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RONALD L. PLESSER  
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May 26, 1994

HAND DELIVER

Mr. William Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, NW #222  
Washington, DC 20554

Re: GEN Docket No. 90-314  
Ex Parte Presentation

Dear Mr. Caton:

Pursuant to Section 1.1206 of the Commission's rules, this letter is to advise you that in my capacity as counsel to PCS Action, Inc., a coalition of companies to promote the deployment of PCS services, I sent today to Commissioner Chong and to Ms. Rozalind Allen, Acting Legal Advisor to Commissioner Ness, the attached letter and materials on PCS Action and its position regarding the Commission's reconsideration of the Second Report and Order in the above-referenced docket.

In accordance with the Commission's rules, I hereby submit one original and one copy of this letter.

Sincerely,



Ronald L. Plesser

cc: Commissioner Chong  
Ms. Rozalind Allen

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HAND DELIVER

Ms. Rozalind Allen  
Acting Legal Advisor  
Office of Commissioner Susan Ness  
Federal Communications Commission  
1919 M Street, N.W.  
Room 832  
Washington, D.C. 20554

Re: PCS Seminar

Dear Ms. Allen:

Thank you for your assistance in arranging a meeting for PCS Action, Inc. to present a seminar to Commissioners Ness and Chong. Donna Stapleton has just called to schedule the meeting for Tuesday, May 31st at 10:45 a.m. Accompanying me will be Jeff Rosenblatt of Comsearch, Mark Roberts of Alex. Brown & Sons, and several other PCS Action, Inc. members.

Attached is PCS Action, Inc. membership roster and other relevant material. PCS Action, Inc. is a group of potential PCS license holders who are interested in a rapid and competitive rollout of PCS.

I look forward to meeting you on Tuesday.

Sincerely,



Ronald L. Plesser  
Counsel for PCS Action, Inc.

RLP/plq  
Enclosures  
cc: Commissioner Rachelle Chong

# **PCS ACTION, INC.**

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## **Membership Roster**

### **Service Provider Members:**

- American Personal Communications/  
The Washington Post Company
- Associated PCN Company
- Cox Enterprises, Inc.
- Crown Media
- MCI Telecommunications Corporation
- Omnipoint Corporation
- Times Mirror Cable Television, Inc.
- Time Warner Telecommunications

### **Manufacturing Members:**

- Motorola Inc.
- Northern Telecom
- QUALCOMM, Inc.

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# PCS ACTION, INC.

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## **PCS Action's Position on Reconsideration of Docket No. 90-314**

PCS Action urges the Commission to retain the key elements of its PCS *Second Report and Order*, including the designation of two 30 MHz licenses in Major Trading Areas ("MTAs"). The allocation of adequate spectrum to independent PCS licensees is crucial to providing effective competition to existing wireless and wireline providers.

The Commission, as it has done, must establish a PCS licensing scheme that is workable from the outset. The practicality and market viability of the Commission's licensing scheme cannot depend on a slow and inefficient aftermarket of gradual aggregation.

The amount of spectrum allocated to each PCS license block will critically affect both the *timing* of PCS deployment and the *viability* of PCS as an industry. Without adequate spectrum, delays in clearing spectrum would keep PCS from being launched until the end of the decade. By then, PCS could find itself chasing a market that existing service providers will have consolidated within existing monopolies and duopolies. The window of competitive opportunity would close, and the loser would be the American public with less competition, fewer jobs, and a small vision of PCS.

Recognizing this, NTIA recommended allocation of 30 MHz blocks, and the Commission has decided to issue two 30 MHz PCS licenses in MTA service areas. This will create greater certainty that an economically viable system will be created.

Frequency parity with incumbent wireless telecommunications providers also is essential if new PCS entrants are to provide effective competition. In-region cellular interests are entering the PCS era with 25 MHz of spectrum clear of microwave incumbents and will have the ability to bid for an additional 10 MHz of PCS spectrum in their cellular markets. Under the Commission plan, this will give cellular incumbents a total of 35 MHz. Independent PCS licensees would have just 30 MHz of spectrum encumbered by existing users, which is the minimum amount of spectrum needed to establish frequency parity.

To provide all potential licensees with 20 MHz of spectrum would result in the in-region cellular incumbents having a total of 45 MHz of spectrum. Independent licensees would be left with only 20 MHz. This disparity would jeopardize the rollout of PCS and crush the potential for new competition.

PCS must be licensed in blocks of 30 MHz or greater for the following reasons:

- Core markets are effectively blocked by existing microwave users (two way, 10 MHz each way), making service fatally defective in allocations of less than 30 MHz until all relocations have been accomplished.
- Incumbents have an absolute right to stay for three years (five years in the case of public safety, which constitutes 20 to 25 percent of all incumbents). Relocations will be time-consuming and difficult; five relocations per year per PCS licensee is the maximum that can be expected.
- Therefore, rolling out a competitive PCS service, even with an extremely aggressive relocation process, will require at least 30 MHz. The FCC has estimated that \$5 billion annually would be saved by consumers if cellular had effective competition.
- PCS also will never have the capacity to compete with local exchange carriers unless it has at least 30 MHz per licensee. Mercury One-2-One, which is attempting local loop competition in London, is at capacity in residential areas with 30 MHz of clear spectrum after only months of operation just because of the capacity needed for residential voice traffic.
- Equipment manufacturers support the need for licenses of at least 30 MHz.
- A licensing scheme predicated on the aggregation of 20 MHz splinters would delay and obstruct the creation of a viable independent PCS industry. It also would significantly reduce PCS auction revenues to the federal government. The FCC has an obligation to issue viable licenses in the first instance.

