and EA 100 (Des Moines, IA-IL-MO) through EA 109 (Duluth-Superior, MN-WI).

REAG 5 (Central/Mountain): REAG 5 consists of the following EAs: EA 087 (Beaumont-Port Arthur, TX); EA 091 (Forth Smith, AR-OK) through EA 094 (Springfield, MO); EA 098 (Colombia, MO); EA 099 (Kansas City, MO-KS); EA 110 (Grand Forks, ND-MN) through EA 146 (Missoula, MT); EA 148 (Idaho Falls, ID-WY); EA 149 (Twin Falls, ID); EA 152 (Salt Lake City-Ogden, UT-ID); and EA 154 (Flagstaff, AZ-UT) through EA 159 (Tucson, AZ).

REAG 6 (Pacific): REAG 6 consists of the following EAs: EA 147 (Spokane, WA-ID); EA 150 (Boise City, ID-OR); EA 151 (Reno, NV-CA); EA 153 (Las Vegas, NV-AZ-UT); EA 160 (Los Angeles-Riverside-Orange County, CA-AZ) through EA 173 (Guam and the Northern Mariana Islands); and EA 175 (American Samoa).

APPENDIX F

INITIAL REGULATORY FLEXIBILITY ANALYSIS

As required by Section 603 of the Regulatory Flexibility Act (RFA), 5 U.S.C. § 603, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected impact on small entities of the policies and rules proposed in this *Fifth Notice of Proposed Rulemaking* (*Fifth Notice*). Written public comments are requested on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Fifth Notice* as provided in paragraph 347. The Secretary shall send a copy of the *Fifth Notice*, including the IRFA, to the Chief Counsel for Advocacy of the U.S. Small Business Administration in accordance with the RFA.[1]

Reason for Action: This rulemaking proceeding was initiated to secure comment on proposals to modify our 220 MHz service rules to permit partitioning of Phase I nationwide licenses. In addition, it seeks comment regarding disaggregation for all licensees in the 220 MHz service. The proposals advanced in the *Fifth Notice* are also designed to implement Congress' goal of giving small businesses the opportunity to participate in the provision of spectrum-based services in accordance with Sections 309(j) of the Communications Act of 1934, as amended (the Communications Act).[2]

Objectives: The Commission proposes to change its rules for the 220 MHz service to facilitate the efficient use of 220 MHz spectrum, increase competition, and expedite the provision of 220 MHz service. These proposals, in accordance with our statutory mandate, seek to increase the level of small business participation in the provision of 220 MHz services, particularly through the competitive bidding process.[3] The Commission considers whether to modify the existing 220 MHz service rules to provide for partitioning for Phase I 220 MHz licensees and to allow disaggregation of 220 MHz service spectrum for the first time. The Commission also proposes to establish license terms that permit 220 MHz service licensees to hold partitioned licenses and disaggregatees to hold disaggregated spectrum for the remaining duration of the original license term; and to establish construction requirements for 220 MHz service partitioning to ensure expedient access to 220 MHz service in partitioned areas to ensure coverage and to increase spectrum efficiency.

Legal Basis: The proposed action is authorized under Sections 4(i), 303(r) and 309(j) of the Communications Act of 1934, as amended.[4]

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[1] 5 U.S.C. § 603(a).

[2] 47 U.S.C. § 309(j); *see also* Section 257 Proceeding to Identify and Eliminate Market Entry Barriers for Small Businesses, Notice of Inquiry, 11 FCC Rcd 6280 (1996) (commencing implementation of 47 U.S.C. § 257).

[3] The Omnibus Budget Reconciliation Act of 1993 (Budget Act), Pub. L. No. 103-66, Title VI, § 6002.

[4] 47 U.S.C. §§ 154(i), 303(r), 309(j). *See also* 47 U.S.C. § 257.

Reporting, Recordkeeping, and Other Compliance Requirements: The proposals under consideration in this *Fifth Notice* include the possibility of imposing reporting and recordkeeping requirements on small businesses seeking licenses through the proposed partitioning and disaggregation rules. The information requirements would be used to determine whether the licensee was qualified to obtain a partitioned license or disaggregated spectrum. This information will be a one-time filing by an applicant requesting 220 MHz service partitioning or disaggregation. This information will be submitted on FCC Forms 490, 600 and/or 430 (filed as one package under cover of the Form 490) which are currently in use and have already received OMB clearance.

