

EX PARTE OR LATE FILED



Building The
Wireless Future™

February 15, 1995

CTIA

Cellular
Telecommunications
Industry Association
1250 Connecticut
Avenue, N.W.
Suite 200
Washington, D.C. 20036
202-785-0081 Telephone
202-785-0721 Fax

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

DOCKET FILE COPY ORIGINAL

Re: Ex Parte Presentation
PR Docket Nos. 94-103, 94-104, 94-105, 94-106,
94-107, 94-108, 94-109 and 94-110
CC Docket No. 94-54, RM-8012
CC Docket No. 92-237
RM-8577
IAD File No. 94-102
IAD File No. 94-104

RECEIVED

FEB 16 1995

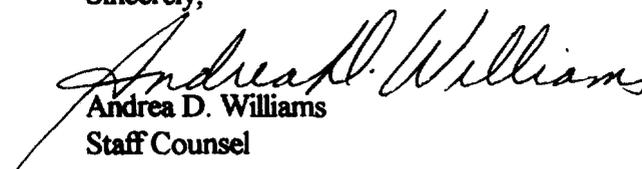
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Dear Mr. Caton:

On Wednesday, February 15, 1995, the Cellular Telecommunications Industry Association ("CTIA") presented a tutorial, "*Vision of the Wireless Future*" to Commission staff members and discussed issues raised in the above referenced proceedings. Attached are a list of individuals representing CTIA at the tutorial and a list of Commission staff members who attended.

At the tutorial, CTIA also presented the attached documents. Pursuant to Section 1.1206(a)(1) of the Commission's Rules, an original and one copy of this letter are being filed with your office. If you have any questions concerning this submission, please contact the undersigned.

Sincerely,


Andrea D. Williams
Staff Counsel

Attachments (4)

No. of Copies rec'd
List ABCDE

241

CTIA *Vision of the Wireless Future* Tutorial
CTIA Offices, February 15, 1995

CTIA Representatives Attending:

Denise Benjamin	Regulatory Policy and Law Assistant, CTIA
Randall S. Coleman	Vice President, Regulatory Policy and Law, CTIA
James Dwyer	President, Wireless One Network
Brian F. Fontes	Senior Vice President for Policy and Administration, CTIA
Michael Kalogris	President & CEO, Horizon Cellular Telephone Company
Dianna Morris	Executive Administrative Assistant, CTIA
Timothy R. Rich	Research Associate, CTIA
Robert F. Roche	Director for Research, CTIA
Thomas E. Wheeler	President/CEO, CTIA
Andrea D. Williams	Staff Counsel, CTIA

CTIA Vision of the Wireless Future Tutorial
CTIA Offices, February 15, 1995

FCC Staff Attending:

Laurence Atlas	Associate Bureau Chief, Wireless Telecommunications Bureau
Rudy Baca	Legal Advisor to Commissioner James H. Quello
Guy Benson	Intern, Office of Commissioner James H. Quello
Jackie Chorney	Legal Assistant, Office of the Bureau Chief, Wireless Telecommunications Bureau
Jonathan Cohen	Attorney, Office of Plans and Policy
Melvin Del Rosario	Staff Engineer, Wireless Telecommunications Bureau
Tom Dombrowsky	Intern, Broadband Commercial Radio Branch, Wireless Telecommunications Branch
Patrick Donovan	Assistant Bureau Chief, Common Carrier Bureau
Doron Fertig	Competition Division, Office of General Counsel
David Furth	Deputy Chief, Commercial Radio Division, Wireless Telecommunications Bureau
Donald Gips	Deputy Chief, Office of Plans and Policy
Kathleen Ham	Acting Legal Advisor, Commercial Radio Division Wireless Telecommunications Bureau
Michael Katz	Chief Economist, Office of Plans and Policy
Kimberly King	Staff Engineer, Wireless Telecommunications Bureau
Jill Luckett	Special Advisor to Commissioner Rachelle B. Chong
Steve Markendorff	Chief, Broadband Commercial Radio Branch, Wireless Telecommunications Bureau
Jay Markley	Telecommunications Policy Analyst, Wireless Telecommunications Bureau
Mary McManus	Legal Advisor to Commissioner Susan Ness
Richard Metzger	Deputy Chief, Common Carrier Bureau
Sally Novak	Chief, Legal Branch, Wireless Telecommunications Bureau
James Olson	Chief, Competition Division, Office of General Counsel
Myron Peck	Deputy Chief, Enforcement Division, Wireless Telecommunications Bureau
Daniel Pythyon	Senior Legal Advisor, Wireless Telecommunications Bureau
Gregory Rosston	Office of Plans and Policy
Sara Seidman	Special Counsel, Office of General Counsel
David Siddall	Legal Advisor to Commissioner Susan Ness
Andrew Sinwell	Telecommunications Policy Analyst Office of Plans and Policy
David Solomon	Deputy General Counsel
Keith Townsend	Legal Advisor to Commissioner Andrew C. Barrett
Michael Wack	Deputy Chief, Policy Division, Wireless Telecommunications Bureau
Amy Zaslov	Commercial Radio Division, Wireless Telecommunications Bureau