The FCC's allocation plan in the *Second Report and Order* has the dual virtue of competition and of workability at the outset. It results not in the *beginning* of deployable PCS systems, which must be completed through accumulation of "building blocks," but rather in *readily deployable and competitive* PCS systems. It should be maintained.

# PCS ACTION, INC.

1200 19TH STREET, NW • 7TH FLOOR • WASHINGTON, DC 20036 • (202) 861-2957 • FAX: (202) 861-3963

September 8, 1993

## A VISION OF THE FUTURE

The FCC faces a choice in the creation of new personal communications services ("PCS"). This is a choice of visions. Will PCS fulfill the vision of new wireless networks as an integral part of the new national infrastructure or will it be a little frosting on the cake of existing mobile voice services?

The members of PCS Action -- telecommunications equipment manufacturers, entrepreneurs, multi-media companies, an interexchange carrier and a cellular service provider -- believe the choice is clear:

An expansive vision of PCS will best serve the public interest and the dynamic needs of American telecommunications in the 21st century at a low cost by providing high-quality digital wireless communications to a mass market (60 million Americans within the next ten years).

The needs of American telecommunications in the 21st century are best served by a PCS industry capable of providing not only wireless and portable voice communications but increasingly sophisticated (though still inexpensive enough for a mass market) data and video transmission services as well.

This expansive vision requires a system of high-capacity, wide-area wireless networks: a system of 40 MHz licenses in large license areas.

Such a system would introduce vigorous competition into the wireless telecommunications market, saving the consumer billions of dollars and encouraging the service innovations that will keep the United States in the forefront of this burgeoning global industry.

Make no mistake: those who say they share this vision, but then demand limited band width and many small licenses, are either being short-sighted or disingenuous.

This has been the position of the Cellular Telecommunications Industry Association ("CTIA"). They have

two goals: one is to obtain additional spectrum for themselves and the second is to limit the creation of wireless services that will compete with them in a meaningful way. Nine cellular companies control 90 percent of today's cellular subscribers in the United States in large regional areas with license allocations of 25 MHz of clear spectrum.

It is not surprising, therefore, that the CTIA not only wants its members to get a total of 45 MHz but is promoting that the new competitors have only 20 MHz of cluttered spectrum broken down into 734 MSAs and RSAs and that there be so many of these fractionalized licenses in each market that none will be well financed. The consistent theme throughout their recently submitted "white papers" is to limit and fractionalize the emergence of competitors to these services. In our view, their statements have contained many misstatements and exaggerations.

The promise of new technologies has been realized by some in our society, but not by all. Cellular services are used by approximately 12 million Americans. The cost of cellular services remains outside of the grasp of most Americans today even as cellular provides the promise of digital communications tomorrow.

The vision of PCS shared by PCS Action members includes small, low-power telephones and data devices that can be shared by millions of individuals in a market with little capacity limitation. They will, therefore, be available to the mass market at mass market prices. This means 60 to 70 million PCS customers. Cellular prices, too, will come down as a result of competition.

This vision includes making routine the ability to perform any communications task at the time and place of one's choosing. It includes, for example, a portable newspaper with voice and video built in. A person in an office, in a car, in a train, in a house, or on a boat could, through the use of a portable device, call up a favorite newspaper, magazine, or new form of data service. The information would be current as of the time of the use, not as of when the newspaper went to press.

The choices faced by the Commission entail risks. On the one hand, the risk is that the Commission may grant more spectrum to PCS providers than they may ultimately need. We believe that this will not be the case and have demonstrated that even after microwave congestion is eased, 40 MHz will be necessary to enable PCS both to provide new data and imaging services and to compete with the local loop.

On the other hand, the risk of granting too little spectrum is that PCS will be stopped before it can even start. Too little spectrum will mean too little investment, too much interference with existing microwave users, too little channel capacity to accommodate a mass market, and too little band width to make possible the wireless data and video transmission services that are part of the PCS promise. Again the choice is clear.

The amount of spectrum allocated to PCS will critically affect the timing of PCS deployment, which in turn will determine the viability of PCS as an industry. Delays in clearing spectrum due to a limited spectrum allocation will keep PCS from launching until the end of the decade. By then, PCS may find itself chasing a market that the current cellular duopolists will have captured. The loser here would be the American public with less competition, fewer new jobs, and a small vision of PCS. The choice is clear: to create PCS as a big vision.

#### Forty MHz Per License

Of all the issues facing the Commission as it authorizes personal communications services, the most crucial are the size of the spectrum allocation to be authorized for PCS licensees and the size of the market areas.

