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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

**EX PARTE**

April 28, 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

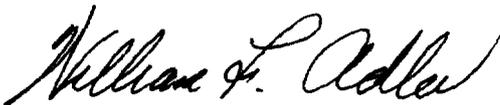
Dear Mr. Caton:

Today Lyn Daniels, Pacific Bell's Vice President-Personal Communications Services, Jim Tuthill, Senior Regulatory Counsel, and Alan Ciamporcero, Senior Attorney, Pacific Telesis Group-Washington, met with Commissioner Quello and Rudy Baca, Michael Katz, Robert Pepper, Greg Rosston and Don Gips regarding issues under reconsideration in GEN. Docket No. 90-314. They distributed the attached discussion paper.

During the course of the discussion, the issue arose of whether all pioneer's preference awardees should be required to pay for their licenses. Pacific Bell reiterated its position in its Petition for Clarification, filed September 10, 1993, in this proceeding and in ET Docket No. 92-100, Narrowband PCS, that no pioneer's preference awardee should be exempt from license fees.

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 Alan Ciamporcero at 202-383-6416 if you have any questions concerning this matter.

Sincerely,



Attachment

CC: Commissioner Quello  
Rudy Baca  
Don Gips  
Michael Katz  
Robert Pepper  
Greg Rosston

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# Personal Communications Services



Bringing Mobility to the Mass Market

APRIL 28, 1994

## MAIN POINTS FOR TODAY'S DISCUSSION

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1. **Market Structure:** Additional large bands needed
2. **Cellular Participation:** Commission's September decision was correct
3. **Roaming:** Ensure interoperability, where technically compatible, 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.

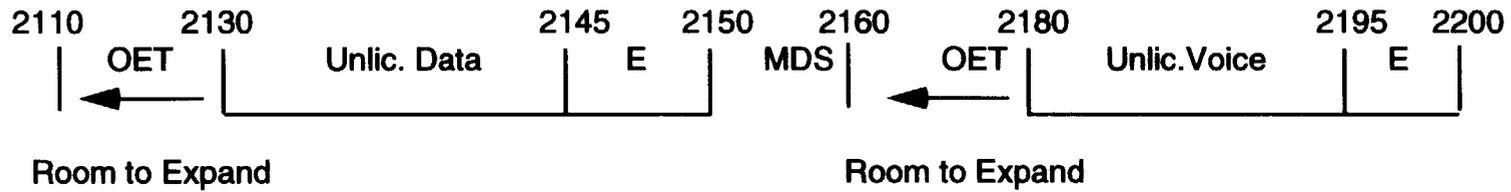
# PROPOSED MARKET STRUCTURE



Four 30 MHz licenses in lower bands:



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



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

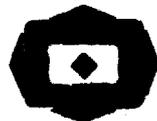
ELEMENT	RECOMMENDATION	RATIONALE
Number and Size of Licenses	<ul style="list-style-type: none"> <li>- Four at 30 MHz in lower band</li> <li>- One at 10 MHz in upper band</li> </ul>	<ul style="list-style-type: none"> <li>- Less microwave congestion in lower band</li> <li>- Lower band best for wide area 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>

# CELLULAR PARTICIPATION

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- 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)

THE NEW YORK TIMES, FRIDAY, APRIL 1, 1994

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

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- 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

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

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- 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.

## 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.

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

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- 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.

## **CLOSING REMARKS**

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- 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.**

# Personal Communications Services



**Answers to Questions from the April 14, 1994 Ex Parte**

**APRIL 28, 1994**

## **UNLICENSED SPECTRUM SHOULD BE PLACED IN THE UPPER BAND**

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- **Unlicensed spectrum sharing schemes are better suited to upper band (via Time Division Duplexing).**
- **UTAM, Inc. can relocate microwave users from any frequency today.**
- **Separating the unlicensed and licensed bands decreases interference problems.**

## **FAIRNESS SUPPORTS MOVING UNLICENSED TO UPPER BAND**

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- **Spectrum is free in the unlicensed band.**
- **UTAM, Inc. will pay less than licensed providers to spectrum share in upper band (via Time Division Duplexing Technology).**
- **Product development cost claims of "tens of millions of dollars" are unsubstantiated. Product development work is easily transferable to other frequencies.**

## **10 MHz BLOCKS ARE VALUABLE AND APPROPRIATE FOR AGGREGATION WITH LOWER BANDS AND FOR CELLULAR ELIGIBILITY**

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- **Permits cellular companies to bid for more spectrum.**
- **Cellular companies are uniquely advantaged to work with a 10 MHz block.**
  - **Cellular has experience working with split spectrum.**
  - **Cellular already has wide-area networks.**
  - **Cellular's head start may give them an infrastructure to build off (e.g., low tier service, in-building service, wireless local loops)**
  - **Cellular does not have a time to market issue.**
- **Support AirTouch's contention at recent PCS panels (4/12/94) that 10 MHz is viable if based on a solid business plan**
  - **George Murray, a Designated Entity representative at the PCS panels, believes 10 MHz blocks are technically and economically feasible.**

## **SMALL BUSINESS PARTICIPATION IN MTA LICENSES**

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- **30 MHz MTAs create economically viable licenses.**
- **One 30 MHz license can be set aside for Designated Entities. Other small businesses may bid for 30 MHz MTA licenses.**
- **30 MHz MTA licenses will assist Designated Entities and other small businesses to attract partners for billing, distribution, and operational systems.**
- **The recently adopted liberal bidding rules, tax certificates, and time payments greatly facilitate Designated Entity participation.**
- **The FCC can further assist Designated Entity and small business participation by encouraging them to enter business consortia for bidding.**

