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January 8, 1993

BY HAND

Ms. Donna R. Searcy  
Secretary  
Federal Communications Commission  
1919 M Street, NW, Room 222  
Washington, DC 20554

*92-100 /*

**RECEIVED**

**JAN - 8 1993**

**FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY**

Re: Reply Comments of Bell Atlantic Personal Communications, Inc. in  
Gen. Docket No. ~~90-314~~  
Amendment of the Commission's Rules to Establish New Personal  
Communications Services

Dear Ms. Searcy:

Enclosed on behalf of Bell Atlantic Personal Communications, Inc. ("BAPCI") are an original and four copies of BAPCI's Reply Comments in the above-referenced proceeding.

Please call me if you have any questions concerning these comments.

Very truly yours,

*James H. Barker*  
Mark S. Fowler  
James H. Barker  
of LATHAM & WATKINS

Enclosures

- cc: Chairman Alfred C. Sikes
- Commissioner Andrew C. Barrett
- Commissioner Ervin S. Duggan
- Commissioner Sherrie P. Marshall
- Commissioner James H. Quello
- Mr. Thomas P. Stanley
- Robert Ungar, Esq.
- Mr. Robert Pepper

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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of

Amendment of the Commission's  
Rules to Establish New Personal  
Communications Services

) Gen. Docket No. 90-314  
) ET Docket No. 92-100  
)  
) RM-7140, RM-7175, RM-7617,  
) RM-7618, RM-7760, RM-7782,  
) RM-7860, RM-7977, RM-7978,  
) RM-7979, RM-7980  
)  
) PP-35 through PP-40,  
) PP-79 through PP-85

RECEIVED

REPLY COMMENTS OF BELL ATLANTIC PERSONAL COMMUNICATIONS, INC.

JAN - 8 1993  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Mark S. Fowler  
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Bell Atlantic Personal  
Communications, Inc.

Dated: January 8, 1993

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## EXECUTIVE SUMMARY

PCS represents perhaps the most important radio development of this century and the beginning of the next. It is vital to the buildout of the nation's information infrastructure, and to assuring the United States' global competitiveness in the information age.

Many commenters agree that in order to maximize the possibilities of PCS, all qualified providers must be provided with the opportunity to offer competitive, varied PCS services to the American public. The Commission must not heed the parochial or unfounded arguments of parties who would restrict entry into the PCS marketplace of LECs and cellular carriers, two classes of providers most likely to bring significant economies of scope to PCS, and whose infrastructures render them promising candidates to "play major roles" in PCS.<sup>1/</sup>

Cellular carriers have demonstrated their commitment to wireless service development and should not be penalized for it. The arguments of those who would ban cellular carriers and raise fears of anticompetitive behavior or market concentration assume that cellular will have excess capacity to offer new services and that PCS and cellular will offer completely substitutable services. These assumptions are flawed. Practical limitations on the ability of cellular providers to increase capacity, analog user obligations, and the ongoing conversion to digital cellular will all tax existing cellular spectrum to a point where relatively little or no spectrum will be left over to offer innovative broadband services such as video, multimedia and highspeed data. More important, given the current state of uncertainty in PCS market development, there is no justification for assuming that PCS and cellular service will compete directly. decade.

Similarly, the Commission and many others have recognized the tremendous benefits that LECs have brought to mobile telecommunications in general and to PCS in particular. LEC infrastructure will be a likely avenue of PCS entry for smaller providers and entrepreneurs, and the Commission must ensure that LECs have every incentive to configure their networks hospitably by permitting them to have full PCS eligibility within their service areas. Once again, the Commission has many regulatory tools at its disposal to address anticompetitive concerns as they arise, and such concerns are even more attenuated if the Commission licenses a large number of providers.

Most parties recognized the tremendous benefit of maximizing the number of PCS providers, such as five providers each with 20 MHz. The Commission should reject arguments that would create duopolies of 40 MHz "mega-licensees" based on the need to share spectrum with microwave incumbents. Such proposals provide licensees with perverse incentives with respect to relocating microwave incumbents, and are

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<sup>1/</sup> David P. Reed, Putting It All Together: The Cost Structure of Personal Communications Services, OPP Working Paper Series No. 28 (November 10, 1992) ("OPP Study"), at v.

antithetical to the goal of the Commission's Emerging Technologies proceeding. Furthermore, to the extent that 20 MHz licenses are insufficient to achieve minimum effective scale, this problem can be readily addressed by allowing licenses to be subsequently purchased, sold or pooled in a free aftermarket, subject to Commission antitrust review.

Finally, it is absolutely vital that the Commission authorize at least two nationwide PCS licenses, which could be accomplished in conjunction with local or regional geographic service area plans. The benefits of nationwide licensing are too vast to be ignored. The nation's Information Highway cannot be built effectively or efficiently through the haggling of even 49 fragmented service areas over standards and roaming charges, any more than the nation's Interstate Highway System could have been built efficiently or effectively by waiting for 48 states to agree on highway specifications, design loads, bridge clearances and signal standards. Nationwide licensing can promote PCS diversity, and provide an effective method of serving rural areas using existing infrastructure. Given these licenses' importance, the Commission must award them through a streamlined comparative hearing.

The Commission has the opportunity to take a tremendous step in building a nationwide information infrastructure. It should do so by inviting all companies to compete and by creating nationwide PCS licenses.

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Washington, D.C. 20554

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Communications Services	)	
	)	PP-35 through PP-40,
	)	PP-79 through PP-85

**REPLY COMMENTS OF BELL ATLANTIC PERSONAL COMMUNICATIONS, INC.**

Bell Atlantic Personal Communications, Inc. ("BAPCI"), on behalf of the Bell Atlantic Corporation ("Bell Atlantic") and through its undersigned attorneys, hereby submits the following Reply Comments in the above-captioned proceeding.

