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FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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| In the Matter of |) | GEN Docket No. 90-314 |
| |) | ET Docket No. <u>92-100</u> |
| |) | |
| Amendment of the Commission's |) | RM-7140, RM-7175, RM-7617 |
| Rules to Establish New |) | RM-7618, RM-7760, RM-7782 |
| Personal Communications |) | RM-7860, RM-7977, RM-7978 |
| Services |) | RM-7979, RM-7980 |
| |) | |
| |) | PP-35 through PP-40, PP-7 |
| |) | through PP-85 |

AT&T REPLY COMMENTS

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SUMMARY

The Commission's objectives for personal communications services ("PCS") are vigorous competition, rapid deployment, interoperable service, and diversity. AT&T's proposals in this proceeding are designed to complement the Commission's goals by facilitating the emergence of a flexible, competitive and ubiquitous wireless PCS system.

AT&T's modified lottery proposal, with which an overwhelming majority of the commenters concur, encourages meaningful spectrum negotiation and deters speculation by requiring applicants to meet strict entry requirements and to post a significant performance bond. A brief transition period should also be implemented to encourage incumbents to seriously consider relocation negotiations with the lottery winners.

The vast majority of commenters similarly agree with AT&T that, to foster more intense competition and greater innovation and diversity of services for consumers, 20 MHz of spectrum should be allocated to each of five PCS licensees for each geographic serving area. Those commenters who advocate fewer licenses per serving area claim that substantially more than 20 MHz of spectrum is needed by each PCS provider, because sufficient clear spectrum to operate PCS service may not be available with a smaller allocation of spectrum. AT&T

shows that such spectrum availability concerns can be addressed, without sacrificing diversity, through such measures as a brief, fixed transition period for relocation of incumbents; assurance that adequate spectrum outside the 2 GHz band remains available for relocating incumbents; and appropriate provisions for license transfers by PCS operators who may require additional clear spectrum in which to operate.

In addition, the majority of commenters show that the need for PCS operators engage in extensive negotiation and relocation efforts to clear spectrum decreases in proportion with the size of the geographic market. Therefore, although AT&T was initially concerned about the network rearrangement costs that MSA/RSA geographic serving areas could generate if the Commission imposes customer choice obligations on wireless services, AT&T is not opposed to licensing PCS service on the basis of MSA/RSA markets if the potential need for PCS operators to accommodate customer choice requirements is clearly recognized.

Finally, like AT&T, those commenters that address the issue of unlicensed devices almost unanimously support allocating the spectrum between 1910 and 1930 MHz for unlicensed applications. A very small number of commenters, however, oppose any allocation for unlicensed uses because of potential interference with

incumbents. As AT&T and other parties have demonstrated, however, adequate clear spectrum is needed for unlicensed devices. Compensation to relocated incumbents can be addressed, as AT&T has shown, by forming an independent advisory council of manufacturers of unlicensed devices. Moreover, most commenters agree with AT&T that the Commission should either reallocate additional spectrum, or create a reserve for non-targeted reallocation for either licensed or unlicensed PCS.

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AT&T REPLY COMMENTS

Pursuant to the November 24 Order in this proceeding,¹ American Telephone and Telegraph Company ("AT&T") replies to the comments of other parties on the Commission's Notice of Proposed Rulemaking and Tentative Decision ("NPRM").²

Over 160 parties, representing a broad spectrum of interests, submitted comments in response to the NPRM.³ These entities include interexchange carriers

¹ Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, Order Extending Time for Reply Comments, DA 92-1600, released November 24, 1992 ("November 24 Order").

² Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, Notice of Proposed Rulemaking and Tentative Decision, 7 FCC Rcd. 5676 (1992).

³ Attachment A lists the commenters.

("IXCs"), local exchange carriers ("LECs"), wireline and non-wireline cellular providers, state public utility regulators and other government agencies, equipment manufacturers, incumbent 2 GHz users, and PCS pioneers. Collectively, this record provides the Commission ample basis for resolving the issues raised in the NPRM with respect to the mechanism for issuing PCS licenses; the appropriate number of licensees, the eligible entities for PCS licenses, and the geographic scope of each license area; and the appropriate allocation of spectrum for unlicensed PCS applications. AT&T in these reply comments addresses each of these subjects.