The amount of spectrum PCS licensees will be permitted to utilize will determine the number of Americans who can be served by PCS and the cost of that service, the speed with which PCS will be deployed, the voice quality PCS will be able to attain, whether highly demanded PCS data transmission will be feasible, and whether PCS will be a viable competitor to cellular telephony and, ultimately, the local exchange -- in short, whether PCS will succeed or fail.

The members of PCS Action believe strongly that an allocation of 40 MHz per PCS licensee is necessary. An allocation of 40 MHz per licensee is not excessive or extravagant; it is simply the allocation that the science underlying PCS demands. Many of the major manufacturers that will design and build PCS equipment agree that a 40 MHz assignment per licensee is imperative to permit PCS to be implemented quickly and efficiently in the United States, particularly given the Commission's Emerging Technology decisions grandfathering incumbent public safety microwave systems. This allocation is consistent with the vision American consumers hold for PCS, as well as with PCS assignments by our international competitors, which are moving ahead to implement PCS this year with allocations of clear

spectrum that are effectively larger than any option being considered by the Commission.

CTIA has taken particular aim at this issue, and has sought to attack the foundation of the 40 MHz argument and has asserted that 20 MHz is sufficient. They in particular accuse PCS Action of manipulating a study done by COMSEARCH. They base their attack on subsequent studies completed by COMSEARCH for Bell Atlantic and GTE. Attached to this paper is a detailed refutation of CTIA's attack of the April COMSEARCH study. The studies are totally consistent and indicate that 20 MHz licenses would significantly delay the introduction of PCS services. Moreover, the studies indicate that PCS will be implemented more rapidly and effectively with 40 MHz licenses.

Again, it is not surprising that CTIA is seeking 20 MHz for each license. That will result in 45 MHz for them if they obtain licenses and, for everyone else, 20 MHz of cluttered spectrum that will never be totally clear given the presence of public service users.

#### Size of License Area and Number of Licenses Issued

The size of the license area and the number of licenses assigned in each license area are additional important issues. Licenses should be assigned on the basis of large areas; MSAs, RSAs, and BTAs are far too small. It would be counterproductive to build a national infrastructure from many small license areas that are simply traded in a private auction after the public auction has taken place.

This was the case with cellular where 734 licenses were issued. Nine companies now control more than 90 percent of today's cellular subscribers in the United States. This consolidation was done in post-license acquisitions. The same thing might happen in PCS if too many small licenses are awarded. But, even if PCS can overcome obstacles never faced by cellular -- that is, consolidating while competing against entrenched wireless providers already in place -- this method of achieving large service areas is terribly inefficient and results in speculators pocketing sums lost forever to the federal treasury.

PCS can succeed only if it is able to realize the economies of scale that have proven necessary in the existing wireless industries. As the annual reports of various cellular providers show, wider area systems cost less to operate. The key to operating economies is a large service area.

Moreover, today's consumer expects wireless services to be completely mobile. Consumer demand has led cellular

evolution to wider geographic coverage with increasing movement toward the development of seamless nationwide roaming capabilities. Major providers of wireless services recognize that the geographic scope of their service must keep pace with consumer expectations. For example, in disclosing last month the nation's fifth largest merger ever, AT&T and McCaw announced their goal of nationwide wireless service.

Thus, large geographic areas for PCS are competitively essential. PCS cannot provide the effective price and service competition to existing mobile service providers if PCS is marginalized in small, ineffective licensing areas.

Moreover, each PCS market should be served by two, or at most three, PCS licensees. PCS will be launched in a market already dominated by wireline and cellular telephone services. Balkanizing PCS by issuing too many licenses would keep any PCS licensee from competing effectively. Too many licenses would consign our new industry to the margins of the marketplace. The very first page of CTIA's fourth so-called "white paper" illustrates the marginalization that would occur and the weak competition to entrenched service providers that would result from too many PCS licenses.

The issuance of too many PCS licenses will also slow service to the public. As the number of PCS providers grows, unit costs to the providers rise, or service quality declines, or both. As a consequence, licensees will conclude that their potential offering is not a viable business and will either withdraw from the market or seek to consolidate efforts with other licensees. The net effect is to delay entry and service to the public.

#### PCS License Eligibility

The rapid deployment of new technologies and the development of a new telecommunications infrastructure are critical national goals. PCS is an important element of both goals and could add significantly to the level of competition in less-than-fully-competitive telecommunications services markets, thereby benefitting the public. In particular, PCS could provide LEC-equivalent wireless local loop services and services competitive with the services currently provided by cellular. The encouragement of competition is a long-standing Commission goal.

Simply stated, existing cellular service providers do not have any incentive to fully develop services that will compete with the services they already provide. PCS Action believes that the Commission should adopt rules prohibiting potential PCS competitors from being eligible to hold a PCS

license in the markets where they provide and dominate competing services.

PCS Action believes that the FCC must take steps to ensure that PCS is a competitive service providing diversity in wireless communications. Because competition is nullified when an entity is pitted against itself, PCS Action believes that cellular incumbents and their affiliates should be free to apply for PCS licenses anywhere in the country except in their home region. A cellular incumbent or its affiliate should be able to apply for a PCS license only if the applicant serves less than 20 percent of the population to be served by the PCS license.