**I. INTRODUCTION**

The Commission must reject arguments by those parties who would narrow PCS development to serve parochial rather than public interests, or who would have the Commission flatly ban the participation of broad categories of PCS providers based on vague, unsubstantiated fears of possible anticompetitive behavior. It must also ignore the positions of those who would hamstring nationwide PCS service and infrastructure development by advocating only local licensing schemes in lieu of and not in tandem with the enormous benefits of nationwide licenses. Instead, as George Gilder has urged, the Commission can speed the development of PCS by

inviting all companies into the competition and taking advantage of the huge investments of local exchange carriers in advanced intelligent networks. Fully accommodating PCS means creating nationwide licenses that accelerate the emergence of national standard interfaces and world class manufacturers. This is

the combination that has given the U.S. world leadership in the computer industry, with three times as much computer power per capita as Europe or Japan. Over the next decade it can work for the new computer industry of PCS as well.<sup>2/</sup>

## II. DISCUSSION

### A. License Eligibility

Many commenters agree that all qualified firms should be permitted to compete freely to provide PCS, including LECs and cellular carriers within and outside of their service territories. As Professor Alfred Kahn observed in his affidavit submitted in connection with Bell Atlantic's original filing, because cellular carriers and LECs are already in the business of offering communications services to their subscribers, it would be "highly inefficient to deny them the opportunity to expand the range, variety and diversity of their offerings in these new ways, making fuller use of their already considerable managerial, technical and commercial capabilities."<sup>3/</sup>

A recent study of the cost structure of PCS released by the FCC's Office of Plans and Policy supports Professor Kahn's observation.<sup>4/</sup> Among other things, the OPP Study confirmed that the suppliers best positioned "to play major roles in PCS would seem to be those already owning infrastructure well suited for that purpose."<sup>5/</sup>

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<sup>2/</sup> Comments of Bell Atlantic Personal Communications, Inc. (November 9, 1992), at 2-3 (Introduction by George Gilder).

<sup>3/</sup> Affidavit of Alfred E. Kahn, Attachment B to Comments of Bell Atlantic Personal Communications, Inc. (November 9, 1992), at 8.

<sup>4/</sup> David P. Reed, Putting It All Together: The Cost Structure of Personal Communications Services, OPP Working Paper Series No. 28 (November 10, 1992) ("OPP Study").

<sup>5/</sup> Id. at v. The OPP study made two important findings supporting the eligibility of LEC and cellular carrier participation in PCS: (1) that the "strong economies of scope between PCS and both telephone and cellular services show that consumers could benefit from allowing these companies to hold PCS licenses," while "the explicit cost of eligibility requirements would be the loss of these production efficiencies"; and (2) that the "weak economies of scale in the cost function indicate that it is highly unlikely that one or two firms would dominate the market." Id. at 56.

The arguments that LECs and cellular carriers should be quarantined from PCS in order to encourage its development ignore these companies' experience and resources in wireless service provision, and instead invoke remote fears and speculation about possible anticompetitive behavior. Specifically, some parties argue that LECs or cellular companies will either (1) deny competitors fair, non-discriminatory access to an essential facility or (2) will have less incentive than other providers to promote PCS development vigorously or will actively seek to retard its development.

Such concerns are unfounded. With regard to interconnection, LECs and cellular providers will have much more favorable incentives to interconnect with other providers and to configure their networks in ways hospitable to PCS if they may provide the service than if they are prohibited from doing so. Moreover, the Commission has the regulatory tools to deal with anticompetitive behavior should it arise. The economies of integration that LECs and cellular providers will bring to PCS overwhelmingly outweigh the drastic and categorical remedy of a flat ban that some parties propose for a problem whose existence is more imagined than proved.

In addition, such arguments are refuted by the Commission's analogous experience with cellular service. There, parties argued that local exchange carriers should be barred from the cellular business. Because that business was thought competitive with the local carriers' business, it was claimed that the local exchange carrier would stifle the development of this new technology. The Commission rejected such arguments and permitted wireline carriers to offer cellular service. The subsequent development of the cellular industry has proved the Commission right. Cellular's growth and innovation has been vitally enhanced by LEC participation.

Finally, in addition to lacking the incentive to stifle PCS growth, cellular carriers, LECs and other communications providers will not have the ability to restrain PCS development in the interests of protecting their existing businesses, especially if the Commission licenses five PCS providers as Bell Atlantic and many others have proposed. Creation of such a dynamic PCS market will ensure that parties prosecute fully the possibilities of their PCS licenses.

The Commission will actively retard the growth of PCS and impede the development of a national information infrastructure if it heeds the comments of those who advocate a return to regulatory protectionism, i.e., the placement of wholly unwarranted regulatory shackles upon the very providers who have developed and are continually refining the infrastructures conducive to rapid, innovative PCS development.

**1. Cellular Carriers**

The cellular industry has demonstrated an unswerving commitment to wireless service development, and has already proven itself a fertile source of PCS innovation. Cellular carriers have efficiently used the spectrum assigned to them and have more than met the expectations that the Commission had for the industry. Nonetheless, several parties to this proceeding have proposed banning cellular carriers from obtaining PCS licenses.