CTIA



Building The Wireless Future™

Preemption Briefing Book

**Cellular Telecommunications
Industry Association
Ex Parte Presentation -
Docket Nos. 94-101, et al.
February 15, 1995**

CTIA



Building The Wireless Future

The Key to Preemption: The Legal Standard

Last year, Congress amended the Communications Act to create a uniform, nationwide, streamlined regulatory regime for mobile telecommunications services and to ensure that substantially similar services are subject to similar regulation. To “foster the growth and development of mobile services that, by their nature, operate without regard to state lines as an integral part of the national telecommunications infrastructure,” Congress granted the Commission discretion to forbear from imposing certain Title II requirements upon Commercial Mobile Radio Service (CMRS) providers, and preempted state regulation of entry and rates for all reclassified CMRS providers.

On August 10, 1994, eight states (Arizona, California, Connecticut, Hawaii, Louisiana, Ohio, New York, and Wyoming) filed petitions with the Commission requesting authority to “continue” regulating CMRS rates and entry.

**The Key to Preemption: The Legal Standard****STATUTORY STANDARD**

Section 332(c) of the Communications Act generally preempts states from regulating the rates of commercial mobile radio service (CMR) providers, unless the states meet the statutory criteria to retain authority over intrastate CMRS rates.

States are permitted to continue rate regulation if they can demonstrate to the FCC that:

- market conditions with respect to such services fail to protect subscribers adequately from unjust and unreasonable prices or rates that are unjustly or unreasonably discriminatory; or
- such market conditions exists, and such service is a replacement for landline telephone exchange service for a substantial portion of telephone landline exchange service within such state.

47 U.S.C. Section 332(c)(3)(A)(i) and (ii) (1993).

Eligibility Requirements

- State must have in effect on June 1, 1993, any regulation concerning the rates for an CMRS service offered in the State on such date; and
- Petition the Commission before August 10, 1994, to extend its pre-existing regulations.

Statutory Criteria for Commission Review of State Petitions

- The Commission must "ensure that continued regulation is consistent with the overall intent of [Section 332(c)]... so that similar services are accorded similar treatment."
- The Commission must "be mindful of the desire to give the policies embodied in Section 332(c) an adequate opportunity to yield the benefits of increased competition and subscriber choice."



The Key to Preemption: The Legal Standard

REGULATORY STANDARD

In the *Second CMRS Report and Order*, the Commission adopted a federal regulatory standard which states must meet to retain their authority over intrastate CMRS rates.

Eligibility Requirements

- States must meet the statutory eligibility requirements as set forth in Section 332(c).

Burden of Proof

- The Commission places the burden of proof squarely upon the states to demonstrate that "market conditions in which competitive forces are not adequately protecting the interests of CMRS subscribers."