Federal Rules Which Overlap, Duplicate or Conflict With These Rules: None.

Description and Number of Small Entities Involved: The rule changes proposed in this proceeding will affect all small businesses which avail themselves of these rule changes or which may acquire licenses through partitioning and/or disaggregation. Pursuant to the RFA, we are required to identify the number of small entities to which a rule will apply and provide a description of such entities.[5] There are approximately 3,800 non-nationwide Phase I licensees and 4 nationwide licensees currently authorized to operate in the 220 MHz band. To estimate the number of such entities that are small businesses, we apply the definition of a small entity under SBA rules applicable to radiotelephone companies. This definition provides that a small entity is a radiotelephone company employing fewer than 1,500 persons.[6] However, the size data provided by the SBA do not allow us to make a meaningful estimate of the number of 220 MHz providers that are small entities because they combine all radiotelephone companies with 500 or more employees.[7] We therefore use the 1992 Census of Transportation, Communications, and Utilities, conducted by the Bureau of the Census, which is the most recent information available. Data from the Bureau of the Census' 1992 study indicate that only 12 out of a total 1,178 radiotelephone firms which operated during 1992 had 1,000 or more employees -- and these may or may not be small entities, depending on whether they employed more or less than 1,500 employees.[8] But 1,166 radiotelephone firms had fewer than 1,000 employees and therefore, under the SBA definition, are small entities. However, we do not know how many of these 1,166 firms are likely to be involved in the 220 MHz service. In the *Third Report and Order*, the Commission adopted a two-tier definition for small businesses as follows: (1) 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 three preceding years; and (2) a small business is an entity that, together with its affiliates and controlling principals, has average gross revenues

[5] 5 U.S.C. § 603.

[6] 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) Code 4812.

[7] 1992 Economic Census Employment Report, Bureau of the Census, U.S. Department of Commerce, Table 3, SIC Code 4812 (industry data adapted by the Office of Advocacy for the U.S. Small Business Administration).

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

that are not more than $15 million for the three preceding years. [9] To assist the Commission in this analysis, commenters are requested to provide information regarding how many total 220 MHz service entities, existing and potential, would be affected by the proposed rules in the *Fifth Notice*. In particular, we seek estimates of how many 220 MHz service entities, existing or potential, will be considered small businesses. Additionally, we request each commenter to identify whether it is a small business under this definition. If the commenter is a subsidiary of another entity, this information should be provided for both the subsidiary and the parent corporation or entity.

The Commission anticipates that a total of 23,500 licensees or potential licensees in the 220 MHz service could take the opportunity to partition or disaggregate a license or obtain a license through partitioning and/or disaggregation. This estimate is based upon the current number of Phase I 220 MHz service licensees (approximately 3,800) and potential Phase II 220 MHz licensees (approximately 900) and our estimate that each license would probably not be partitioned and/or disaggregated to more than five parties. At this time, there is no basis upon which to estimate definitively the number of 220 MHz service licensees, either current or potential, that are small businesses. [10] However, we estimate that a significant number of the 220 MHz service licensees and potential licensees who take the opportunity to partition and/or disaggregate a license or who could obtain a license through partitioning and/or disaggregation will be small businesses.

Significant Alternatives Minimizing the Impact on Small Entities Consistent with the Stated Objectives: The impact on small entities in the proposals in the *Fifth Notice* is the opportunity to enter the 220 MHz service market through partitioning and disaggregation. Through partitioning and disaggregation, additional entities, including small businesses, may participate in the provision of 220 MHz service without needing to acquire wholesale an existing license or a license awarded through competitive bidding. Acquiring ``less'' than a current license or a license awarded through competitive bidding will presumably be a more flexible and less expensive alternative for entities desiring to enter this service.

The rule changes proposed in the *Fifth Notice* by the Commission are consistent with the Communications Act's mandate to identify and eliminate market entry barriers for small business in the provision and ownership of telecommunications services under Section 257, and the mandate under Section 309(j) of the Communications Act, to utilize auctions to ensure that small businesses have an opportunity to participate in the provision of spectrum-based services. The proposals in the *Fifth Notice*, if implemented, will facilitate market entry by parties, including small businesses, that may lack the financial resources for participation in 220 MHz service.