The argument for barring cellular carriers from holding 2 GHz PCS licenses rests upon two assumptions: (1) that cellular carriers have sufficient spectrum to provide new services, and (2) that PCS and cellular will compete directly with each other and are substitutable services. Neither assumption is true. In its comments to this proceeding, the Cellular Telecommunications Industry Association (CTIA) pointed out that, even under the most optimistic assumptions for capacity increases achievable with

the conversion to digital technology, the cellular industry will have little if any spectrum available to offer new services before the year 2000.<sup>6/</sup> Under less optimistic assumptions, the industry will have none. The reasons for these conclusions are easy to understand.

The cellular industry's conversion to digital will take place over a period of about ten years. For much of that time, the number of analog units in service will continue to increase because dual-mode digital units will be more expensive and heavier. CTIA estimates that the total number of analog subscribers will continue to grow until about year six of the digital conversion program and not fall below current numbers until year ten. To serve these customers in the year 2000, and to permit them to roam, CTIA estimates that 7.5 MHz of spectrum is needed.<sup>7/</sup>

In addition, the cellular carriers will have to support roamers whose home systems may not have changed to digital or whose digital format differs from the visited system. Indeed, to a large extent, the conversion to digital technology exacerbates the cellular industry's capacity problems as different digital standards will require continued reliance on analog frequencies as a *lingua franca* to assure ubiquitous service and roaming among non-compatible digital systems. Naturally, during this time the cellular carriers will continue to add new digital customers to whom spectrum must be dedicated for service. The most optimistic view assumes that, in densely populated areas, digital technology can achieve ten times the capacity of existing analog cellular service. This

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<sup>6/</sup> See Comments of the Cellular Telecommunications Industry Association (November 9, 1992) at 65 & Attachment B; see also Comments of McCaw Cellular Communications, Inc. (November 9, 1992) at 29; OPP Study at 57-58.

<sup>7/</sup> Comments of CTIA at Appendix B.

optimistic scenario will require 11.5 MHz of spectrum to serve the new digital customers and to ensure compatibility among digital voice and low speed data services.<sup>8/</sup>

The sum of such spectrum demands leaves only approximately 6 MHz available for new services in the year 2000.<sup>9/</sup> Should digital technology not meet the optimistic capacity expectations of the industry,<sup>10/</sup> a cellular carrier's entire 25 MHz allocation would then be needed for the digital and analog cellular services alone and no spectrum would be left for new services.

Perhaps most important, the new wireless services that customers are likely to demand also present a problem for the cellular operator. These new services, which many expect to include video, multimedia, and high-speed data, will be transmitted using broadband technologies that are technically incompatible with cellular's narrowband channelization and spectrum allocation. Given the cellular carriers' ongoing commitments to both analog and digital customers outlined above, there is at best only a small amount of spectrum available for these new services. This capacity limitation effectively denies cellular carriers the opportunity to offer new broadband services to their existing voice customers. More important, customers will lose the cost-effective option of having one service provider for both voice and broadband data needs. This

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<sup>8/</sup> Id.

<sup>9/</sup> During the intervening years, the situation is worse.

<sup>10/</sup> The Department of Justice itself takes a skeptical view of the ability of technology to solve its own frequency capacity problems. In a letter to the Office of Spectrum Management, DOJ noted that its access to 26 MHz of federal land mobile spectrum was increasingly unable to meet the needs of its law enforcement activities. In voicing its concerns, the Department doubted the ability of technology to provide "realistic solutions" to the problem of increasing congestion in its radio frequencies. See Letter from Department of Justice to Mr. W. Russell Slye, Office of Spectrum Management, National Telecommunications and Information Administration (Oct. 27, 1992), at 2 (submitted in response to NTIA Notice of Inquiry, Docket No. 920532-2132, Current and Future Requirements for the Use of Radio Frequencies in the United States).

could be a significant consumer welfare loss since powerful evidence argues that strong economies of scope will exist between PCS and cellular.<sup>11/</sup>

The second assumption underlying the argument to bar cellular carriers argues that the services offered by these carriers and those offered by PCS providers will be substantially substitutable; unless this is true, there is no public interest in a cellular exclusion.<sup>12/</sup> All evidence to date, however, strongly suggests that there is little justification for this assumption.

The Commission itself has defined PCS in an open ended fashion because there is still much uncertainty regarding future wireless services and the technologies that will be used to convey them.<sup>13/</sup> By design, the Commission's proposed definition

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<sup>11/</sup> OPP Study at ix, 36-44, 56-60; see Charles River Associates/S. Besen, R. Lerner & J. Murdoch, An Economic Analysis of Entry By Cellular Operators into Personal Communication Services, (November 1992) at 67-69 (Attached to Comments of CTIA) [hereinafter Charles River Study]; National Economic Research Associates/Richard Schmalensee and William Taylor, Study Directors, Assigning PCS Spectrum: An Economic Analysis of Eligibility Requirements and Licensing Mechanisms (November 9, 1992) (Attached to PCS Comments of BellSouth) [hereinafter NERA Study] at 19-21. These analyses all suggest that substantial portions of the cellular infrastructure may be utilized in the provision of PCS, and that significant cost savings may flow from the sharing of infrastructure between PCS and cellular systems.

<sup>12/</sup> Thus, in advocating the imposition of such an exclusion on cellular carriers (and affiliated LECs), the Department of Justice's analysis of eligibility issues rests upon its "understanding" that there are no "technological, economic or regulatory limitations that would prevent cellular licensees from offering services substantially similar to the services offered by PCS licensees, or vice versa." Comments of the United States Department of Justice (November 9, 1992), at 29.