I. THE COMMISSION SHOULD ADOPT A MODIFIED LOTTERY PROCESS FOR THE AWARDING OF PCS LICENSES.

The Commission in the NPRM (¶ 82) solicited comment on possible reforms of the lottery process, and whether lotteries or competitive bidding (if authorized by Congress) would be the most appropriate mechanism for licensing PCS. An overwhelming number of the commenters, including AT&T (p. 3), suggest that in the absence of authorization from Congress to use competitive bidding to select licenses (see NPRM, Appendix E, p. 91), the Commission should implement a modified lottery proceeding.⁴

⁴ See, e.g., APCN, pp. 16-19; Cablevision, pp. 9-12; Calcell, p. 16; CSI, p. 5; CTIA, pp. 70-71; Centel,

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For example, Ameritech (p. 31) points out that "[w]hile auctions would provide the greatest efficiencies, it is improbable that Congress will act to permit the Commission to use such a method. Under such circumstances, the Commission should use lotteries for PCS license distribution." Similarly, DOJ (pp. 33-34) "continues to believe that auctions are the best method for assuring that the licenses go to those who are most likely to maximize their value," but that agency recognizes that auction authority is not likely to be "swiftly forthcoming." Thus, AT&T and the majority of the other commenters propose that reformed lotteries, rather than spectrum auctions, be used to license PCS.

Moreover, commenters generally concur with AT&T's position (p. 4) that to deter speculation, license applicants should be required to meet strict entry requirements and post a significant performance bond, which would be applied toward the development of the licensees' service, before they would be permitted to

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pp. 20-22; CCI, p. 14; CBT, pp. 20-21; Metrocall, p. 9; Motorola, p. 44; NRTA, pp. 15-16; PTG, pp. 32-33; PCNS-NY, p. 16; PSI, p. 8; QUALCOMM, p. 6; Rolm, p. 28; RIC, p. 13; RCC, p. 2; SWBT, p. 25; Sprint, pp. 14-15; Tel/Logic, pp. 11-12; TWT, pp. 19-23; U S WEST, pp. 15-18; and, Viacom, pp. 20-21.

enter the licensing process.⁵ For example, Ameritech (pp. 36-39), suggests that the Commission should "(1) develop a market-based refundable deposit, (2) require applicants to submit a pre-filing firm financial commitment, (3) require applicants to submit a pre-filing engineering plan, and (4) implement buildout requirements." Centel (pp. 20-22) also supports the implementation of stringent anti-speculation safeguards, which should include rigorous filing requirements; high, non-refundable initial application fees; demonstration of financial ability to construct and operate the system for one year; and demonstration of technical capabilities to implement the proposal. Thus, as GTE (p. 57) demonstrates, "whether these methods are used in a comparative hearing process or with a lottery . . . [e]ach of these provisions will help ensure that only parties who have a serious interest in delivering PCS systems will apply for spectrum."

The scant number of commenters that support alternatives to lotteries as a licensing mechanism almost

⁵ Adelphia, pp. 14-17; APC, pp. 39-42; APCN, pp. 16-19; Cablevision, pp. 9-12; Calcell, pp. 14-17; Century, p. 14; CBT, pp. 16-20; Comcast, pp. 26-30; Concord, p. 5; dbX, p. 13; EEI, pp. 13-14; ICC, pp. 11-12; NRTA, pp. 15-16; PTG, pp. 32-33; PerTel, pp. 15-16; PSI, p. 7; Rochester, p. 26; SBPCS, pp. 8-10; SWBT, p. 25; Teco, p. 2; Tel/Logic, pp. 11-12; and, Telocator, pp. 10-12.

exclusively propose national licenses which, given the scope and value of these licenses, they claim "must be chosen by comparative hearing."⁶ For example, McCaw states (pp. 35-36) that although it "is adamantly opposed to nationwide licensing because only a few valuable assignments would be available, this approach could not even be responsibly considered without assurances that comparative hearings would be utilized." However, even commenters such as MCI that advocate comparative hearings are constrained to admit (pp. 13-14) that "[t]he cellular licensing process has shown how impractical comparative hearings can be when many licenses are to be awarded."

