

William F. Adler  
Executive Director  
Federal Regulatory Relations

1275 Pennsylvania Avenue, N.W., Suite 400  
Washington, D.C. 20004  
(202) 383-6435

DEPARTMENT OF COMMERCE

RECEIVED

APR 14 1994

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

PACIFIC  TELESIS  
Group - Washington

EX PARTE OR LATE FILED

EX PARTE

April 14, 1994

William F. Caton, Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W. - Room 222  
Washington, D.C. 20554

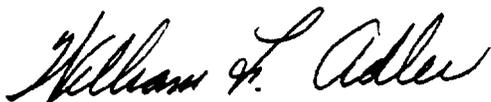
Re: GEN. Docket No. 90-314, Personal Communications Services

Dear Mr. Caton:

Today Lyn Daniels, Pacific Bell's Vice President-Personal Communications Services, Jim Tuthill, Senior Regulatory Counsel, and Ron Stowe, Vice President, Pacific Telesis Group-Washington, met with Chairman Hundt and members of his staff regarding issues under reconsideration in the subject proceeding. They distributed the attached discussion paper.

I am filing two copies of this letter and its attachment in accordance with Section 1.1206(a) of the Commission's rules. Please contact me if you have any questions concerning this matter.

Sincerely,



Attachment

CC: Chairman Reed Hundt  
Brian Fontes  
Byron Marchant  
Ralph Haller  
Michael Katz  
Robert Pepper  
Tom Stanley  
Don Gips

# Personal Communications Services



Bringing Mobility to the Mass Market

APRIL 14, 1994

## MAIN POINTS FOR TODAY'S DISCUSSION

---

1. Market Structure: Additional large bands needed
2. Cellular Participation: Commission's September decision was correct
3. Roaming: Mandate needed to ensure interoperability and thus increase value of PCS licenses
4. Power Levels: PCS cell size must be competitive with cellular

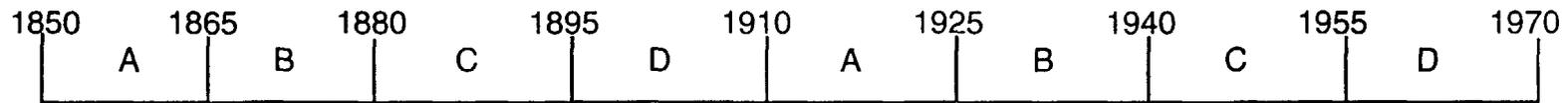
Pacific Bell and TTL have done considerable original work on PCS demand, technology, and auction dynamics.

# 1. MARKET STRUCTURE SHOULD BE REBALANCED IN SIZE AND LOCATION.

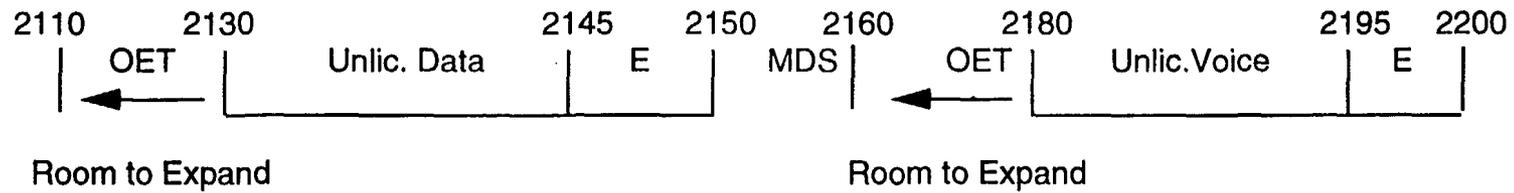
ELEMENT	RECOMMENDATION	RATIONALE
Number and Size of Licenses	<ul style="list-style-type: none"> <li>- Four at 30 MHz in lower band</li> <li>- One at 10 MHz in upper band</li> </ul>	<ul style="list-style-type: none"> <li>- Less microwave congestion in lower band</li> <li>- Lower band best for wide area services</li> <li>- Increases competition</li> <li>- Value-creating licenses</li> <li>- Equipment more readily available</li> </ul>
Unlicensed PCS	<ul style="list-style-type: none"> <li>- 30 MHz in upper band</li> </ul>	<ul style="list-style-type: none"> <li>- Upper bands best for localized applications</li> <li>- Microwave relocation easier</li> <li>- Room to expand unlicensed allocation</li> <li>- If "E" channel not acquired, allocate to unlicensed</li> <li>- UTAM established to manage microwave relocation</li> </ul>
Serving Area Size	<ul style="list-style-type: none"> <li>- All licenses cover MTAs</li> </ul>	<ul style="list-style-type: none"> <li>- Market research shows need to serve broader areas</li> <li>- Meet competitive "footprints" of cellular companies</li> <li>- MTAs facilitate roaming and interoperability</li> <li>- MTAs simplify auction process</li> <li>- Supports simultaneous auction design</li> </ul>

