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June 1, 1994

Building The Wireless Future™

CTIA

Cellular Telecommunications Industry Association
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RECEIVED

JUN 1 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

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

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

Dear Mr. Caton:

On Wednesday, June 1, 1994, the Cellular Telecommunications Industry Association (CTIA), represented by Thomas E. Wheeler and Randall S. Coleman of CTIA, met with Commissioners Rachelle B. Chong and Susan Ness in separate meetings to discuss issues related to personal communications services. Accompanying Commissioner Chong was her Senior Advisor, Jane E. Mago. Accompanying Commissioner Ness were her Interim Advisors, Gregory J. Vogt and Rosiland Allen. The substance of the matters discussed in both meetings are summarized in the attached document and reflects 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 attached document are being filed with your office.

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

Sincerely,

Andrea D. Williams

Andrea D. Williams
Staff Counsel

Attachment

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CELLULAR ELIGIBILITY AND COMPETITIVE PARITY

CELLULAR TELECOMMUNICATIONS
INDUSTRY ASSOCIATION

JUNE 1, 1994

- Cellular carriers have not sought to block competition from PCS

- Some PCS proponents are services to block cellular competition in new services

HOW CELLULAR COMPANIES WILL USE NEW SPECTRUM

- In cellular territory: new services
- Out-of-territory: new markets
- In-territory spectrum important because:
  - ✓ Analog service requirement
  - ✓ New services enabled
  - ✓ Competitive parity

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ANALOG SERVICE REQUIREMENT

- **16 million cellular subscribers**
  - ✓ **Expectation equipment will continue to work**
  - ✓ **Ability to roam from analog to digital markets**
  - ✓ **Digital compatibility default**
- **Analog capacity will always be needed**

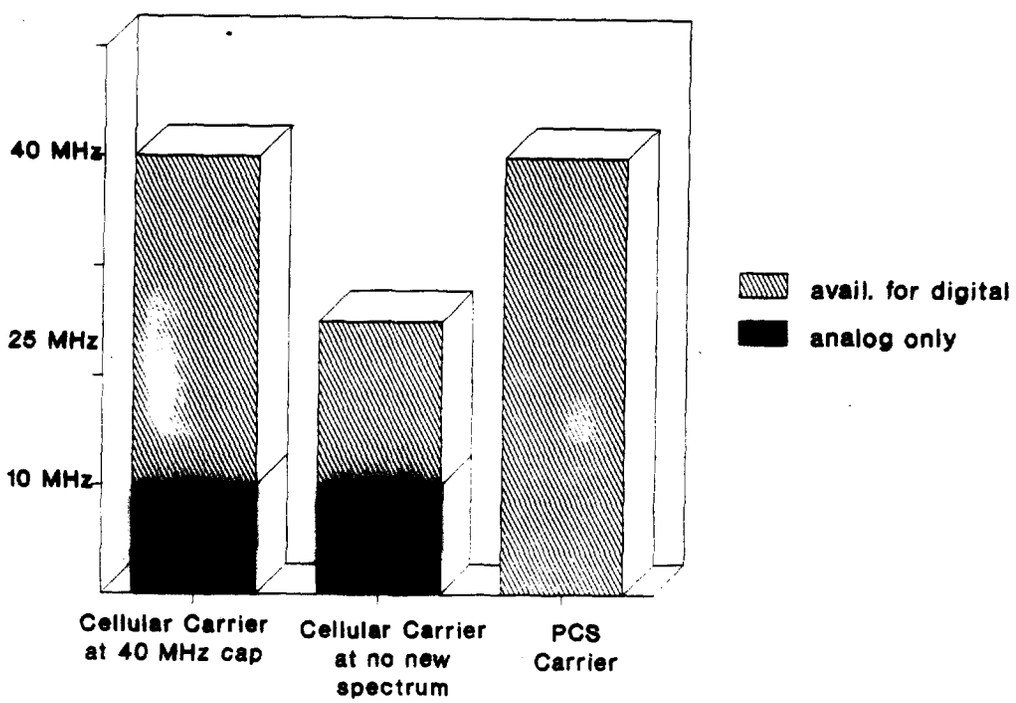
CONTINUING NEED TO SERVE ANALOG CUSTOMERS

YEAR	TOTAL SUBSCRIBERS	TOTAL ANALOG	TOTAL DIGITAL	% ANALOG
1992	300,000	300,000	0	100.00%
1993	360,000	324,000	36,000	90.00%
1994	432,000	348,600	83,400	80.69%
1995	518,400	371,580	146,820	71.68%
1996	622,080	390,078	232,002	62.71%
1997	746,496	400,395	346,101	53.64%
1998	895,795	397,750	498,045	44.40%
1999	1,074,954	375,975	698,979	34.98%
2000	1,289,945	327,129	962,816	25.36%
2001	1,547,935	241,020	1,306,915	15.57%
				SOURCE: CTIA