The Commission proposes facilitating 220 MHz service partitioning by offering a choice between two different build-out options, which could be negotiated by the parties. [11] The

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[9] See para. 291, *supra*. See also Section III of Appendix A, *supra* (Final Regulatory Flexibility Analysis).

[10] See Section III of Appendix A, *supra* (Final Regulatory Flexibility Analysis) .

[11] See para. 133, *supra*.

Commission tentatively concludes that these proposed flexible build-out requirements, if adopted, will encourage partitioning to entities that have a sincere interest in providing 220 MHz service and will thereby expedite the provision of service to geographic areas that otherwise may not receive it as quickly. The two build-out options may have a different impact on small entities. We seek comment on how the two options will affect small entities.

This *Fifth Notice* solicits comments on a variety of proposals discussed herein, *i.e.*, construction requirements,[12] combined partitioning and disaggregation,[13] and available license areas.[14] Any significant alternatives presented in the comments will be considered.

Partial Dissent
of
Chairman Reed E. Hundt

[12] See paras. 328-340, *supra*.

[13] See para. 327, *supra*.

[14] See paras. 324-325, *supra*.

Released: March 12, 1997

Re: Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Frequency Band by the Private Land Mobile Radio Service (PR Docket No. 89-552); Implementation of Sections 3(n) and 332 of the Communications Act -- Regulatory Treatment of Mobile Services (GN Docket No. 93-252); and Implementation of Sections 309(j) of the Communications Act -- Competitive Bidding 220-222 MHz (PP Docket No. 93-253).

The Commission has decided in this Third Report and Order (*Order*) that 220 MHz licensees aggregating contiguous 5 kHz channels to form channels wider than 5 kHz must adhere to a government-mandated spectrum efficiency standard. This standard arbitrarily requires licensees offering voice services to employ equipment that provides at least one voice channel per 5 KHz channel of bandwidth. For data services, licensees are required to employ equipment that operates at a data rate of at least 4,800 bits per second per 5 KHz channel of bandwidth. The imposition of such a standard is inappropriate, unnecessary, and will have the effect of severely limiting users' equipment choices and will cause a costly delay in the provision of competitive services to the public. I dissent from this section of the Order.

Regulatory intervention is the opposite of free market forces. In this Order we claim to be voting for free market forces in the form of competitive bidding, but in fact we're preserving the mantle of regulatory intervention in the guise of a mandated efficency standard.

I believe the Commission should instead adhere to a consistent approach to spectrum policy that relies on market-based mechanisms to ensure that spectrum is used to benefit the public. Under this approach, the Commission without exception should seek to promote competition over monopoly and provide users with the maximum flexibility to rapidly respond to consumer demand and technological innovation Such a policy in this case would mean that 220 MHz licensees should be given broad flexibility to aggregate channels wider than 5 kHz using any technology they deem appropriate to offer any service they believe the market demands. Licensees should be subject only to the minimum technical restrictions necessary to prevent interference with the operations of neighboring licensees and to protect public health.

A government-mandated efficiency standard is unnecessary to promote spectrum efficiency in this band for several reasons. First, additional spectrum in this band will be awarded through competitive bidding. In addition, licensees in this band have the ability to sell their licenses to other parties. One of the primary advantages of this market-based freedom is that in addition to awarding licenses to those who value them most highly, auctions and tradability impose economic incentives on licensees to use spectrum as efficiently as possible. Where spectrum is freely tradable, licensees have the incentive and the ability to determine the most efficient tradeoffs between acquiring more spectrum and using more efficient equipment. By mandating an efficiency standard here, we are eliminating the ability of users' to deploy the highest quality, lowest cost equipment that will best meet consumer needs. This view is affirmed by equipment manufacturers and service providers alike who have argued in this proceeding that the

imposition of an efficiency standard will arbitrarily limit the ability of 220 MHz licensees to select affordable equipment that will enable them to offer the services consumers demand. Moreover, an efficiency standard will impair the ability of 220 MHz licensees to compete with service providers in other bands who are not subject to similar technical restrictions and will therefore benefit from a more competitive equipment market where they can select the highest quality, lowest cost and most efficient technology from competing manufacturers.