# PROPOSED MARKET STRUCTURE

Four 30 MHz licenses in lower bands:



One 10 MHz license and 30 MHz unlicensed in upper bands:



## 2. CELLULAR PARTICIPATION MUST BE RESTRICTED TO ENSURE COMPETITION.

---

- Cellular companies already have their fair share of spectrum.
  - Their spectrum is clear of microwave interference and it has superior propagation.
  - They are not excluded from offering Personal Communications Services
  - They also can acquire large licenses in new areas
  
- Cellular participation in large PCS licenses would be poor policy.
  - Reduces the number of potential wireless competitors
  - Supports high cellular prices and is bad for customers
  - Lessens the incentive for cellular companies to make more efficient use of their analog systems  
(see New York Times article, April 1, 1994, attached)
  - Permits cellular aggregation of more spectrum than new entrants
  
- Therefore, retain the current limits on cellular participation.
  - 40 MHz aggregation limit
  - 20% attribution standard
  - 10% overlap threshold

## CELLULAR PARTICIPATION

---

- In its September Order, the Commission said "competitive benefits may be reduced if cellular incumbents are permitted to acquire PCS licenses within their service areas." Para. 97
- "One of the public policy goals of this proceeding should be to create opportunities for greater competition in the provision of cellular-like mobile telephone services. Allowing incumbent cellular firms, ... to acquire another 30 MHz of spectrum in the PCS band would not advance this pro-competitive goal."
  - Letter to James Quello from Larry Irving, NTIA, September 14, 1993, p. 3.

### DIGITAL TECHNOLOGY FOR CELLULAR ONE IN NEW YORK



The Cellular One unit of McCaw Cellular Communications has put into effect digital technology that triples the capacity of its cellular telephone system in the New York metropolitan area. The new equipment will also enable services like paging and electronic mail. Cellular One is using time-division multiple-access technology, which allows cellular operators to transmit three times as much data onto a given radio channel as conventional analog signals.

Cellular One's competitor in the New York cellular market, the Nynex Corporation, is installing code-division multiple-access technology, a more expensive system that increases capacity by a factor of 10. Nynex plans to deploy its technology next year. Customers will have to choose between the two systems when they upgrade to digital, because they are incompatible.  
(Bloomberg Business News)

### 3. ROAMING AND INTERCONNECTION MUST BE PERMITTED.

---

- Roaming and interconnection permits customers to use their handsets between different providers, technologies and frequencies when outside their "home" territory.
- Roaming and interoperability extend the Commission's long-standing policies supporting ubiquitous origination and termination of calls and interconnection among networks.
  - Evolution in the cellular industry toward increased portability of features
  - Avoid "islands of service"
  - Meet customer needs
- NTIA supports roaming also: "... the Commission should adopt rules requiring interoperability and seamless roaming among license areas and among providers...."
  - Letter to James Quello from Larry Irving, NTIA, September 14, 1993, p. 5, fn. 6.

Roaming is good for customers and will increase the value of the licenses.

#### 4. POWER LEVELS MUST PROVIDE CELL SIZES AND PROPAGATION THAT ARE COMPETITIVE WITH CELLULAR.

---

- PCS operators will encounter propagation losses at PCS frequencies (~ 9dB).
- Our analysis (FCC visit February, 1994) indicates that 2500 watts ERP are needed by PCS operators to achieve reasonable propagation characteristics with cellular (at 500 watts ERP).
- "The commission should not... impose on PCS licensees power and antenna height limitations that are more restrictive than those allowed to cellular operators."

- 90-134, Comments of the Department of Justice, November 9, 1992, p. 9.

Pacific endorses the FCC staff's consideration of higher antenna gains in order to provide required power to ensure reliable links.

## POWER LEVELS

- The low power limit (100W EIRP) will require many more cells than otherwise necessary to provide service and to meet build-out requirements.

Effects of additional loss based on RF Link Budget Analyses:

	Cell Radius (miles)		
	Indoor Suburban	Suburban	Urban
PCS System	1.8	3.5	1
Cellular Systems	3.5	6.8	2.7

	Number of Cells Required		
	In-Building Suburban	Suburban	Urban
PCS System	43	12	8
Cellular Systems	11	3	1

Coverage: Suburban, 360 sq. mi., Urban, 18.7 sq. mi.

## CLOSING REMARKS

---

- Beyond the stated advantages, Pacific Bell's plan is:
  - Implementable based on the Commission's First Report and Order
  - Addresses allocation inefficiencies
  - Accelerates time to market
  - Increases auction values
- The Commission should continue to optimize the four objectives it seeks via this proceeding.
- The Commission should adopt rules which provide sufficient value creation potential for new PCS licensees.
- The Commission should reject attempts to stifle new competition.

Additional delay in auctioning and licensing PCS providers will extend the cellular duopoly and erode the value of PCS licenses.