In sum, the record abundantly supports the Commission's tentative conclusion (NPRM, ¶ 84) that "[l]otteries generally have proved to be superior to comparative hearings because they have been completed in less time and have used less resources of both applicants and the Commission." Thus, AT&T urges the Commission to adopt a modified lottery approach, which would require applicants to meet significant entry requirements and meet construction deadlines and proof requirements

⁶ Bell Atlantic, p. 28; cf., USTA, p. 27 (comparative hearings more likely to yield qualified applicants, however, alternatively considers a modified lottery procedure to be the best approach).

regarding financial ability to complete the service.⁷ Entry barriers such as these will deter speculation, while encouraging the Commission's goal (NPRM, ¶ 4) to foster the rapid development and deployment of emerging technologies for the benefit of consumers.

II. THE COMMISSION SHOULD ALLOCATE SPECTRUM FOR FIVE 20 MHZ LICENSES AT 2 GHZ FOR PCS SERVICE.

Consistent with its stated objective "to provide an allocation that allows for the provision of the widest range of PCS services at the lowest cost to consumers,"⁸ the Commission in the NPRM recognized that "at a minimum three service providers per market will be necessary to ensure a wide and rich range of PCS services that meet consumer needs at reasonable prices."⁹ Thus, although the NPRM tentatively proposed to allocate 30 MHz of spectrum to three licensees in each geographic market, the Commission explicitly acknowledged that a larger number of licensees may produce additional innovation benefits, and requested comments on the merits of

⁷ As AT&T also showed (p. 8), if at any time one or more implementation requirements are not met, the licensee should be required to forfeit its license to the next-ranked applicant without any further regulatory processing, and its bond to the bondholder. The newly-licensed applicant also should have to maintain implementation standards or risk similar forfeiture.

⁸ NPRM, ¶ 34.

⁹ Id. (emphasis supplied).

authorizing up to five PCS licensees in each market.¹⁰ The NPRM (¶ 36) also recognized that such an expansion in the number of licensees would require a concomitant adjustment of each licensee's spectrum allocation to 20 MHz.

Like AT&T, the majority of the commenters who address the issue support licensing five service providers, each with an allocation of 20 MHz, for each geographic serving area.¹¹ For example, NYNEX (p. 26) points out that licensing five providers in each locality will provide customers the widest possible choice among PCS service providers. Moreover, several parties note that authorizing five licensees per service area will foster intense competition that will encourage these entities to differentiate their offerings from those of competing licensees.¹² As a result, this licensing

¹⁰ Id.

¹¹ See ALLTEL, pp. 15-16; AMTA, p.4; Bell Atlantic, pp. 38-39; BellSouth, pp. 20-23; CTIA, pp. 28-30; Centel, p. 10; Chesnee, p. 1; Concord, p. 2; GTE, pp. 28-32; Lincoln, p. 9; McCaw, pp. 6, 10-11; NTCA, p.8; NYDPS, pp. 5-6; NYNEX, pp. 26-27; PDM/PCS, p. 7; PaPUC, p. 4; Piedmont/West Carolina/Farmers, p. 2; Rochester, p. 13; Rock Hill, p. 4; RCC, p. 1; SCTA, p. 3; SNET, pp. 6-7; TDS, pp. 5-8; USSBA, pp. 10-11; and, Vanguard, pp. 3-5.

¹² See, e.g., ALLTEL, pp. 15-16; Bell Atlantic, p. 33; Concord, p. 2; Lincoln, p. 10; NYNEX, p.26; Rural Telcos, pp. 4-5; Ohio LINX, p. 5; and, TDS, pp. 5-8. As BellSouth also points out (p. 22), creating a larger number of licensees in each market increases the likelihood that some of these entities will

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approach is best calculated to encourage innovation on the part of licensees and promote a wide diversity of services for customers. The more intense competition among PCS providers that five licensees will provide also is more likely to maximize consumer benefits in terms of lower prices for PCS services.¹³

Many parties also recognize that licensing five providers in each service area is better calculated to assure that PCS services will be available to the largest possible number of customers, as the NPRM (¶¶ 34-37) contemplates. These commenters correctly state that maximizing the number of licensees will generate strong incentives for these entities to establish a customer base in advance of their rivals, and thus to speed deployment of PCS service within their territories.¹⁴

Those parties who contend that the Commission should grant fewer licenses in each service area principally claim that more than 20 MHz of spectrum must be allocated to each PCS provider to allow service to be

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attempt to serve specialized, "niche" applications for wireless services.