Second, the band plan adopted in this *Order* already recognizes the Commission's earlier policy of promoting spectrally efficient, narrowband technology in the 220-222 MHz band, and thus a spectrum efficiency standard is unnecessary to fulfill that commitment. The Commission originally reallocated the 220 MHz band in 1988 to encourage the development of spectrally efficient technologies. The service rules and channelization plan subsequently adopted in 1991 were designed to afford spectrally efficient narrowband technology "an opportunity to gain acceptance in the marketplace." This goal, which may have been appropriate in a preauction environment, is no longer necessary where licensees will acquire additional spectrum through a market-based auction process and must face the opportunity cost of inefficient use. Nonetheless, in this *Order*, the Commission leaves unchanged the original allocation of 100 channels assigned on non-contiguous basis in Phase I. This allocation will ensure that Phase I licensees who have made substantial investments in existing 5 KHz equipment will be able to expand their operations without substantial investment in new equipment. There is no legitimate reason, however, to place additional restrictions on users of this spectrum in order to protect manufacturers of 5 KHz equipment from facing competition in this band.

Third, the spectrum efficiency standard mandated in this Order will have the likely effect of delaying the ability of licensees to provide new competitive services that meet the needs of consumers. The efficiency standard will severely limit the ability of 220 Mhz licensees to provide services that require channels wider than 5 kHz. For example, the *Order* nominally allows 220 MHz licensees to provide a variety of services including paging on a primary basis; but the efficiency standard we impose is not currently achievable by paging systems and thus, paging is effectively precluded from this band until the efficiency standard sunsets in 2001. As a result, licensees will be forced to make costly and inefficient equipment decisions that will delay the provision of competitive services.

The decision to impose an efficiency standard in this band represents an unnecessary departure from the Commission's move towards a market-based spectrum policy. It arbitrarily limits licensees' flexibility to provide a variety of services to the public and effectively dictates licensees technology choices. The imposition of this standard will cost users the benefits of a competitive equipment market and will deny consumers the benefits of the rapid introduction of competitive new services.

Separate Statement
of
Commissioner Susan Ness

Re: *Use of the 220-222 MHz Band, PR Docket No. 89-552*

Today we close a decade-long initiative to license services using spectrum-efficient technologies in the 220-222 MHz band. Our decision removes restrictions on the types of technology that can be used, increases the flexibility of licensees to provide any fixed or mobile services, allows for the expeditious licensing of remaining spectrum by competitive bidding, and furthers our statutory mandate to encourage development of new and spectrally efficient technologies.

I disagree with those who advocate allowing only the current 5 kHz channel plan. The better approach is the one we take here to introduce flexibility for the channels and allow the newer technologies to be implemented by placing the channel bandwidth decision with the bidders and the marketplace. The channels will be auctioned in either adjacent or non-adjacent groups based upon the former channeling plan. Bidders may purchase, trade, aggregate, or partition in any fashion they wish. We also propose to permit spectrum disaggregation. Using these tools, licensees will be able to obtain the specific channel bandwidth(s) they desire.

In the Notice, we tentatively concluded that allowing channel aggregation should be accompanied by a spectral efficiency requirement at least equivalent to that obtained through 5 kHz channelization. The requirement here is based upon the one adopted unanimously last year in our Refarming proceeding, Docket 92-235. It is technology-neutral, attainable, flexible, and will sunset in five years.

Continuing to use the 220 MHz band as a commercial testbed for spectrum-efficient technologies furthers the purposes set out in our competitive bidding authority, Section 309(j) of the Communications Act. This Act requires, among other things, that we "protect the public interest in the use of the spectrum" and promote its "efficient and intensive use."

This Congressional directive within our competitive bidding authority is, of course, consistent with the goals and requirements expressed elsewhere in the Act. For example, Section 7 requires that we encourage (not merely permit) the provision of new technologies to the public. Similarly, Section 303(g) requires that we "study new uses for radio" and "generally encourage the larger and more effective use of radio in the public interest."

Congress would not have charged us separately to ensure efficient spectrum use if competitive bidding itself was sufficient to attain this objective. Competitive bidding provides an incentive for *economically efficient* service, but does not necessarily result in use of the most *spectral efficient* technology.

Because we have not imposed an efficiency requirement in other auctionable bands, the need is more compelling to continue the experiment in this small two-megahertz wide band. Here, licensees can experiment with spectrally-efficient, state-of-the-art technologies without interfering with older, less efficient ones.