<sup>13/</sup> In conducting a technical and economic review of potential wireless technologies relevant to PCS provision, the OPP Study observed:

PCS has the potential to encompass a broad family of existing voice and data services, both indoor and outdoor, as well as unknown future applications. Service providers remain uncertain regarding the group of features that consumers will value the greatest. Indeed, aspiring PCS providers are just beginning to conduct serious market trials to assess consumer demand by learning, for example, the importance that consumers place upon features such as degree of mobility, service quality, and handset size. . . . These uncertainties in consumer demand make it difficult to forecast what are the best services and technologies for PCS. Thus, it is not surprising that a myriad of different definitions of PCS have been offered, along with a variety of network architecture proposals.

These uncertainties favor a broad definition of PCS so as not to eliminate the consideration of any promising new technologies or service concepts. Similarly, under a

provides as much flexibility as possible in encouraging different providers, services and technologies to bring their respective entrepreneurial strengths to the PCS marketplace precisely because it is not clear that PCS will be simply the next generation of mobile voice telephony.<sup>14/</sup> Categorical exclusion of cellular providers in the presence of such technological and market uncertainty about how PCS will develop is unwarranted and arbitrary, particularly in light of the Commission's general presumption that consumers "are best served when all firms are permitted to compete freely rather than when some are restricted or excluded from service offerings altogether."<sup>15/</sup>

Furthermore, as a number of commenters pointed out, to the extent that it is possible to project the likely configuration of PCS networks, indications are that significant PCS markets will develop that are independent of and/or complementary to cellular service. For example, one type of PCS will likely focus upon the needs of pedestrian mobile users, using lightweight handsets with long battery life operating at very low-power. This technology implies a network configuration comprised largely of

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broad definition, PCS providers would have the flexibility to develop an efficient infrastructure to deliver services.

OPP Study at 46-47 (emphasis supplied).

<sup>14/</sup> The NERA Study, for example, found that the fact that "the nature of the PCS service that will be provided in the 2 GHz band is unknown" prevented "our measurement of the substitutability of PCS and cellular services." NERA Study at 19. Moreover, the Charles River Study stated:

Because of the wide variety of Personal Communications Services being developed, and the uncertainty about their salient attributes, it is premature to conclude that PCS will necessarily be a competitive alternative or close substitute for cellular service. Some Personal Communications Services, such as high-speed data service, would seem to be complementary in demand to traditional cellular service. Others, such as low-quality portable services, may be largely independent in demand. And even where PCS is clearly a substitute, it may be an alternative to cellular service only at certain levels of cost, price and service quality.

Charles River Study at 15.

<sup>15/</sup> Cellular Communications Systems, Notice of Inquiry and Notice of Proposed Rulemaking, 78 F.C.C.2d 984, 993 (1980).

microcells which cannot satisfy the high-power requirements of users in vehicles traveling at high speed.<sup>16/</sup> In such a scenario, there is no justification for excluding cellular carriers on the basis of market concentration.<sup>17/</sup>

Even assuming a "worst case" where PCS is a perfect substitute for traditional cellular service, the Charles River Study has determined that "[a] blanket prohibition against the acquisition of PCS licenses by incumbent cellular providers cannot easily be justified," and "a portion of the spectrum that the Commission proposes to allocate to PCS can be acquired by incumbents without significant threat of competitive harm." The study concluded that cellular carriers should be eligible to acquire 2 GHz spectrum inside their service territories even in this unlikely scenario.<sup>18/</sup>

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<sup>16/</sup> See Charles River Study at 32 (concluding in such a scenario that "there would be no adverse effect on competition in either the PCS, i.e. handheld cellular, or 'cellular,' i.e. automobile cellular, markets if incumbent cellular operators were to acquire access to a portion of the PCS band").

<sup>17/</sup> Charles River Study at 20. The study concluded:

A blanket prohibition against the acquisition of PCS licenses by incumbent cellular providers cannot easily be justified. Even in the 'worst case,' where PCS is a perfect substitute for traditional cellular service, a portion of the spectrum that the Commission proposes to allocate to PCS can be acquired by incumbents without significant threat of competitive harm. In the more likely cases where PCS is a weaker substitute for cellular, so that concerns about competitive harm are reduced, and/or where there are economies of scope between cellular and PCS, so that cost savings result when incumbents are permitted to offer PCS, an even larger acquisition of PCS spectrum by incumbent operators can be justified.

Id. at 38-39; see also NERA Study at 19 (concluding that "significant competitive harm is unlikely to occur if incumbent cellular carriers are permitted to acquire PCS license in their territory").

<sup>18/</sup> Charles River Study at 20. Moreover,

[i]n the more likely cases where PCS is a weaker substitute for cellular, so that concerns about competitive harm are reduced, and/or where there are economies of scope between cellular and PCS, so that cost savings result when incumbents are permitted to offer PCS, an even larger acquisition of PCS spectrum by incumbent operators can be justified.

Id. at 38-39; see also NERA Study at 19 (concluding that "significant competitive harm is unlikely to occur if incumbent cellular carriers are permitted to acquire PCS licenses in their territory"). Similarly, the OPP Study found that acquisitions of PCS spectrum by cellular operators likely would be based more on the benefits this spectrum could bring to an operator, and not an attempt to suppress competition since it would have a small impact on the overall market structure." OPP Study

Overall, whether PCS will be a good substitute for cellular service and therefore in the same relevant market is at best unknowable at this time. But Bell Atlantic agrees with CTIA that there will be substantial and unwarranted public interest costs to the Commission's adopting an approach that presumes to know the answer in the face of much technological and market uncertainty.<sup>19/</sup>

The reasoning of those parties who favor cellular exclusion from PCS provision is flawed and internally inconsistent. The Department of Justice's ("Department") entire analysis of the eligibility issue, for example, stems from the assumption that there "does not appear to be any substantial difference between the services that new PCS providers will be able to offer and the services that cellular operators will technologically be able to offer."<sup>20/</sup> This is simply not true. As discussed above and as explained in greater detail by CTIA and others, cellular providers are under severe capacity limitations as a result of the need to meet obligations to existing analog users and to ensure compatibility among digital services. Without the ability to obtain PCS spectrum, these carriers will be constrained in their ability to offer the public, innovative PCS services, including new broadband offerings such as video, multimedia, and highspeed data.