## **THE FCC SHOULD TAKE AN ACTIVE ROLE IN ENSURING THAT CONSUMERS HAVE UBIQUITOUS WIRELESS SERVICES**

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- **FCC support is necessary to achieve roaming, interoperability, and interconnection across technically compatible CMRS providers.**
  - **The initial customer base of new market entrants will not be economically attractive to existing providers.**
  - **New entrants will be disadvantaged and cellular competition lessened.**
  - **Minimum requirements are the ability to originate/terminate calls and to bill for them.**
- **The public will benefit from these actions**
  - **The mass market will expect wireless networking on a par with PSTN.**
  - **These actions will ensure ubiquitous, national wireless services.**

current figures on phone service availability in Colombia were not provided by Northern Telecom, the digital upgrade project will increase phone service coverage throughout the country, said a spokesman for Northern Telecom-CALA, the vendor's sales and marketing arm for the Caribbean and Latin America.

The Colombian project is one of several Latin American deals Northern Telecom-CALA is cultivating. The

company is part of a consortium going after a hotly contested contract to build a cellular infrastructure in Colombia, the spokesman said. The government will announce the recipients of the contract within weeks. If chosen, Northern Telecom would deploy its DMS-MTX time division multiple access SuperNode systems.

Northern Telecom-CALA also has equipment contracts in Brazil, Mexico, and several Caribbean locales. ■

## AirTouch execs say PCS will play small role

Charles F. Mason, East Coast Bureau Chief

**W**hile maintaining their continued interest in competing for personal communication services (PCS) licenses, the top two executives at AirTouch say they don't believe PCS will reach a point of equality with cellular in the years to come.

"I don't believe PCS will ever catch up to—let alone surpass—cellular," said Lee Cox, president of AirTouch.

Continued delays by the Federal Communications Commission to license PCS is also good news, said Sam Ginn, AirTouch chairman.

"The delay is in our favor," he said. "[The longer] we can maintain the current wireless market structure, the better."

Both men spoke during a recent press briefing as the company was officially spun off from Pacific Telesis.

While AirTouch plans to bid for PCS licenses, Ginn said "if there is a bidding frenzy, we will not participate."

Cox said that cellular carriers' more than 10-year head start over PCS providers is virtually insurmountable. He estimated that it will take PCS carriers seven or eight years to deploy networks as ubiquitous as cellular and by that time cellular carriers will have improved their networks even further.

Ginn declined to discuss rumors that his company is planning an alliance of some sort with another cellular carrier, other than to say that "everybody is talking to everybody."

AirTouch has been rumored to have been involved in talks with Nynex and Bell Atlantic.

As part of its newly won freedom from the Modified Final Judgment, the

company is planning to implement a new long-distance strategy by June. No longer subject to the equal access requirements or the service restrictions imposed by the MFJ, the company plans to transport its own completely wireless services, including interexchange calls, Cox said. For other long-distance calls, AirTouch will soon have an agreement with "one or more" interexchange carriers that will allow it to buy service wholesale and resell it to cellular subscribers at retail, he said.

While discounting the threat from PCS, both executives said they plan to meet any competitive challenges from Nextel or PCS providers. They said the outlook for wireless telecommunications, both domestically and globally, is unparalleled. ■

## Eunetcom to use NET backbone equipment

**N**etwork Equipment Technologies Inc. will supply its wide area network bandwidth managers and other equipment to Eunetcom, a joint venture of France Telecom and Deutsche Telekom that is building a data network for European multinational corporations.

NET's IDNX/90 Communications Resource Manager will be installed on an 18-node backbone network, with two units at each node, by the middle of this year. Eunetcom's backbone network will connect to eight sites in seven European countries, including Paris and Frankfurt, where Eunetcom is based. In addition, there eventually will be a trans-Atlantic connection to the United States, and the network will be further expanded over the next several years, according to Eunetcom.

Eunetcom plans to offer outsourcing services, managed bandwidth services and private network solutions to large multinational customers, including banking and financial institutions, retail organizations, government entities and other businesses. The joint venture company also will use NET's NetOpen network management system, and will resell frame relay services using its IDNX FrameXpress option.

NET is based in Redwood City, Calif. It also operates an office in Paris, from which it will coordinate its relationship with Eunetcom.

## MFS Intelenet serves up its own numbers

**M**F S Intelenet made history recently, becoming the first competitive access provider to activate blocks of telephone numbers directly assigned to its own switch. That means incoming calls to some MFS Intelenet customers no longer have to pass through New York Telephone switches.

The company activated two blocks of about 10,000 phone numbers each in New York City's 212 area code. The action will reduce the potential for technical problems, and improve service reliability and security, according to MFS Intelenet, which has been offering integrated local and long-distance service to small and medium-sized business customers since last October (*Telephony*, Oct. 4, 1993, page 1).

The activation of the new number blocks, known as NXX codes, follows an order issued late last year by the New York Public Service Commission stating that NXX codes should be allocated to MFS Intelenet. Prior to this order, the MFS Communications subsidiary had to lease phone numbers from New York Tel. MFS Intelenet also has asked regulators in Illinois, Maryland and Pennsylvania to follow the lead of the New York PSC.

Being able to assign its own numbers will help MFS Intelenet emerge as an independent carrier, forcing New York Tel to treat it on the same basis as in-

*continued on page 14*