Dale Hatfield, in his 1995 paper "The Economic Impact of Refarming" -- submitted in our Refarming proceeding -- demonstrates the value of spectrum efficiency. Hatfield explains that increasing efficiency to 5 kHz (from 7.5 and 6.25 kHz) in just the 150 and 450 MHz private bands would increase the number of available paired channels by 32 percent, resulting in the creation of over 8,000 service jobs and thousands more manufacturing jobs. Hatfield estimates that in an auction, the *additional* spectrum capacity would have a value in the billions of dollars. Even if

wildly optimistic, a fraction of this predicted benefit would be of continuing value to the American public.

Providers employing less spectrally-efficient technologies have the universe of other bands from which to choose. Some of these bands will also be available to competitive bidding within the same timeframe as the 220 MHz band. I have not supported an efficiency rule for other commercial bands, believing that marketplace forces should be relied upon for establishing the balance between efficient spectrum use and cost of service. However, allowing this testbed to continue for five years in a technologically-neutral fashion furthers the goals established by Congress, harms no potential service provider, and has great potential to benefit the public.

March 12, 1997

Separate Statement
of Commissioner Rachelle B. Chong

Re: *Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service*, PR Docket No. 89-552, RM-8506, *Third Report and Order; Fifth Notice of Proposed Rulemaking*

I support our decision today to provide 220 MHz licensees with more flexibility in the types of services that they can provide with their spectrum.[15] I believe that this decision will allow 220

[15] Our decision today allows 220 MHz licensees to provide one and two way paging and fixed services on a primary basis, in addition to the land mobile services they are currently allowed to provide.

MHz licensees to compete more effectively in the wireless communications marketplace and will broaden the array of services for customers.

In order to facilitate the provision of certain of those services, I also supported our decision to allow 220 MHz licensees to aggregate 5 kHz channels into channels of larger bandwidth. However, precisely because we have decided to allow such aggregation, I believe it is important, as we tentatively concluded in the *Notice*, to require licensees choosing to aggregate channels to maintain a degree of spectrum efficiency at least equivalent to that obtained through 5 kHz channelization. I write separately to set forth my reasoning for supporting adoption of a spectrum efficiency standard for this band and to explain why I respectfully disagree with the arguments raised by my dissenting colleague. I emphasize that my decision to support such a standard is limited to the unique circumstances of this service.

My dissenting colleague argues that licensees who will acquire this spectrum at auction will have incentive to use the spectrum as efficiently as possible. I agree that licensees acquiring 220 MHz spectrum at auction will have incentives to use their spectrum in an *economically* efficient manner. The most economically efficient result, however, does not necessarily require the use of the most spectrally efficient technology. While I generally prefer that the market drives the technology choice in wireless services such as this one, I believe that the equities of the situation mitigate in favor of the adoption of a limited spectrum efficiency standard.

As background, we reallocated the 220-222 MHz band from the Amateur Radio Service to private and federal government land mobile use in 1988.[16] In doing so, we *specifically* dedicated this 2 MHz of spectrum for the development of spectrally efficient narrowband technology. In addition, we stated at that time that, "[w]e are convinced that in order for narrowband land mobile technology to flourish, it must be afforded a reasonable opportunity to gain full acceptance in the market place [sic]."[17] In furtherance of this policy, we channelized the 2 MHz into 200 5 kHz channel pairs.[18]

In spite of our good intentions and the best efforts of several manufacturers, narrowband technology has not yet had a real opportunity to gain acceptance in the marketplace. First, there were a number of delays associated with the Commission's adoption of service rules and issuance of licenses in the 220 MHz band.[19] Even after the licenses were issued, the new licensees were

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[16] *Amendment of Part 2 of the Commission's Rules Regarding the Allocation of the 216-225 MHz Band*, GEN Docket No. 87-14, *Report and Order*, 3 FCC Rcd 5287 (1988).

[17] *Id.* at 5289.

[18] *Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Services*, PR Docket No. 89-552, *Report and Order*, 6 FCC Rcd 2356 (1991).