ASSUMPTIONS: City of 10 million people, with 3% cellular subscriber penetration in 1992, growing by 20% per year; 10% of all new phones sold are digital in 1993, increasing by 10% each year, until all phones sold in 2001 are digital; each year 10% of analog phones are traded in for digital.

ANALOG SERVICE OBLIGATION

- While PCS will be 100% digital, cellular will always maintain analog obligation
  - ✓ 10 MHz of cellular 25 MHz cannot be converted to digital



NEW SERVICES ENABLED

- From POTS to PANS
  - ✓ New Services require greater throughput
- Portability of Processing

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	100,000,000	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
1994	Pentium-chip PC	60,000,000	3,000
1995	Sony PCX video game	500,000,000*	500*
1995	Microunity set-top box	1,000,000,000*	500*

*estimated

Sources: Company reports; The New York Times

NEW SERVICES ENABLED (CONTINUED)

- **Throughput requirements:**

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

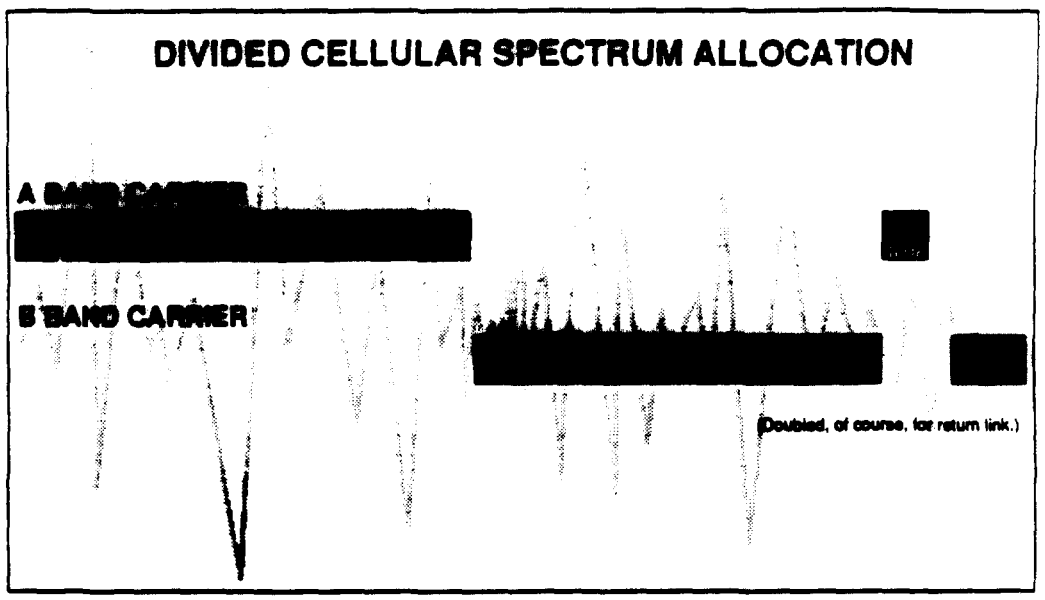
- **Feeding the Portability of Processing:**