PCS Action's position on cellular eligibility echoes the recommendations of key federal agencies, which uniformly favor prohibiting cellular companies from bidding on PCS licenses covering their own service areas:

National Telecommunications and Information Administration:

"[W]e recommend that the Commission promote competition among PCS and cellular providers by initially prohibiting the acquisition of PCS licenses by cellular providers in their own service areas . . . . [T]he Commission should review this limitation, in light of subsequent market developments, three years after initially assigning PCS licenses."<sup>1/</sup>

U.S. Department of Justice:

"[T]he FCC should not at this time permit any firm to control both a cellular and a PCS license in the same geographic area. That restriction, which should be reexamined in a definite time period (e.g., four years), we believe, should apply equally to both wireline and non-wireline cellular licensees."<sup>2/</sup>

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<sup>1/</sup> Comments of the National Telecommunications and Information Administration at 27, FCC GEN Dkt. No. 90-314 & ET Dkt. No. 92-100 (Nov. 9, 1992).

<sup>2/</sup> Comments of the U.S. Department of Justice at 29-30, FCC GEN Dkt. No. 90-314 & ET Dkt. No. 92-100 (Nov. 9, 1992).

U.S. General Accounting Office:

"In allocating the spectrum and granting licenses for the new personal communications services, the FCC should consider establishing a policy that gives first preference to firms that are not current cellular telephone service providers in a given market area . . . ."3/

The benefits that could be brought to PCS by experienced cellular service providers, moreover, would not be lost by adoption of this proposal. A cellular licensee and its affiliates barred from becoming a PCS licensee in one market would be eligible in other markets where it did not have an overwhelming presence. An out-of-region cellular licensee would have a greatly diminished incentive and opportunity to conduct its PCS operations in an anti-competitive manner, and therefore, should not be barred from participation under all circumstances.

Conclusion

The vision of a new competitive voice and data network requires the allocation of 40 MHz of spectrum for large market areas. The primary opposition to this proposal has been from various entrenched incumbents seeking to protect themselves from effective competition.

The public interest here dictates the creation of rules that will foster the vision of PCS as a large scale voice and data service available to a mass market. There must be 40 MHz licenses in large service areas to realize this vision.

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3/ U.S. General Accounting Office, "Telecommunications: Concerns About Competition in the Cellular Telephone Service Industry" at 42 (GAO/RCED-92-220 July 1992).

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

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of	)	
	)	
Amendment of the Commission's	)	GEN Docket No. 90-314
Rules to Establish New Personal	)	
Communications Services	)	

**COMMENTS OF PCS ACTION, INC.**

Ronald L. Plessner  
Emilio W. Cividanes  
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Counsel for PCS Action, Inc.

Date: April 22, 1994

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Amendment of the Commission's ) GEN Docket No. 90-314  
Rules to Establish New Personal )  
Communications Services )

**COMMENTS OF PCS ACTION, INC.**<sup>1</sup>

**Introduction and Summary**

PCS Action, Inc. ("PCS Action") has long believed that, generally, the Commission's allocation plan in the PCS Second Report and Order has the best prospect of fostering competition and creating a workable plan at the outset. Throughout the proceedings on the reconsideration of the Commission's PCS Second Report and Order, PCS Action has asserted that the allocation of spectrum for new PCS services must be accomplished in a way that ensures rapid rollout and new entrant viability, which will engender effective competition to existing wireless and wireline providers. The record developed by the Commission's PCS Task Force at last week's two-day panel discussion clearly supports PCS Action's views. Moreover, apparently recognizing the impact caused to the demand for all wireless services should PCS licensing be delayed further, the cellular industry's chief spokesperson stated last week that the industry would now support a Commission decision to forgo major reconsideration -- "we also want to get on with it [*i.e.*, the licensing of PCS]."2

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1 A list of PCS Action members is attached.

2 Communications Daily, April 12, 1994, at 2, quoting Thomas Wheeler, President, Cellular Telecommunications Industry Association. The same call to finalize the regulatory process quickly can be heard from the PCIA. See Written Testimony of Personal Communications Industry Association to the FCC Panel Discussion at 2 (April 11, 1994) ("PCIA Testimony") ("Now it is time to move forward").

PCS Action, Inc. hereby submits its comments on how the record developed by the Commission's PCS Task Force at the two-day panel discussion clearly supports PCS Action's views on reconsideration.

### I. PCS Can Bring Effective Competition to the Wireless Market

The panelists, including all the economists representing a variety of interests, were virtually unanimous in viewing PCS as a major entrant into the market for mobile wireless communication services, not merely as a cluster of services to be offered using the newly licensed spectrum.<sup>3</sup> These competitive services include cellular, ESMR, and PCS.<sup>4</sup> Defining PCS as *part* of the wireless market, rather than a *separate* market, requires the Commission to give PCS a fair opportunity to develop as a strong competitive alternative to other wireless services, rather than as a "highly fragmented marketplace with multiple [PCS] licensees."<sup>5</sup> The call for "frequency parity" must be viewed in the context of a single wireless market. In that