¹³ See, e.g., Bell Atlantic, pp. 32-35; Centel, p. 10; GTE, pp. 28-32; McCaw, p. 11; SNET, pp. 6-7; and, Vanguard, pp. 5-7.

¹⁴ BellSouth, p. 22; GTE, p. 31; NYNEX, p. 27; PaPUC, p. 4; and, TDS, pp. 5-8.

provided effectively.¹⁵ For example, APC argues (pp. 9-13) that large numbers of private fixed microwave users already occupy spectrum in the 2 GHz band. In view of these incumbent users, APC alleges, PCS licensees with allocations of 20 MHz will be unable to obtain sufficient clear spectrum in some market areas to permit efficient deployment of PCS or, in some instances, to offer service at all.¹⁶ Accordingly, APC requests the Commission to license no more than two PCS providers, with 40 MHz of spectrum, in each market area. Other parties propose identical (or substantially similar) limitations on the number of licensees on this same ground.¹⁷

¹⁵ Some commenters also contend that, wholly apart from any questions of spectrum adequacy, the Commission should limit the number of licensees because the wireless services marketplace allegedly will not profitably support more participants. See, e.g., QUALCOMM, p. 3 (two licensees per service area); Rolm, pp. 13-16 (no more than three licensees per service area); Ericsson, pp. 7-8 (only 2 licensees per market). These protectionist claims are antithetical to the Commission's well-established procompetitive policies, which allow marketplace forces and not regulatory fiat to determine the optimal number of providers of telecommunications services. The Commission should therefore reject limits on the number of PCS licensees on the basis these commenters propose.

¹⁶ See American Personal Communications, Report on Spectrum Availability for Personal Communications Services Sharing the 1850-1990 MHz Band with Private Operational Fixed Microwave Service (November 1992), pp. 24-29.

¹⁷ See APCN, pp. 2-4 (2 licensees with 40 MHz each); California, p. 2 (3 licensees); CSI, p. 5 (3 licensees with 25-30 MHz allocations); Century, p. 9

The spectrum availability concerns raised by these commenters can be adequately addressed by the Commission through other procedures that do not entail the loss of diversity of service providers that will necessarily result from narrowly limiting the number PCS licensees in each market. As AT&T pointed out in its Comments (pp. 6-8), the Commission should take steps to encourage negotiations among PCS licensees and incumbents in the 2 GHz band to relocate those existing users to other usable spectrum.¹⁸ One important component of that

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(3 licensees with 25 MHz each of channel and reserve spectrum); Cox, pp. 6-7 (40 MHz licenses); HNS, pp. 5-6 (30 MHz per licensee); InterDigital, pp. 3-7 (40 MHz per licensee); MCI, pp. 4-8 (three licensees with 40 MHz each); NATA, pp. 6-7 (licensees require at least 80 MHz each); OCI, pp. 11-12 (licensees should initially be allocated 60 MHz to "hunt" in for 40 MHz of spectrum); SWBT, p. 9 (two licensees with 40 MHz); TWT, pp. 10-12 (clear spectrum sufficient for only two licensees); U S WEST, pp. 9-11 (four licensees with 25 MHz each); Viacom, pp. 13-14 (no more than three licensees per market).

¹⁸ The Commission in ET Docket No. 92-9 is currently studying a transition plan to permit "fair and equitable sharing of the 2 GHz frequencies by new services and the existing fixed microwave services that currently use this spectrum and/or relocation of existing 2 GHz facilities to other spectrum." Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, First Report and Order and Third Notice of Proposed Rulemaking, FCC 92-437, released October 16, 1992, ¶ 1. AT&T supports market-based measures to promote relocation of incumbent users of PCS spectrum. See AT&T Reply Comments filed July 8, 1992 in ET Docket No. 92-9.

program is establishing a fixed transition period that is as brief as reasonably practicable, after which existing licensees in the 2 GHz band will no longer be permitted to occupy that spectrum on a co-primary basis with PCS licensees. AT&T also showed (*id.*) that setting such a transition period will create substantial marketplace incentives for incumbents, whose licensees will otherwise expire in the near term, expeditiously to bargain with PCS providers to pay the current licensees' moving costs.