The Department proposes that the Commission flatly ban cellular carriers from PCS provision in their service territories -- in the process assuming that PCS and

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at 58. Citing fairness concerns, the OPP would "limit cellular operators from acquiring licenses more than 15 MHz of 2 GHz frequencies." *Id.* Nevertheless, given that the OPP Study does not assess the magnitude of cellular capacity limitations and sharing obligations, there appears to be no reason to prohibit cellular providers from being eligible to hold full PCS licenses given the beneficial economies of scope.

<sup>19/</sup> Comments of Cellular Telecommunications Industry Association at 64.

<sup>20/</sup> Comments of the United States Department of Justice at 5-6.

cellular will compete directly -- yet in the same breath concedes that PCS and cellular providers may choose to provide entirely different services to entirely different market segments.<sup>21/</sup> If the latter development proves true, however (as is likely), then the former restriction is unsupportable.

More contradictory yet is the Department's assessment of Specialized Mobile Radio ("SMR") services relative to cellular and PCS. SMR, especially in light of the development of Motorola's Enhanced Specialized Mobile Radio ("ESMR") technology that Fleet Call has been authorized to provide, will exhibit close substitutability with cellular service.<sup>22/</sup> Nevertheless, footnote 25 of the Department's comments states:

It is possible that firms using frequencies assigned to SMR will offer services that may compete with services offered by cellular or PCS licensees. At this time, however, the ability of firms using SMR frequencies to compete effectively has not been demonstrated. according to the footnote, the Department has determined that the ability of SMR firms to "compete" effectively with cellular has not yet been demonstrated.

In other words, even though SMR and cellular are substitutable one for the other, and therefore in the Department's view both substitutable for PCS, the Department nonetheless concludes that cellular carriers may not possess PCS licenses, while SMR

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<sup>21/</sup> See Comments of the United States Department of Justice at 6 & n.7.

<sup>22/</sup> As the Charles River Study observes:

By (i) consolidating radio frequencies that had previously been used by separate carriers to provide mobile telephone services, (ii) introducing digital technology, (iii) employing Time Division Multiple Access (TDMA) multiplexing, and (iv) using multiple base stations, Fleet Call will add substantially to the capacity of the industry to provide radio telephone service. One estimate is that the adoption of ESMR will increase the capacity of the SMR bandwidth by a factor of fifteen, and that ESMR will have the capacity to serve several million subscribers in the nation's largest markets, including New York, Chicago, Los Angeles, San Francisco, and Dallas.

Charles River Study at 38. Fleet Call is at present constructing an ESMR system in Los Angeles. It has been announced that Fleet Call will begin operating this third cellular system in mid-1993.

carriers are permitted to do so. It is inconsistent to argue for a categorical ban of one class of carriers on the ground that "direct competition" can be assumed between it and an inchoate, unavailable personal communications service while at the same time to refuse to exclude a second class of carriers that is, for all practical purposes, as similarly situated as the first.<sup>23/</sup>

The Commission should also reject arguments by parties seeking to serve their own self-interest at the expense of the public's. American Personal Communications ("APC"), for example, "strongly opposes permitting cellular licensees (including LECs with in-region cellular holdings) to receive PCS licenses in areas where they already provide cellular service to a substantial part of the population":

[Cellular licensees] have entrenched physical plants -- including dozens of zoned and operating cell sites -- and sales and technical infrastructures developed over years of service. They have unparalleled name recognition and consumer acceptance within their home regions. They have established agents, dealers, resellers and billing systems.

. . . .  
[A] PCS licensee won't be able to compete against a company that holds both a cellular and a PCS license. That company would have a staggering head start against a newcomer. The independently owned PCS licensee could never compete fairly against such an entrenched business, assuming it could even obtain financing to get off the ground. And a stand-alone cellular company with both cellular and PCS licenses would face an uphill battle. The company with both licenses would have joint sales, marketing and other staffs, joint interconnection arrangements,

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<sup>23/</sup> The proposed disparate treatment of cellular in the NPRM relative to SMR and ESMR participation in PCS is virtually impossible to justify on a principled basis. Nonetheless, the NPRM does not propose excluding this latter class of providers from PCS participation, in spite of SMR's and ESMR's ability to provide services largely substitutable with cellular -- and under the Commission's proposed rationale, with PCS. See Comments of McCaw at 31-32. Nor should it. Indeed, the Commission should follow the same policy of open entry in PCS that it adopted with respect to SMR. There, the Commission did not place any limitation on a cellular company's ability to obtain an SMR license. This policy has not resulted in any anticompetitive trends, and cellular carriers have proven to be efficient SMR market participants. See Comments of CTIA at 64. The same will be true of cellular provision of PCS at 2 GHz.

and joint facilities. This company could crush competition from both PCS and cellular licensees in the same market.<sup>24/</sup>

As the highlighted language illustrates, APC's concern is rather different from the one expressed by the Commission in the NPRM, i.e. potential anti-competitive behavior by joint cellular-PCS licensees in limiting entry by other firms into the PCS market.<sup>25/</sup>

Instead, APC simply seeks protection from the fact of cellular carriers' ability to realize strong economies of scope between PCS and their cellular infrastructures. The Commission should reject appeals for it to become a kind of national "Handicapper General" of new markets and companies.<sup>26/</sup>

Although Bell Atlantic agrees with APC's statement that "PCS can accomplish its goals only if the industry is structured in a sensible way,"<sup>27/</sup> this can be so only if "sensible" is defined by reference to the public interest, and not APC's private interests in protecting its recently awarded pioneer's preference.<sup>28/</sup> The argument that a

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<sup>24/</sup> Letter from Wayne N. Schelle, Chairman, American Personal Communications to the Hon. Alfred C. Sikes (November 9, 1992) at 1 ("APC Letter") (emphasis supplied). This rhetoric is virtually identical to that of parties who argued against the ability of local exchange carriers to hold cellular licenses, an argument which the Commission rejected.