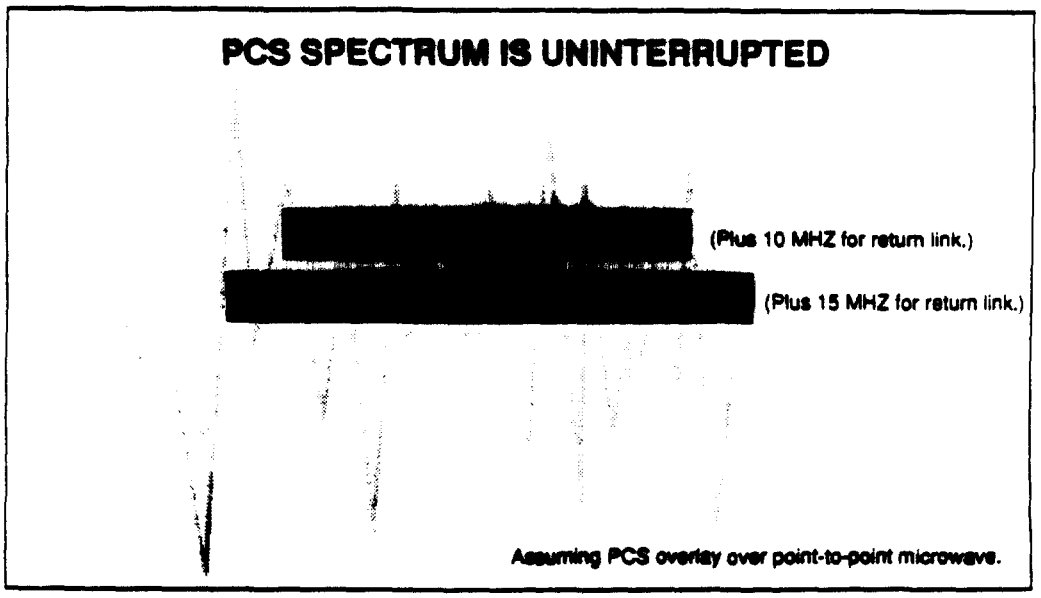
Time Needed to Deliver	1 MByte	4 MByte
Circuit Switched Cellular (@ 9.6 kb/s)	~14 min.	~56 min.
CDPD (@ 19.2 kb/s)	~7 min.	~28 min.
Broadband PCS (2.5 MHz)	~9 sec.	~ 36 sec.

- **Who is most likely to offer new services**

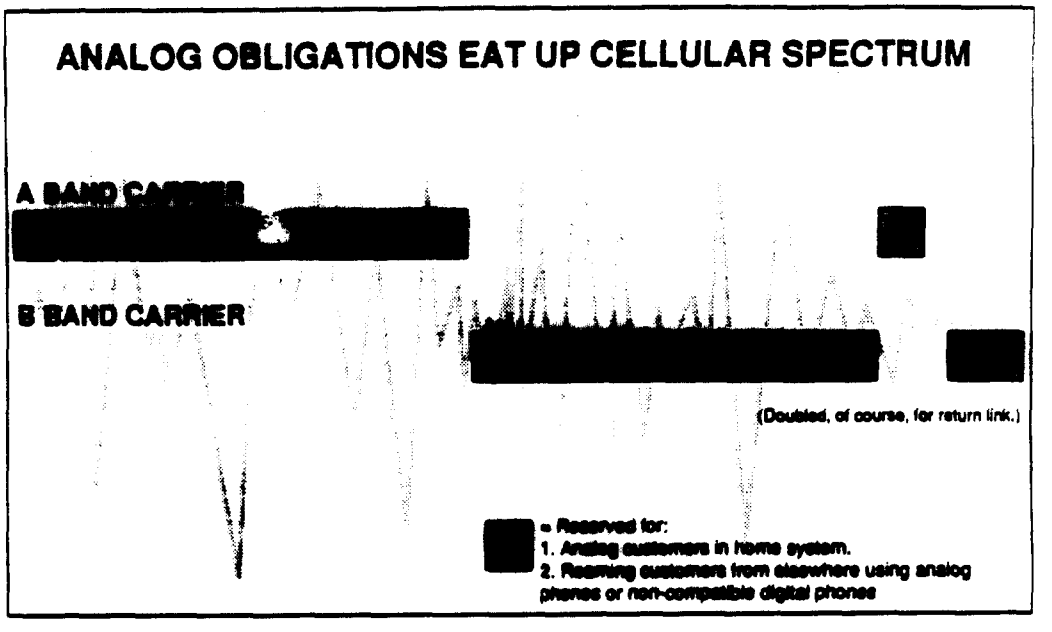
  ✓ **Willie Sutton Rule**

COMPETITIVE PARITY





COMPETITIVE PARITY (CONTINUED)



Spectrum available for digital	PCS	Cellular
First License	30 MHz	15 MHz
Subsequent License	10 MHz	15 MHz
Broadband PCS (2.5 MHz)	40 MHz	30 MHz