The Commission should also assure that adequate spectrum outside the 2 GHz band remains available in which to relocate these incumbents. For example, currently pending before the Commission in ET Docket No. 92-9 is a proposal to rechannelize and allocate spectrum in multiple bands above 3 GHz.¹⁹ AT&T has demonstrated that rechannelizing that spectrum in the manner proposed in that proceeding will not only unnecessarily disrupt incumbent 4 GHz and 6 GHz users, but will also unduly complicate relocation to these bands by 2 GHz licensees. Accordingly, AT&T has submitted an alternative rechannelizing proposal that will afford relocating 2 GHz users a wide variety of spectrum choices

¹⁹ See Redevelopment of Spectrum to Encourage Innovation in the Use of Telecommunications Technologies, Notice of Proposed Rulemaking, 7 FCC Rcd. 1542 (1992).

in these bands.²⁰ By adopting this plan and other measures that facilitate efficient reassignment of spectrum from current users to PCS applications, the Commission can significantly mitigate the spectrum scarcity concerns raised by commenters who suggest licensing fewer than five PCS providers in each market.²¹

Moreover, even where these measures may not afford particular PCS providers sufficient clear spectrum to operate successfully, the Commission can allow those entities to transfer their licenses to another PCS provider in that geographic area. In this way, for example, two PCS licensees whose spectrum is partly occupied by incumbent microwave users that cannot successfully be relocated could combine their licensed spectrum allocations to provide PCS service in that geographic market area. The proposals by some commenters

²⁰ See AT&T Comments filed December 11, 1992 in ET Docket No. 92-9.

²¹ The Commission can further ameliorate any spectrum scarcity concerns through its selection of the appropriate geographic area for licensing PCS providers. The likelihood that an incumbent 2 GHz user may occupy some part of the spectrum allocated to a PCS provider increases with the size of the latter's service territory. Therefore, granting PCS licenses coextensive with current cellular Metropolitan Service Areas ("MSAs") and Rural Service Areas ("RSAs") will reduce the potential for interference with incumbent fixed microwave users. As shown in Part III below, most commenters in this proceeding favor licensing on the basis of MSA/RSA market areas.

(e.g., APCN, p. 13) that PCS license transfers should be entirely prohibited for some period of time after they are granted thus appears unwarranted.

The Commission should administer such license transfers, however, in a manner that is consistent with its overall objective of maintaining a diversity of PCS services and service providers. AT&T proposes that the Commission adopt a "cap" of 45 MHz on the amount of spectrum available for PCS use which may be held by any licensee in a particular geographic service market. This restriction on license transfers should be sufficient to allow PCS providers with limited initial clear spectrum in that service area to consolidate their allocations, in the manner described above, to successfully commence operation. At the same time, the cap on the total PCS spectrum which may be held by a single licensee will assure that a variety of PCS providers and service offerings remains available to customers in that geographic market as contemplated by the NPRM.

Establishing the cap at 45 MHz will also permit existing cellular licensees, who have already been allocated 25 MHz of spectrum, to acquire limited additional spectrum in the 2 GHz band. The NPRM (¶¶ 67, 70) proposes to allow cellular carriers to use their already-allocated spectrum for PCS, and to acquire additional PCS licenses outside of their cellular service

areas. The Commission recognizes that these steps will foster greater competition in the provision of wireless communications services -- especially if five PCS licensees are authorized in each geographic market.²²

The majority of commenters in this proceeding not only endorse these licensing procedures, but also favor allowing cellular carriers to hold PCS licenses within their cellular service areas.²³ As these parties correctly point out, disenfranchising all cellular carriers to hold PCS licenses in markets that they already serve will only inhibit competition, by denying experienced and technically proficient entities the opportunity to participate in the development of a wide variety of attractive PCS offerings to customers. AT&T therefore urges the Commission to allow cellular carriers to hold PCS licenses within their cellular service territories.²⁴

²² See NPRM, ¶ 65.

²³ See, e.g., ALLTEL, pp. 5-7; Bell Atlantic, pp. 5-12; Centel, pp. 14-16; GTE, pp. 36-42; ICC, pp. 9-10; McCaw, pp. 24-33; and, NYDPS, pp. 8-9.