[19] Although we reallocated the spectrum in 1988, we did not actually issue any service rules for the 220-222 MHz band until 1991. *Id.* Although we began accepting license applications almost immediately, within one month of opening the application window, the staff imposed a freeze on the filing of all applications (which continued in place until last year). *Acceptance of 220-222 MHz Private Land Mobile Applications*, 6 FCC Rcd 3333 (1991). We held lotteries for non-nationwide and nationwide licenses in 1992 and 1993,

reluctant to invest in the narrowband technology and construct their systems because of a pending lawsuit challenging certain aspects of the Commission's licensing procedures in the 220-222 MHz band.[20] In recognition of these problems and delays, the Commission extended the 220 MHz construction deadline *five times* -- with the last deadline expiring August, 1996.[21]

I believe that because we specifically set aside this band for the development of spectrally efficient technology, and some licensees and manufacturers relied our set aside decision, we should honor our commitment to spectrum efficiency in this band. That being said, I acknowledge that narrowband technology is not the only type of spectrally efficient technology. Because I did not want to preclude other spectrally efficient types of technologies that require wider bandwidths from being used in the 220 MHz band, I supported the decision to allow channel aggregation and the use of non-narrowband technologies, so long as the licensee choosing to aggregate channels also maintains a level of spectrum efficiency.

My dissenting colleague argues that the efficiency standard will surely limit the ability of 220 MHz licensees to provide services that require channels wider than 5 kHz and will effectively preclude paging services. I disagree. In establishing the spectrum efficiency standard, we tried to choose an efficiency level that would promote efficiency, but would still be reasonably attainable by manufacturers. The standard we chose -- for voice, 1 voice channel per 5 kHz, and for data, 4800 bits per second per 5 kHz -- meets both of these criteria. This standard is similar to the standard that we recently adopted in our refarming decision.[22] It appears that it is a standard that can be met by both of the current narrowband manufacturers and in fact has been exceeded threefold by one of the manufacturers.[23] Moreover, the data standard is one that other types of technologies, including TDMA and some new paging technologies, should be able to meet, if there is enough

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respectively, and issued the last licenses in 1995. *Public Notice, Commission Announces Lottery for Rank Ordering of 220-222 MHz Private Land Mobile "Local" Channels*, 7 FCC Rcd 6378 (1992); *Public Notice, Commission Announces Lottery to Select Commercial Nationwide 220-222 MHz Private Land Mobile Licensees, DA 93-159 (rel. Feb. 16, 1993), 58 Fed. Reg. 09174 (Feb. 19, 1993).*

[20] *See Evans v. FCC*, Order, per curiam, Case No. 92-1317 (D.C. Cir. Mar. 18, 1994). This suit was filed in July, 1992, and the case was settled in March, 1994.

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

[22] *Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Radio Services*, PR Docket No. 92-235, *Amendment of the Commission's Rules Concerning Maritime Communications*, PR Docket No. 92-257, *Memorandum Opinion and Order*, FCC 96-492 (rel. Dec. 30, 1996) (*Refarming Reconsideration Order*).

[23] Securicor Radiocoms Limited ("Securicor") is reporting that its current system is operating at 14.4 kb/s. Securicor, *Ex Parte Submission*, PR Docket 89-552, GN Docket 93-252, and PP Docket 93-252, filed November 12, 1996; SEA, Inc. ("SEA") proposed a data rate of 4,800 b/s. SEA Comments at 17.

available spectrum at 220 MHz.[24] In addition, we provided that a manufacturer may obtain type acceptance for 220 MHz equipment that does not meet the voice or data efficiency standard if they can meet certain other conditions.

Although I believe that we should adopt a spectrum efficiency standard today, I do not believe that we should retain the spectrum efficiency standard indefinitely. For this reason, I supported a five year sunset date for the spectrum efficiency standard. I believe that this time period will provide a fair opportunity for spectrally efficient technologies to develop in the band and gain acceptance in the marketplace. Moreover, with the fast pace of wireless technological development, it is my hope that by the year 2002, the spectrum efficiency standard we adopt today will have long since been exceeded.

[24] Cellular and 800 MHz SMR digital TDMA equipment are operating at a data rate of 48,600 b/s for a 30 kHz channel. This translates to 8,100 b/s for a 5 kHz channel and meets our 220 MHz data standard. In addition, Motorola is reported to have developed a paging technology, Inflexion, which is expected to have a data rate of 112,000 b/s for a 50 kHz channel. This translates to 11,200 b/s for a 5 kHz channel, a number far in excess of our efficiency standard.