<sup>25/</sup> See NPRM at 27, ¶ 64.

<sup>26/</sup> As a threshold matter, APC has misconstrued the Commission's proper role in this proceeding. The "objective or role assigned by law to the Federal Communications Commission" is to think about competition in terms of its overall benefit to the public, and not "specifically with the objective of equalizing competition among competitors." See Hawaiian Telephone Company v. F.C.C., 498 F.2d 771, 776 (D.C. Cir. 1974) (emphasis in original). In this instance, the benefits and economies of scope that cellular carriers can bring to their customers and others through PCS participation (by APC's own admission) are likely to be great, and the potential harm is speculative. The Commission therefore should be wary of parties who invoke the cry of "competition" in the interest of restricting entry; the Commission should instead ask who is truly promoting the policy of competition, and who is not. See United States v. F.C.C., 652 F.2d 72, 107 (1980).

<sup>27/</sup> APC Letter at 3.

<sup>28/</sup> As Chairman Sikes recently remarked:

[L]egislators and regulators should err on the side of freedom. Sure market power still exists. And I, for one, know that regulation has a place. But cartel management aimed at making

joint PCS-cellular provider will dominate PCS markets and overwhelm smaller providers has little empirical or historical basis. As noted earlier, for example, the OPP Study found that "weak economies of scale in the cost function indicate that it is highly unlikely that one or two firms would dominate the [PCS] market."<sup>29/</sup> Furthermore, as Bell Atlantic pointed out in its initial comments, the Commission chose in the cellular proceeding to favor its presumption of open eligibility in spite of similar arguments based on the speculative anticompetitive effects of wireline carrier entry into the cellular markets. In justifying its decision, the Commission reasoned:

[W]hile we must consider potential anticompetitive effects attributable to the entry of wireline carriers, we must consider . . . whether continuing regulatory supervision can prevent anticompetitive behavior . . . . [A] potential effect on competition may well call for a different regulatory response than an immediate effect on competition would. This is particularly true when anticompetitive effects cannot be predicted with accuracy in advance but will become apparent, if at all, only upon implementation.<sup>30/</sup>

The result of the Commission's open entry policy has been the development of a vibrant, ten million subscriber cellular industry -- which includes "independently owned" providers like McCaw Cellular Communications that have proven quite capable of competing with

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the strong weak or at least weaker will not work. Simply stated, there will be and there must be room for the big and the small but not at the expense of throttling development of the nation's communications infrastructure.

Remarks of Alfred C. Sikes, Chairman, Federal Communications Commission, Before the United States Telephone Association Annual Convention, New Orleans (30064), 1992 FCC LEXIS 5747 (Oct. 6, 1992) (emphasis supplied).

<sup>29/</sup> OPP Study at 56.

<sup>30/</sup> Cellular Communications Systems, Report and Order, 86 F.C.C.2d 469, 484 (1981) (emphasis supplied).

LEC-affiliated cellular carriers, notwithstanding the implication of APC-styled arguments.<sup>31/</sup>

Finally, if the Commission chooses to license five PCS providers as Bell Atlantic and the vast majority of other parties to this proceeding have proposed, the case for barring cellular carriers from 2 GHz PCS participation in their service territories evaporates almost entirely. Most parties acknowledge the Commission's suggestion in the NPRM that the competition concerns surrounding in-territory PCS participation by cellular providers or LECs are far more attenuated in the presence of a large number of PCS providers. Thus, even the Office of Advocacy for the United States Small Business Administration "is convinced that the potential benefits [of allowing current wireline and wireless communications companies into the PCS market] outweigh the risk of reduced competition."<sup>32/</sup> With regard to cellular participation, the Office of Advocacy stated:

[C]urrent mobile communication providers understand the technology and have the basic infrastructure needed to adapt to the PCS market. The Office of Advocacy does not believe that the technical abilities of these companies should be set aside due to fears of decreased competition. A better means to protect competition is to ensure that sufficient spectrum is made available to as large a group of providers as technically possible.<sup>33/</sup>

In sum, there is no persuasive justification for deviating from an open entry regulatory approach in PCS to bar cellular carriers or any other class of provider, especially when no commenter has raised or can raise any evidence more substantial than

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<sup>31/</sup> Indeed, the owners of APC itself successfully constructed and operated a non-wireline cellular system ("ARTS") in Washington, D.C. Bell Atlantic, notwithstanding all of the putative "advantages" that APC ascribes to it, found ARTS to be a formidable competitor. To the extent that Bell Atlantic enjoyed certain economies of scope and scale with its LEC operations, consumer welfare only has been enhanced.

<sup>32/</sup> Comments of the Chief Counsel for Advocacy of the United States Small Business Administration (November 9, 1992) at 21.