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<sup>3</sup> See, e.g., Oral Statement of Thomas A. Stroup, President, Personal Communications Industry Association to the FCC Panel Discussion, transcript at 20 and 81 (April 11, 1994) ("PCIA Statement"); Oral Statement of Mark Lowenstein, Director, the Yankee Group to the FCC Panel Discussion, transcript at 35 (April 11, 1994) ("Yankee Group Statement"); Oral Statement of Stanley M. Besen, Charles River Associates to the FCC Panel Discussion, transcript at 140 (April 11, 1994) ("Charles River Statement"); Oral Statement of Jerry Hausman, MacDonald Professor of Economics, Massachusetts Institute of Technology, Department of Economics to the FCC Panel Discussion, transcript at 159 (April 11, 1994) ("MIT Statement"); Oral Statement of Elliott Hamilton, Vice President and Director, MTA-EMCI, to the FCC Panel Discussion, transcript at 46-47 (April 11, 1994) ("EMCI Statement"); Oral Statement of Mark A. Roberts, C.P.A., Alex, Brown & Sons to the FCC Panel Discussion, transcript at 248-249, 252 (April 11, 1994) ("Alex, Brown Statement"); Oral Statement of Paul Riseman, Alliance Capital Management, L.P. to the FCC Panel Discussion, transcript at 239 (April 11, 1994) ("Alliance Statement"); Oral Statement of Alex D. Felker, Vice President, Technology, Time Warner Telecommunications to the FCC Panel Discussion, transcript at 14 (April 12, 1994) ("Time Warner Statement").

<sup>4</sup> Further, some panelists posited that eventually this competitive wireless market would also compete against the local exchange carriers. See Alex, Brown Statement, transcript at 252-253 (PCS can offer a competitive alternative to the local loop); Oral Statement of David Kerr, Senior Industry Analyst, BIS Strategic Decisions to the FCC Panel Discussion, transcript at 59 (April 11, 1994) ("BIS Statement") (Demand studies indicate that consumers want wireless POTTS); Oral Statement of Nancy Peretsman, Managing Director, Salomon Brothers to the FCC Panel Discussion, transcript at 245 (April 11, 1994) ("Salomon Brothers Statement") (PCS has a broader role in telecommunications than just the wireless market).

<sup>5</sup> Written Testimony of BIS Strategic Decisions to the FCC Panel Discussion at 3 (April 11, 1994) ("BIS Testimony"). See also Written Testimony of Hatfield Associates, Inc. to the FCC Panel Discussion at 1 (April 11, 1994) ("Hatfield Testimony").

light, the allocation of at least 30 MHz Major Trading Area (MTA) licenses for new PCS entrants is a necessary step toward parity in the market.

Most panelists who view the market broadly and addressed the issue of number of PCS licensees concluded that the economic realities of the market support only two or three PCS licensees.<sup>6</sup> Five or six vigorous, full-service *wireless* licensees -- consisting of these two or three PCS licensees, the incumbent cellular licensees, and an ESMR system -- would provide for a wide range of consumer choice, and wireless service prices would attain a more competitive level.<sup>7</sup>

## **II. The Commission Should Promptly Begin Issuing PCS Licenses**

Expeditious licensing of PCS is one of the crucial elements of a PCS regulatory regime promoting competition in the marketplace for wireless services. The other elements are: (1) wide bandwidth assignments (which is related to rapid development), (2) broad geographic license areas, and (3) making major cellular licensees, ineligible for PCS licenses within their service areas.

Even with a bandwidth and geographic area allocation plan *designed* to promote competition, it will be nearly impossible to build a viable PCS industry unless PCS operators can rapidly roll out wireless services. "The benefits of a perfect auction mechanism can easily be outweighed by the costs to consumers of delaying the availability of service."<sup>8</sup> Time-to-market is a key indicator of success for PCS licensees.<sup>9</sup> Timing of PCS deployment will affect demand

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<sup>6</sup> See, e.g., BIS Testimony at 7; Written Testimony of Alliance Capital Management, L.P. to the FCC Panel Discussion at 2 (April 11, 1994) ("Alliance Testimony"); MIT Statement, transcript at 159; Salomon Brothers Statement, transcript at 279.

<sup>7</sup> See Alliance Testimony at 2; MIT Statement, transcript at 159: Dr. Hausman made clear that the optimal market would be two cellular, one ESMR; and two PCS providers.

<sup>8</sup> Hatfield Testimony at 1.

<sup>9</sup> Written Testimony of Time Warner Telecommunications to the FCC Panel Discussion at 18 (April 12, 1994) ("Time Warner Testimony").

for specific wireless services and the relative market share of each.<sup>10</sup> The Commission can further expedite the process by finalizing the service and allocation rules and by licensing PCS. By doing so, the Commission will enhance stability so that others can resolve delay as quickly as possible. This in turn will enhance the prospects of success of a PCS industry determined to lower the consumer cost of wireless telephony and bring greater functionality to wireless communications. By contrast, the panel discussion demonstrated clearly that too much delay in deploying PCS will cripple PCS, will hurt competition in wireless services, and will jeopardize international trade opportunities.

