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Building The
Wireless Future.

April 21, 1994

CTIA

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

APR 21 1994

SECRETARY

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

Randall S. Coleman
Vice President for
Regulatory Policy and Law

Dear Mr. Caton:

On Thursday, April 21, 1994, the Cellular Telecommunications Industry Association (CTIA), represented by Thomas E. Wheeler and Randall S. Coleman of CTIA, Philip L. Verveer and Jennifer A. Donaldson of Willkie, Farr & Gallagher, and Stanley M. Besen and William B. Burnett of Charles River Associates, met the Commission's PCS Task Force to discuss issues related to cellular carrier eligibility for personal communications services spectrum. Attending on behalf of the Task Force were Ralph A. Haller, Karen Brinkmann, Gregory Rosston, David R. Siddall, Renee Licht, Doron Fertig, Joseph A. Levin and Donald Gips. The views expressed in this meeting, as summarized in the attached presentation materials, reflect CTIA's position as previously filed in this docket.

Pursuant to Section 1.1206(a)(1) of the Commission's Rules, an original and one copy of this letter and the attachment are being filed with your office.

If you have any questions concerning this submission, please contact the undersigned.

Sincerely,

Randall S. Coleman

Attachment



CELLULAR ELIGIBILITY FOR PCS

Today's Theme: The cellular telephone industry should be allowed to grow out of their existing business into broadband wireless services

- **Competition Theory**
 - **Competition Today**
 - **POTS to PANS**
 - **Why Restrict Any Potential PCS Providers?**
 - **Wireless Service Innovation**
 - **Restrictions on Cellular**
 - **Conclusion**
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COMPETITIVE THEORY

- **Stan Besen and Bill Burnett: An Antitrust Analysis of the Market for Mobile Telecommunications Services**
 - ▶ **Broad Geographic and Product Markets**
 - ▶ **Capacity is the relevant measure of market share**
 - ▶ **Competition will not be threatened by cellular eligibility for PCS spectrum**
 - ▶ **CTIA's PCS spectrum assignment proposal would create even less concentration in mobile services**



COMPETITION TODAY

- **Example: Chicago & Central Illinois (Ameritech vs. Cellular One)**
 - ▶ **Rate War**
 - ▶ **Free Air Time**
 - ▶ **Free Handset**
 - ▶ **Quality**
 - ▶ **Roaming Rates**
 - ▶ **Coverage**

 - **Example: Dallas (Southwestern Bell vs. LIN)**
 - ▶ **Aggressive Pricing Strategies**
 - ▶ **Price Cuts on Hardware and Airtime**
 - ▶ **Free Airtime**
 - ▶ **Off-peak Rates (as low as \$.06/min.) Very Close to Landline Rates (\$.05/min. on average).**
 - ▶ **Coverage**

 - **Conclusion: Wireless competition is here today.**
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POTS to PANS

- CTIA is agnostic about what PCS spectrum will be used for
- At one time, so was the Commission, loosely defining PCS as:

"[A] family of mobile or portable radio communications services that could provide services to individuals and business and be integrated with a variety of competing networks." Second Report and Order at ¶ 19.
- Already there is an incremental evolution/integration of existing services:
 - ▶ Messaging (Nextel)
 - ▶ Simon (combining voice, paging and messaging)
- Provider's perspective and market opportunity should define PCS:

"For the cellular industry, cellular is PCN, and the key issue is interoperability. For the local exchange carrier, PCN is an adjunct to the network and the issue is integration. For the interexchange long distance carriers, PCN is bypass for the local loop and the issue is local access. For new entrants, PCN is competition to cellular and landline service, and the key issue is cost."

Cowen & Company, "Industry Strategies, Wireless Communications Industry," January 1993



POTS to PANS (continued)

- "The main difference between cellular and PCS is that cellular is a medium for people talking to people. PCS is a medium for machines to talk to machines on behalf of people."

-- Paul Saffo, Institute for the Future

- The increasing needs of PANS machines:

The Faster the Cheaper

In the virtuous cycle of computer-chip technology, as information-processing speed has increased, the prices of computing devices have declined.