<sup>33/</sup> Id. at 22.

the spectre of "potential effects" on competition to support categorical restrictions on eligibility.<sup>34/</sup>

## 2. Local Exchange Carriers

Many commenters, along with the Commission, have acknowledged the tremendous advantages that local exchange carriers have brought to mobile services in general, and can bring to PCS in particular. As the NERA Study observed:

[T]he history of mobile telecommunications in the U.S. shows a strong relationship between the participation of local exchange carriers and the successful development of the market. Landline participation in cellular and paging markets was perceived as important at the time because the wireline carriers had a wealth of experience, technical expertise, and resources. In the cellular market, it was AT&T (then a wireline carrier) that was the primary developer of the technology, and the wirelines were seen as the key to creating national networks.

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<sup>34/</sup> In light of this fact, as a legal matter, the Commission would risk abusing its discretion under the Communications Act by imposing a flat ban on cellular or LEC entry into PCS. Such a ban would be plainly antithetical to the public interest in this context, where "mere incantation of the words 'anticompetitive consequences'" does not "suffice to prove damage to the public interest." *United States v. F.C.C.*, 652 F.2d 72, 104 (D.C. Cir. 1980). On the current record, the Commission's public interest standard demands not outright prohibitions on entry but recognition of the Commission's continuing authority under the Communications Act to prevent anticompetitive behavior as it may occur. *See, e.g., id.* at 106 (approval of joint venture of IBM, Comsat, and Aetna to enter domestic satellite industry where Commission declared itself willing to exercise oversight of possible anticompetitive effects of entry); Cellular Communications Systems, Report and Order, at 486 ("[W]e find that there are compelling public interest reasons to support wireline ownership of cellular systems, particularly when we have at our disposal measures that we are confident can minimize the risk of any potential anticompetitive behavior.").

The record to date presents no reasonable justification for the Commission to change course or depart from its articulated policy evolution away from absolute bars to entry and structural safeguards towards a variety of non-structural regulatory protections. *See In the Matter of Computer III Remand Proceedings*, CC Docket No. 90-623 (Nov. 21, 1992) (detailing how the "substantial benefits" of nonstructural safeguards in realizing efficiencies and economies of scope outweigh the "small diminution in protection against anticompetitive conduct"); *see also Greater Boston Television Corp. v. F.C.C.*, 444 F.2d 841, 852 (D.C. Cir. 1970) (citations omitted) (agency changing course from prior policies and standards must supply reasoned analysis for doing so). Accounting safeguards, for example, can ensure that PCS operations are not subsidized with revenues from other services, and interconnection requirements will ensure that all PCS providers will be able to interconnect with landline, cellular, cable, interexchange and other networks in the same manner as their competitors, thereby negating any competitive advantages that could otherwise accrue from discriminatory interconnection policies. *See Comments of Rochester Telephone Corporation* (November 9, 1992), at 11 n.18. On the other hand, imposition of the death penalty in structural safeguards -- a flat ban on entry within service territories -- would needlessly deny the public of the vast benefits of cellular and LEC participation.

Many of the same considerations apply to wideband PCS. The large number of small cell sites and the switching and transport requirements of the backhaul network embed the PCS network in the PSTN to a greater extent than cellular or paging networks. As a result, one could expect to find large economies of scope between PCS and the PSTN based on shared switching and transport facilities. Evidence that these savings are significant is shown by the interest of non-LEC local networks in the PCS market. In recognition of such benefits, most parties who addressed the issue argued in favor of LECs being permitted to provide PCS in their local exchange areas.<sup>35/</sup>

As these parties pointed out, full LEC participation in PCS will bring many benefits to the public. In particular, LEC participation will likely be essential to the rapid build-out and provision of PCS in rural areas.<sup>36/</sup> In addition, LEC participation will be vital to promoting competitive participation by smaller providers because LEC participation will encourage LECs to develop the infrastructure for PCS. As the OPP Study found:

[A]n independent firm -- an entrepreneur or small company that obtains a PCS license but does not own any existing infrastructure in the subscriber loop --

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<sup>35/</sup> The Department of Justice concurs that LECs should be able to acquire PCS licenses in their local exchange service areas. The Department, however, would preclude LECs from doing so in areas where they are authorized to provide cellular service. See Comments of the United States Department of Justice at 30. The effect, of course, is to preclude most LECs from providing PCS in-territory. See also Comments of the United States Telephone Association (November 9, 1992) at 7-19.

<sup>36/</sup> See, e.g., Comments of Clear Creek Mutual Telephone Company, Mollalla Telephone Company, Monitor Cooperative Telephone Company, Monroe telephone Company, Mt. Angel Telecommunications, Inc., Pioneer Telephone Cooperative, SCIO Mutual Telephone Association and Yelm Telephone Company (November 9, 1992), at 6-7; Comments of the National Telephone Cooperative Association (November 9, 1992), at 6; Comments of the Palmetto Rural Telephone Cooperative (November 9, 1992), at 9; Comments of Rock Hill Telephone Company, Fort Mill Telephone Company, and Lancaster Telephone Company (November 9, 1992), at 8; Comments of Roseville Telephone Company (November 9, 1992), at 5; Comments of the Rural Independent Coalition (November 9, 1992) at 9; Comments of Small Rural Virginia Telcos (November 9, 1992), at 1-2.

probably would not choose to construct a stand-alone PCS network. Results indicate the fixed costs of a PCS network using microcells are high in relation to the fixed costs of providing PCS using existing infrastructure. This cost differential is especially dramatic at the low levels of penetration which are to be expected during the first few years of deployment. Instead, the independent provider is likely to pursue a strategy of negotiating alliances or commercial relationships among the infrastructure alternatives available to deliver PCS.<sup>37/</sup>

Given the importance of LEC infrastructure to smaller entrepreneurs, this finding further supports the Commission's suggestion in the NPRM that LECs be eligible for PCS licenses within their exchange areas in part to provide them with every incentive to configure their wireline architectures in a PCS-friendly manner.<sup>38/</sup> Moreover, since many LECs have cellular affiliates, the benefits of exploiting LEC infrastructure will be lost if cellular carriers are barred from holding PCS licenses in their service territories.