- **To reach all its available spectrum:**

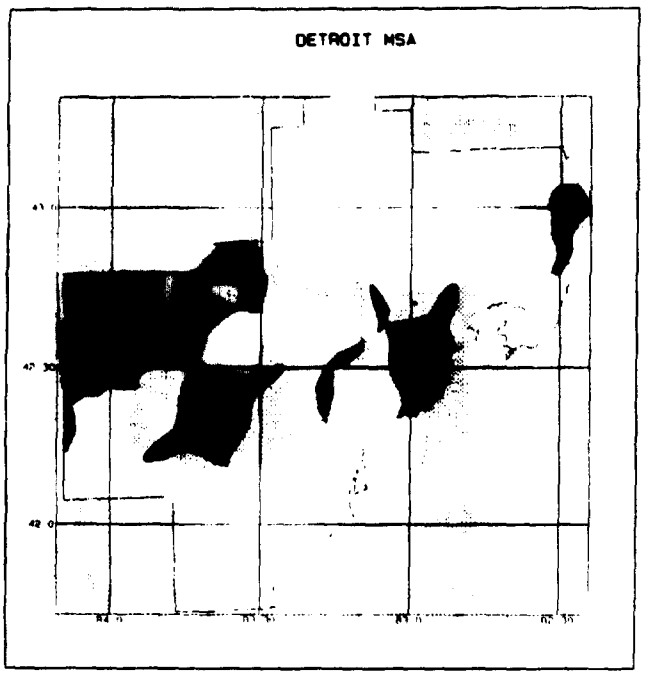
  ✓ **PCS licensee: one radio**

  ✓ **Cellular Licensee: two radios**

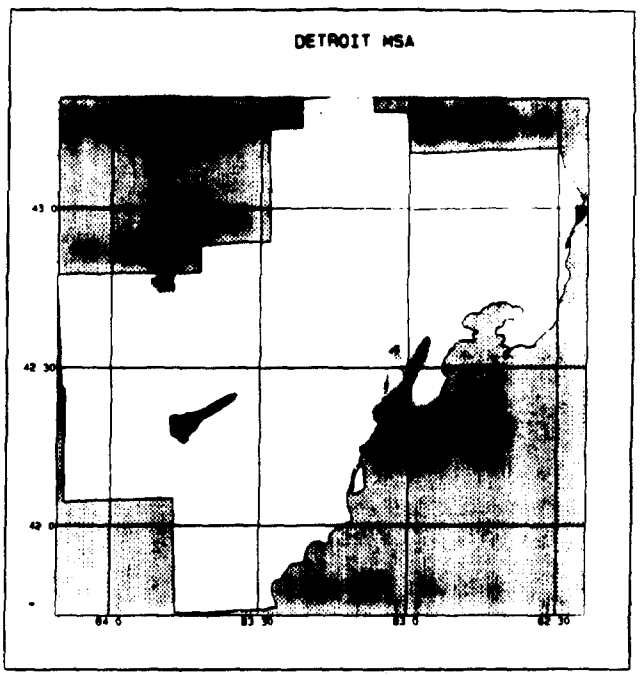
THE "INCUMBENT ISSUE"

- **Microwave interference is not as bad as portrayed**

Original Study With Misleading Assumptions



Same Data Re-run With Valid Assumptions



- **In five years . . .**
  - ✓ **Microwave incumbents <u>gone</u>**
  - ✓ **Cellular analog obligation <u>not gone</u>**

COMPARATIVE MARKET POWER

- Geographic service area
  - ✓ MTAs larger than aggregated cellular markets
- Spectrum allocation
  - ✓ PCS at 40 MHz has greater throughput than cellular at 40 MHz
- Market presence (example: Tampa, FL, MTA)
  - ✓ Infrastructure in place:
    - ▸ GTE Cellular
    - ▸ McCaw Cellular
    - ▸ Time Warner Cable
  - ✓ Subscribers in place
    - ▸ GTE Cellular - 20,000
    - ▸ McCaw Cellular - 20,000
    - ▸ Time Warner Cable - 200,000
- Market presence (national)
  - ✓ MCI - 21.2 million subscriber (plus Nextel)
  - ✓ Entire cellular industry - 16 million subscribers

CONCLUSION

- Competition is a reality.

- Make competitive parity a reality, too.

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HAND DELIVER

Mr. William Caton
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 met today with Mr. Ralph Haller, Chief, Private Radio Bureau. Attending the meeting on behalf of PCS Action, Inc. were Mr. Lex Felker of Time Warner Telecommunications and Mr. J. Barclay Jones of American Personal Communications.

During this meeting, we discussed PCS Action's position with respect to the Commission's reconsideration of its Second Report and Order in the above-referenced proceeding, as reflected in previous filings of PCS Action in that proceeding. We also spoke of concepts of disaggregation of PCS licenses.

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

Sincerely,

Ronald L. Plesser

RLP/plq
cc: Mr. Ralph Haller

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