Delay includes all of the hurdles that must be overcome before PCS is available to the consumer. These delays include the creation of a competitive bidding system, the manufacturing of equipment,<sup>11</sup> financing the capital and operating costs of a PCS system,<sup>12</sup> processing of applications,<sup>13</sup> moving microwave incumbents,<sup>14</sup> as well as constructing the PCS system. The

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<sup>10</sup> PCIA Statement, transcript at 22-23.

<sup>11</sup> Northern Telecom estimates that significant reconsideration allocation changes would cause at least six months of delay to equipment vendors and potential licensees. See Oral Statement of Dave Twyver, President, Wireless Systems Group, Northern Telecom to the FCC Panel Discussion, Telspan Tape 1 of 4, April 11, 1994 at 1.32.30 to 1.33.24 ("Northern Telecom Statement"). PCS Action urges the Commission not to engage in setting standards for PCS equipment, as this would add further delay to the process of equipment manufacturing and deployment.

<sup>12</sup> Panelists from the financial community agreed that unless PCS is viable from the start, financing would be difficult. See Alex, Brown Statement, transcript at 248-250; Salomon Brothers Statement, transcript at 243-244, 322; Alliance Statement, transcript at 241.

<sup>13</sup> The statutory 30-day public notice period for license application cannot be avoided. However, if after market aggregation is encouraged with a six by 20 MHz licensing scheme, these transactions could also add significant delay.

<sup>14</sup> Comsearch showed that negotiating microwave incumbents will take a considerable amount of time due to: (1) complicated negotiating and financing strategies where the microwave incumbent straddles more than one PCS license; (2) the relocation of microwave incumbents to the 6.7 GHz band and the resulting equipment supply challenges; and (3) the lack of experienced negotiators, coordinators, engineers, and the Commission personnel able to handle such a massive relocation. Written Testimony of Comsearch to the FCC Panel Discussion at 2-5 (April 11, 1994) ("Comsearch Testimony").

Commission in making changes to the Second Report and Order should be sensitive to the delay issue.<sup>15</sup>

Several panelists testified that every day of delay in deploying PCS results in decreasing demand for PCS services. They referenced the study conducted by DSS Research that shows that a delay in the licensing PCS from this year to next year would alone result in a 15 percent reduction in PCS market penetration; a two-year delay would result in a total reduction of one-third.<sup>16</sup> A "snowballing" effect occurs because once consumer demand declines, the incentives to mass-produce equipment, to move microwave incumbents, to finance PCS, and to avidly build out a PCS system, all decline with the demand. The longer PCS's entry into the market is delayed, the lower the expected investment returns, which in turn raises the cost of capital.<sup>17</sup> Indeed, investment in PCS is being withheld today because of uncertainty of the service and allocation rules.<sup>18</sup>

Assuming early fall 1994 auctions and a two-year build-out, no large-scale PCS system will turn on before early fall 1996.<sup>19</sup> Meanwhile, other wireless services are moving to preempt PCS opportunities.<sup>20</sup> Cellular carriers, for example, are adding new customers to their networks at the rate of five million per year -- 14,000 per day.<sup>21</sup> Even assuming PCS deployment in late

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<sup>15</sup> Mr. Ralph Haller, of the FCC's PCS Task Force, suggested this when he asked the first Panel of April 11, 1994 whether it would be better to finalize the current rules or try to substantially change the rules, which would require a reconsideration of the revised rules. FCC Panel Discussion Transcript of April 11, 1994 at 91.

<sup>16</sup> PCIA Statement, transcript at 22-23; Written Testimony of Northern Telecom to the FCC Panel Discussion at 6 (April 11, 1994) ("Northern Telecom Testimony"); BIS Statement, transcript at 96 (PCS auctions in 1995 would be perceived as a significant delay).

<sup>17</sup> Alex, Brown Statement, transcript at 249-250.

<sup>18</sup> Hatfield Testimony at 1.

<sup>19</sup> Alliance Testimony at 1.

<sup>20</sup> Alex, Brown Testimony at 3.

<sup>21</sup> PCIA Statement, transcript at 23.

1996, cellular is projected to grow to a 30 million subscriber level by 1998.<sup>22</sup> ESMR is also projected to achieve rapid market penetration as these new networks are deployed in the coming months.<sup>23</sup>

GTE Corp., for example, announced this week that it will use its existing cellular spectrum to offer by year's end a new, mass market wireless service priced significantly lower than regular cellular-phone service. Called "Tele-Go," the service was tested for two years and described by GTE's witness at the panel discussion.<sup>24</sup> Calling it a "preemptive strike" against PCS that industry analysts have long expected, The Wall Street Journal described the launching of Tele-Go as an effort by cellular "to beat PCS entrants to the punch by expanding [cellular's] base of customers beyond executives to cost-conscious consumers."<sup>25</sup> It is no surprise that the GTE witness requested significant revisions to the PCS rules that would result in significant delay in the licensing of PCS.

Absent strong PCS, the consumer will be deprived of true cost and service competition to the cellular duopoly; the Commission has estimated that \$5 billion annually would be saved by consumers if cellular had effective competition.<sup>26</sup> This must be sustainable competition, not merely the threat of competition that leads duopolists to temporary cost cutting. The consumer is also being deprived of the enhanced functionality -- wireless data and video transmission -- that PCS promises. The digital technology upon which PCS is based, and which makes possible both

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22 Northern Telecom Testimony at 5-6.