	Approximate number of instructions per second	Price
1975 I.B.M. Mainframe	10,000,000	\$ 10,000,000
1976 Cray 1	160,000,000	20,000,000
1979 Digital VAX	1,000,000	200,000
1981 I.B.M. PC	250,000	3,000
1984 Sun Microsystems 2	1,000,000	10,000
1984 Pentium-chip PC	66,000,000	3,000
1986 Sony PCX video game	500,000,000*	500*
1986 Microunity set-top box	1,000,000,000*	500*

*estimated

Sources: Company reports; The New York Times

- **Computer Analogy:**
 - ▶ "Demand in the personal computer industry was heightened by the creation of new applications -- spreadsheets, word processing, electronic mail, it did not simply take over old mainframe functions like payroll processing and customer billing."

New York Times, "Toys Now, Computers Tomorrow," April 20, 1994



POTS to PANS (continued)

- **The increase in information processing speed and the decrease in cost per MIP of processing power in PANS machines is driving:**
 - ▶ **the rapid proliferation of high speed computers and LANS**
 - ▶ **an increase in graphics user interfaces and bandwidth intensive applications**

 - **The End Result: A Rapid Increase in Access Bandwidth Requirements**
 - *and now add image, video, and portability to the equation!*

 - **Growth Will Be in Data and Multimedia:**
 - ▶ **Between 1993 and 1998 data traffic growth will be ~9 times that of voice.**
 - ▶ **Between 1993 and 1998 Multimedia will drive bandwidth needs up by a factor of ~10.**
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POTS to PANS (continued)

- **Bandwidth Requirements**

<u>File Type</u>	<u>File Size</u>
E-Mail	~1 kbyte
Word Processor	~100 kbyte
Image: 8 bit color VGA	~2.5 Mbyte
Image: 24 bit color	~7.5 Mbyte

- **Feeding the Portability of Processing:**

<u>Time Needed to Deliver</u>	<u>1 MByte</u>	<u>4 MByte</u>
Circuit Switched Cellular (@ 9.6 kb/s)	~14 min.	~56 min.
CDPD (@ 19.2 kb/s)	~7 min.	~28 min.
Broadband PCS (10 MHz)	~30 sec.	~ 2 min.



WHY RESTRICT ANY POTENTIAL PCS PROVIDERS?

Reasons for limiting cellular participation in the PCS market:

- **Misplaced concern that competition will be quashed**
 - ▶ **Telcos did not quash competition in the cellular market because other providers kept them honest**
 - ▶ **Same will be true for PCS**

 - **Erroneous claim of "cellular head start"**
 - ▶ **B-side cellular carriers received their licenses earlier than A-side, but**
 - ▶ **A-side carriers brought competition that has erased the "head start" advantage**

 - **All segments of the communications industry seek to grow out of their core businesses:**
 - ▶ **Cable Telephony**
 - ▶ **Video Dialtone**
 - ▶ **AT&T/ McCaw, MCI/Nextel**

 - **All segments will seek PCS spectrum**
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WHY RESTRICT ANY POTENTIAL PCS PROVIDERS? (continued)

- **All segments have potential scope economies that will allow them to be efficient PCS providers:**
 - ▶ **Infrastructure:**
 - ▶ **MCI's National Network**
 - ▶ **Cable High Capacity Trunking Plant**
 - ▶ **Celco Networks**
 - ▶ **Subscribers, Billing Systems, Monthly Contact With Customer**
 - ▶ **MCI -- 21.2 Million domestic subscribers**
 - ▶ **Time Warner: 200,000 subscribers in Orlando**
 - ▶ **McCaw: 23,000 subscribers in Orlando**
 - **Is it any wonder that Time Warner's Gerald Levin says that by 10 years from now, half of the nation's phone calls will be made over wireless or cable systems rather than conventional phone lines?**
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WIRELESS SERVICE INNOVATION

- **Willie Sutton Rule**
 - ▶ **Quickest Hit: POTS**

 - **Who is most likely to go for PANS?**
 - ▶ **Someone already in the wireless POTS business in territory**
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RESTRICTING CELLULAR PARTICIPATION

- **There is no need to unnecessarily restrict cellular participation:**
 - ▶ **Distant markets:**
 - ▶ **cellular treated like everyone else, as it should be**
 - ▶ **Adjacent markets:**
 - ▶ **Combination of MTA licensing + attribution/overlap effectively bans cellular**
 - ▶ **Many of the cellular carriers most affected by the attribution and overlap rules are the victims of Commission-mandated settlements**
 - ▶ **Map examples**
 - ▶ **In-market**
 - ▶ **Don't let others limit competition and development**
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CONCLUSION

- There is no justification for restricting *any segment of the telecommunications industry*, from growing out of its core business.