²⁴ While the Commission thus should not restrict the eligibility of any category of potential market entrants to obtain PCS spectrum, it also should not automatically allocate such spectrum to a particular class of entrant. For example, the majority of commenters (other than the LECs themselves) oppose the NPRM's tentative proposal (¶¶ 78-80) to allocate LECs 10 MHz of PCS spectrum within their service areas. See, e.g., APCN, p. 14; Cablevision, pp. 14-15; Comcast, p. 16; Florida Cellular, p. 12; McCaw,

III. MSA/RSA BOUNDARIES MAY BE USED TO DEFINE THE
PCS GEOGRAPHIC MARKET SERVICE AREA.

As the NPRM (¶ 56-61) recognizes, the Commission's selection of the geographic area in which PCS licensees will operate is critical to achieving its goal of a diverse, attractively priced and feature-rich service environment. The appropriate geographic scope of the license areas is therefore a principal focus of this proceeding. The NPRM solicited comments on four alternative geographic license territories for PCS. Specifically, the Commission requested parties to address the relative merits of licensing PCS operators in (1) the 487 Basic Trading Areas ("BTAs") defined by Rand McNally; (2) Rand McNally's 47 Major Trading Areas ("MTAs"); (3) the 194 telephone LATAs; or (4) nationwide license territories.²⁵

The NPRM (¶ 56-58) also considered, but rejected, licensing PCS providers in metropolitan and rural service areas ("MSAs/RSAs") coterminous with the geographic areas in which cellular service providers were initially licensed. The Commission reasoned that,

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pp. 33-34; NYDPS, pp. 9-10. AT&T agrees with these parties that a "set aside" of spectrum to potential PCS providers is squarely at odds with the Commission's pro-competitive objectives in this proceeding.

²⁵ NPRM, ¶60.

because the cellular industry has undergone extensive consolidation in recent years (thus resulting in the development of larger geographic service areas), licensing larger PCS service areas from the outset could eliminate the need for eventual consolidations as well as their associated transaction costs and regulatory delays.

In its initial comments, AT&T supported licensing on the basis of the 194 existing LATAs, largely because LATA-bounded service areas will minimize the future need for possibly costly network rearrangements if customer choice requirements are made applicable to wireless services.²⁶ The majority of commenters, however, strongly urge the Commission to adopt MSA/RSA boundaries as the basis for PCS licenses.²⁷ As these parties persuasively point out, licensing on the basis of these smaller service territories could produce cost savings for PCS operators that would offset any potential network reconfiguration costs to provide customer choice, and will also further the Commission's other objectives in this proceeding.

²⁶ See AT&T Comments p. 12 and n.16, citing Policies and Rules Pertaining to the Equal Access Obligations of Cellular Providers, RM-8012.

²⁷ See, e.g., Adelpia, p. 5; BellSouth, pp. 30-39; CTIA, pp. 34-57; Fleet Call, pp. 4-7; HNS, pp. 7-8; McCaw, pp. 14-18; NYNEX, pp. 22-24; Sprint, pp. 10-11; USTA, p. 19; and, Vanguard, pp. 9-13.

For example, McCaw (pp. 14-18) and BellSouth (p. 32) note that licensing on the basis of MSAs/RSAs will provide significantly greater opportunities for many small- and medium-sized businesses to participate in the PCS market than would be available under any of the Commission's proposed alternatives. This is because the capital requirements to acquire, construct and operate a PCS system are generally proportional to the size of the service territory.

Accordingly, reducing the geographic license area will make it possible for smaller, less well-funded entities to compete to provide service. Licensing on this basis will also thereby promote the dual goals of diversity and service innovation that the Commission has established for PCS service.²⁸ The commenters further point out that licensing on the basis of MSA/RSA boundaries offers the opportunity for earlier implementation of PCS service than with a larger geographic area, because of the lower cost of deploying

²⁸ Even though it proposed various larger alternative licensing areas, the NPRM acknowledged (§ 59) that "smaller service areas may permit a broader participation by firm of all sizes in the PCS market." Moreover, the NPRM recognized (id.) that the broader participation in the PCS market that can be expected to flow from this licensing approach "may produce a greater degree of diversity and degree of technical and service innovation than would be expected" from a geographic licensing scheme that allows only a few large firms to provide service.