23 PCIA Testimony at 6.

24 See generally Written Testimony of GTE Personal Communications Services to the FCC Panel Discussion (April 11, 1994) ("GTE Testimony").

25 "Pocket-Phone Service Planned By GTE Corp.: Move Is Attempt to Beat Delayed Rival Service Into Consumer Market," Wall Street Journal A3 (April 19, 1994).

26 See Letter from Alfred C. Sikes, Chairman, FCC, to President George Bush, April 28, 1992, at 14 ("Letter of April 28, 1992").

low-cost service and extraordinary functionality, simply will not be available quickly and broadly in the absence of major new entrants to the wireless market.

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Time-to-market is a key indicator of success for PCS licensees.<sup>27</sup> The Commission's finalization of PCS service and allocation rules will be the catalyst for resolving potentially crippling delays.<sup>28</sup> Timely development of PCS will result in "(1) the largest addressable market allowing many players to successfully compete, (2) the highest volume of product to be manufactured, thus creating economies of scale and scope to minimize costs, and (3) allow U.S. manufacturers to export innovative and cost effective telecommunications solutions to a global marketplace, as well as increase jobs and services in the United States."<sup>29</sup>

### III. The Dual Virtue of the Commission's Allocation Plan

The Commission's allocation plan in the PCS Second Report and Order results in *readily deployable and competitive* PCS systems, not simply the beginning of a process of after-market accumulation of "building blocks" to create such systems. The Commission should maintain the plan's key elements: 30-MHz MTA licenses available to all except certain in-region cellular providers, with a possibility of aggregating to 40 MHz. The Commission should maintain its decision to guarantee vigorous and sustainable competition with the creation of two large-scale spectrum blocks.

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<sup>27</sup> Time Warner Testimony at 18.

<sup>28</sup> This does not preclude the Commission from making minor adjustments that would not require a second reconsideration period. For example, the Commission should reconsider mandating low-power for all PCS antennas. Unless the Commission authorizes use of higher power, universal PCS service will be impossible, less densely populated areas will receive stunted service (if any), consumer prices will be higher, PCS will be far less competitive with cellular, and less efficient systems will have to be used.

<sup>29</sup> Northern Telecom Testimony at 2.

### A. Wide Bandwidth Assignments for PCS

The Commission should maintain current allocations to blocks A and B in the 1850-1970 MHz band. The Commission correctly reasoned that several allocations of at least 30 MHz in the lower band will most efficiently accomplish its three goals of: (1) rapid deployment of services; (2) opportunity to provide a full range of services through the use of different sized frequency blocks; and (3) successful spectrum-sharing between PCS licensees and microwave incumbents.<sup>30</sup>

#### 1. The Virtue of Wide Bandwidth Assignments

The 30 MHz allocations together with the ability to create 40 MHz licenses, as directed by the Commission and supported by PCS Action, represent the best hope for having PCS develop first as a wireless competitor, and eventually as a provider of data, imaging, multi-media, and video services and a competitor, to the landline network. Panelists from the financial community agreed that viable licenses are the key to a successful PCS industry.<sup>31</sup>

NTIA was among the first to advocate the virtue of 30 MHz license blocks: rapid deployment, flexibility to avoid certain frequencies now encumbered with microwave users, and lower costs.<sup>32</sup> The Commission's decision to issue 30 MHz licenses and permit aggregation of up to 40 MHz will ensure that an economically viable PCS industry will be created. A decision to issue smaller licenses will ensure delay, lost revenues to the Treasury, and a weakened PCS industry.

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<sup>30</sup> Second Report and Order, 8 FCC Rcd. 7700 at ¶ 58 (1993) ("Second Report and Order").

<sup>31</sup> *See Alliance Statement*, transcript at 25 ("There is enough risk in this as it is that the size of the spectrum grant does not have to be the issue around which risk turns."); *Alex, Brown Statement*, transcript at 248 (30 MHz MTAs are required to finance a PCS system).

<sup>32</sup> *Letter to the Honorable James H. Quello, Acting Chairman, Federal Communications Commission from Larry Irving, Assistant Secretary for Communications and Information, United States Department of Commerce, dated September 14, 1993 at 3* ("NTIA Letter").

**First**, the allocation scheme supported by PCS Action gives PCS operators the necessary flexibility to focus on rapid implementation of service to the public. Given that studies confirm that ubiquitous service throughout the coverage area is among the most important elements of consumers' decisions to subscribe to PCS, PCS operators must be able to provide coverage to a large part of their market on the first day without causing interference to microwave incumbents. Without sufficient spectrum, however, a single existing microwave link can preclude ubiquitous PCS operation.<sup>33</sup> Panelists acknowledged that regardless of bandwidth assignments, "in most markets, before even the first [PCS] cell is turned up, microwave paths will need to be relocated."<sup>34</sup> The process of engineering new links, purchasing equipment, coordinating frequencies and securing Commission approval, and constructing and installing systems will take years to complete.<sup>35</sup> Consequently, there will be a need to share spectrum with some microwave incumbents as a stopgap accommodation while implementing other reallocations. Spectrum sharing dictates that a minimum amount of spectrum will be needed merely to deploy PCS service initially.<sup>36</sup> Otherwise, there will be insufficient spectral room to frequency engineer around microwave paths. Bandwidth assignments of at least 30 MHz coupled with the use of recently developed sharing techniques to work around incumbent microwave users would permit PCS operators to begin service and then evolve toward advanced PCS services.