#### **B. Number of Providers**

Like Bell Atlantic, most parties advocated that the Commission maximize diversity in PCS service provision by licensing five PCS providers each possessing approximately 20 MHz of 2 GHz spectrum. The majority of the comments echoed the finding of the OPP Study that the Commission's policy objectives "are best satisfied by a licensing option that provides the highest number of suppliers while still providing at least 20 MHz to each provider. Thus, given that the FCC has indicated that it will allocate a

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<sup>37/</sup> OPP Study at 44.

<sup>38/</sup> See NPRM at 30, ¶ 74. The relationship between LECs and smaller PCS providers is more likely to be synergistic than competitive, and to the extent that opportunities for anticompetitive behavior exist, the Commission can implement sufficient regulatory protections without resorting to the extreme measures of excluding LECs from PCS provision, either outright or on a de facto basis through the award of a reduced 10 MHz allocation. Although the Commission may mandate interconnection, regulators cannot possibly match free markets in ensuring that networks are configured technically in ways most hospitable to PCS provision -- and here, there is no reason that they should try. LECs should be given full opportunity to develop innovative, efficient PCS infrastructures.

minimum of 90 MHz, licensing options that include five or six 20 MHz licenses would appear to be the most attractive.<sup>39/</sup>

A minority of commenters have taken the position that the Commission should not license a large number of PCS providers, citing the need for PCS licensees to co-exist for a period of time with incumbent microwave users in some markets.<sup>40/</sup> Because of the practical requirements of spectrum-sharing, these parties argue that theoretical PCS spectrum allocations will in reality amount to smaller allocations in markets heavily populated by microwave incumbents. They therefore urge the Commission to allocate two large 40 MHz chunks of spectrum to two PCS licensees in each market in order to ensure a sufficient amount of usable spectrum for the prompt initiation of PCS service in major markets.

The Commission should reject this argument. First, in many markets that do not possess heavy populations of incumbent microwave users, 20 MHz should be more than adequate for PCS licensees to introduce innovative services. In such markets, there is no reason why the Commission should not seek to maximize effective competition by licensing as many providers as possible. Although two 40 MHz may do more technologically with twice as much allotted spectrum, this would be a wasteful sacrifice of the diversity and innovation provided by a high number of providers, including small entrepreneurs, cellular companies, local exchange carriers, operating as nationwide, regional, and local service territory licensees.

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<sup>39/</sup> OPP Study at 55.

<sup>40/</sup> See Comments of APC at 10-13; Comments of Omnipoint Communications, Inc. (November 9, 1992) at 10; Comments of Cox at 6; see, e.g., Comments of Associated PCN Co. (November 9, 1992) at 3; Comments of Per Tel (November 9, 1992) at 4-5; Comments of Time Warner Telecommunications on 1850-1990 MHz Personal Communications Services (November 9, 1992) at 6.

Moreover, in markets where amounts of spectrum greater than 20 MHz are required to achieve minimum effective scale because of sharing obligations, for example, a free aftermarket in which PCS licenses can be subsequently purchased, sold or pooled will provide an efficient market correction mechanism, subject, of course to Commission review and approval.<sup>41/</sup> On the other hand, correcting the anticompetitive consequences of issuing too few PCS licenses will be far more difficult.<sup>42/</sup>

Finally, a 40 MHz duopoly scheme promotes perverse incentives in light of the Emerging Technology proceeding's goal of redeveloping the 2 GHz band for emerging technologies through the relocation of incumbent microwave users.<sup>43/</sup> This policy is best served by an allocation scheme that actively encourages the relocation of microwave users as soon as possible to free needed spectrum. Parties whose spectrum

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<sup>41/</sup> As Bell Atlantic proposed in its initial comments, the Commission should review case-by-case whether particular mergers and acquisitions are likely to impair competition. In order to promote certainty and reduce delay in such aftermarket consolidations, the Commission should establish number-of-MHz boundaries for expressly permitted consolidations within the PCS spectrum, with case-by-case treatment only of those proposed consolidations that fall outside of the boundaries. Given the large number of wireless providers in each locality, including possibly five PCS providers, Bell Atlantic has proposed that any proposed spectrum consolidation that results in common control of not more than fifty percent of such spectrum and a minimum of three independent PCS providers in the affected market shall be deemed in the public interest. Comments of Bell Atlantic at 36.

<sup>42/</sup> As Professor Kahn has observed, the likelihood of initial recipients with overlarge allocations "being willing to sell off some of their rights to potential competitors will almost certainly be less than of companies with licenses insufficiently broad to sell them off to others who could make better use of them." In the absence of market correction, the Commission will thus have to expend significant resources identifying the problem in particular markets and revoking all or part of the offending licenses to correct it. Kahn Affidavit at 7. Similarly, the NTIA observes:

Assuming the Commission permits PCS licensees to aggregate their operations through market transactions, consumers may not be appreciably harmed by initially assigning 'too many' licenses, while the cost of assigning 'too few' licenses -- high rates for services and other characteristics of less than fully competitive markets -- could be potentially significant and persistent.

Comments of the National Telecommunications and Information Administration (November 9, 1992) at 6-7 & nn. 9-11; see Comments of CTIA at 33-34.

<sup>43/</sup> Emerging Technologies Order at 7, ¶ 14.