facilities to achieve full coverage of the licensed territory.²⁹

In sum, AT&T believes that these commenters have shown that the Commission should reexamine its tentative conclusion that MSA/RSA boundaries would not be the most appropriate basis for licensing PCS. Avoidance of potential network rearrangement costs to provide customer choice to PCS subscribers need not be a paramount concern if, as the record now amply demonstrates, licensing on the basis of MSAs/RSAs could produce offsetting initial cost savings to PCS operators. The Commission should make clear, however, that a decision to use MSA/RSA boundaries as the basis for licensing market entrants will not serve as a basis for relieving PCS operators of any future obligations to

²⁹ See ALLTEL, p. 13; BellSouth, p. 32; Concord, pp. 3-4; McCaw, pp. 16-17; and, Taconic, pp. 3-4. Additionally, reliance on these smaller service territories will facilitate licensing a larger number of PCS operators in each market, with a more efficient allocation of the total available spectrum. This is because PCS licensees with 20 MHz allocations are more likely to have sufficient "clear" spectrum, without interference from co-primary point-to-point microwave operators, to operate in a limited geographic area than if the provider is licensed at any of the geographic levels proposed in the NPRM. Moreover, even if the PCS operator must arrange for the relocation of incumbent users in order to gain enough clear spectrum to operate successfully, there is likely to be less need for such transactions (with their consequent cost to PCS entrants) as the size of the geographic market decreases.

implement appropriate customer choice requirements, even if they necessitate reconfiguration of those entities' networks.

IV. THE COMMISSION SHOULD INCREASE ITS ALLOCATION FOR SPECTRUM IN THE UNLICENSED BAND.

The overwhelming majority of commenters who addressed unlicensed user concerns agree with AT&T's support (p. 13) of the Commission's proposal (NPRM, ¶¶ 41-43) to allocate spectrum for unlicensed applications between 1910 to 1930 MHz.³⁰ For example, Ameritech (p. 12) states "that the 1910 to 1930 MHz range makes the most sense for [unlicensed] systems." Similarly, McCaw (p.12) "also strongly supports the specific allocation proposal to dedicate 1910-1930 MHz for unlicensed PCS devices."

In addition, most commenters interested in unlicensed devices, such as wireless PBXs, wireless Local Area Networks, and cordless phones, support AT&T's proposal (p. 13) for an allocation to unlicensed users of spectrum in addition to the 1910 to 1930 MHz proposed by

³⁰ See, e.g., APC, p. 19; Ameritech, p. 12; Bell Atlantic, p. 39; DAC, p. 4; IEEE, p. 7; PerTel, p. 2; USSBA, p. 14; and, UTC, p. 23; accord, Comments of AT&T (ET Docket No. 92-9, June 5, 1992); cf., CBT (p. 14) (the 1900-1910 MHz and 1980-1990 MHz band should be used for unlicensed devices, and not the 1910-1930 MHz band, which should be used for unstructured wideband PCS).

the Commission.³¹ As AT&T demonstrated (p. 15) "even if the initial 20 MHz allocation could be considered adequate, the demand would rapidly outgrow the allocated spectrum, degrading the unlicensed users' ability to provide service."³² Similarly, Ericsson (pp. 20-21) "believes the Commission's proposed allocation of 20 MHz between 1910-1930 MHz is marginal to meet the initial demands of the unlicensed services community for a variety of reasons." For example, as CM illustrates (p.1), unlicensed PCS "requires more than 20 MHz to provide both voice (e.g., wireless PBX) and data (e.g., wireless LAN) service to an economically-adequate number of users."

As AT&T demonstrated (p. 15), the spectrum between 1895 and 1910 MHz is ideal for an additional allocation to unlicensed devices because it "is currently not targeted for reallocation and is adjacent to that portion of the spectrum already assigned for unlicensed

³¹ See, e.g., Ameritech, p. 10; DAC, pp. 4-6; Ericsson, p. 21; Hitachi, pp. 2-3; InterDigital, pp. 10-11; IEEE, p. 6; McCaw, pp. 12-13; NTI, p. 22; PCSI, p. 15; and, TCSI, p. 2.

³² Operation of PCS in the unlicensed band is based upon user-owned devices, and not network equipment like licensed PCS, which presents unique coordination concerns. "[T]o bring high quality, non-licensed, voice and data products to home, office and factory environments, manufacturers and consumers need [a sufficient] allocation of clear spectrum" Comments of AT&T (ET Docket No. 92-9, June 5, 1992).