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33 Time Warner Testimony at 6. Microwave licensees in the lower PCS band use two 10 MHz channels -- a total of 20 MHz. See generally "White Paper on PCS Spectrum Issues," PCS Action, Inc. (filed July 21, 1993).

34 Comsearch Testimony at 5; Time Warner Testimony at 5-6.

35 Time Warner Testimony at 4.

36 Comsearch Testimony at 5. The much debated issue of how much of a problem is incumbent relocation underscores at least two indisputable facts: commercial incumbents have at least three years to move and public safety operators can remain at their 2 GHz frequency for five years. Third Report and Order, ET Docket No. 92-9, 8 FCC Rcd. 6589, at ¶ 2 (1993); Memorandum Opinion and Order, ET Docket No. 92-9, FCC 94-60, at ¶ 35 (released March 31, 1994).

On the other hand, an allocation scheme based solely on blocks of less than 30 MHz would deny PCS licensees any flexibility to engineer around incumbent microwave users. It would preclude: (1) immediate head-to-head competition with the existing mobile service industry, and the concomitant loss of billions of dollars in consumer savings as a result of reduced prices in wireless telephone service;<sup>37</sup> and (2) the influx of revenue from rapid deployment that would allow PCS operators to finance the costs of more advanced PCS services. In short, an allocation scheme with only 20 MHz licenses will cripple the deployment of PCS.

Second, the ability to begin serving the public soon after the licensing process will give PCS operators more leverage to *negotiate* with microwave incumbents. The panelists acknowledged that the negotiations with microwave incumbents will tend to be protracted and complicated.<sup>38</sup> As noted above, a PCS license of less than 30 MHz in the lower band would prohibit any simultaneous operation with incumbent microwave operators. A PCS operator should be able to deploy a cellular-competitive service and then negotiate with incumbent microwave operators on a more level, reasonable basis. By avoiding exorbitant relocation costs that would result from a small allocation, a PCS licensee will be able to expand the range and lower the cost of services available to the public.

Third, any allocation scheme based solely on blocks of less than 30 MHz would impose a significant and unacceptable risk that the vision for advanced PCS will never be realized. Without sufficient spectrum, a non-cellular (or non-ESMR) PCS operator, after paying the auction price, will be forced to negotiate with microwave incumbents for years while revenues are reduced or non-existent.<sup>39</sup> Only the deepest pockets (*e.g.*, RBOCs) could survive in such an

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37 See Letter of April 28, 1992 at 14 (PCS competition with cellular will save the American public \$2 billion to \$5 billion per year); see also 1994 DSS Research study on Effect of Delayed PCS Deployment ("DSS Study").

38 Comsearch Testimony at 2.

39 For example, a 20 MHz plan would result in extensive disruption, requiring relocation of approximately 50 percent of the 10,000 existing microwave links, including 100 percent of the public safety links, within three years of licensing just to initiate service. See Comsearch, "Spectrum Allocations and Their Impact on Microwave User Relocations: A Case Study," at § 5.0 (April 12, 1993).

environment. In contrast, cellular interests, for example, will not face the same roadblock because their cleared 25 MHz may be readily used to support PCS, as demonstrated by GTE's planned launch of its Tele-Go service. Thus, without the Commission's continued commitment to a competitive playing field from the start, PCS operators will not be able to effectively compete with existing mobile service providers.

Further, as recognized by the Commission, large blocks of PCS spectrum can deliver more than just high quality wireless telephone services. It promises "the fullest range of services."<sup>40</sup> As PCS Action has explained in this proceeding, studies of the U.S. demand for PCS and the lessons of the early failure of PCS in the U.K. confirm that:

PCS services will evolve from secure, high-quality voice and text transmission with national roaming, to fixed and mobile ISDN data, telemetry, broadband data, advanced intelligent network services, and multimedia.<sup>41</sup>

This vision of a full range of service was one of the motivating factors that led NTIA to propose an allocation greater than 20 MHz: "larger allocations would enable PCS licensees to offer alternative services to consumers, such as larger bandwidth data or imaging services, more quickly and more cheaply than would be the case with smaller allocations."<sup>42</sup>

## 2. The Modular "Building Blocks" Approach Would Harm PCS

The modular "building blocks" approach advanced by some parties "would slow and make more expensive the initiation of service"<sup>43</sup> and significantly reduce PCS auction revenues to the federal government.

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40 Second Report and Order at ¶ 58.

41 "White Paper on PCS Spectrum Issues," PCS Action, Inc. (filed July 21, 1993).

42 NTIA Letter at 3.

43 Time Warner Testimony at 13. In addition, a large after market, in which licenses recently allocated through the Commission's auction are then bought and sold in a "private auction," is contrary to the intent of the