Demonstration of Market Failure

The State's petition must include **demonstrative evidence** that:

- Market conditions in the State for CMRS do not adequately protect subscribers to such services from unjust and unreasonable rates or rates that are unjustly or unreasonable discriminatory; or
- Such market conditions exist, and that a substantial portion of CMRS subscribers in the State or a specified geographic area have no alternative means of obtaining basic telephone services.

**The Key to Preemption: The Legal Standard****The Type of Demonstrative Evidence the Commission Will Consider To Determine Market Conditions and Consumer Protection Indicates that Generalized Claims, Policy Arguments, and Legal Theories Are Insufficient To Meet the Statutory and Regulatory Burden of Proof.**

- Information about the CMRS providers in the state, and the services they provide.
- Customer trends, annual revenues, and rates of return for each in-state company.
- Rate information for each in-state company.
- The substitutability of services that the state seeks to regulate.
- Barriers to entry for new entrants to the market for such services.
- Specific allegations for fact regarding anti-competitive or discriminatory practices by in-state providers.
- Particularized evidence that shows systematically unjust and unreasonable rates, or unduly discriminatory rates charged by in-state providers, and
- Statistics regarding customer satisfaction and complaints to the state regulatory commission regarding service offered by in-state CMRS providers

The Commission must act upon the state petition (including any reconsideration) by August 10, 1995.

**The Key to Preemption: The Legal Standard**

State filings must meet the “substantial” burden of proof by providing a detailed, factual showing that it meets the statutory and regulatory standard.

The petitioning states have failed to meet this burden. Instead, they have provided general assertions and speculations that rates “may” or “appear” to be unjust or unreasonable. (*E.g.*, Arizona, Hawaii, New York, Louisiana, Ohio.) In some instances, the states admit that they have “insufficient evidence” regarding the marketplace. (*E.g.*, Arizona, Hawaii, Louisiana.)

Some states try to meet their burden of proof by substituting assertions that their regulations are necessary to protect the consumer interests in reasonable rates in place of the required “evidence of a pattern of such rates that demonstrate the inability of the marketplace in the state to provide reasonable rates through competitive forces.” 47 C.F.R. Section 20.13.

These allegations fail to reflect the reality that such regulations themselves harm the consumer interest and distort rates and service offerings -- and that competition produces innovative and affordable services.



The Key to Preemption:

Regulation vs. Deregulation - A Measured Impact

A recent study by Dr. Jerry Hausman, MacDonald Professor of Economics at MIT, demonstrates that, controlling for all other variables:

- *Rates in deregulated states average 5-15 percent lower than rates in states which regulate.*
- Subscriber penetration is higher in comparable markets in deregulated states (e.g., Chicago vs. Los Angeles).

Cellular Penetration in the Top 10 MSAs: 1994

New York is used as basis: New York = 1.0

<u>MSA No.</u>	<u>MSA</u>	<u>1989 Penetration</u>	<u>1993 Penetration</u>	<u>Regulated</u>
1.	New York	1.00	1.00	Yes
2.	Los Angeles	1.42	1.30	Yes
3.	Chicago	2.04	2.92	
4.	Philadelphia	1.45	1.61	
5.	Detroit	1.72	1.74	
6.	Dallas	1.71	2.06	
7.	Boston	1.79	2.35	Yes
8.	Washington	2.47	2.39	
9.	San Francisco	1.37	1.40	Yes
10.	Houston	1.45	1.98	
	Average Regulated	1.29	1.30	Yes
	Average Unregulated	1.82	2.19	

- Although rates may decline in states which do regulate, **rates decline further and faster in states which do not regulate.**



The Key to Preemption:

Regulation vs. Deregulation - A Measured Impact

Compare the change in rates between a state which deregulated pursuant to the Omnibus Budget Act, and one which is seeking exemption to preserve its regulations:

Decline in Rates in Unregulated State v. Regulated State

	January 1994	November 1994	Percent Change
Boston	Regulated \$79.91	Unregulated \$69.99	-12.41%
Hartford	Regulated \$93.31	Regulated \$90.75	-2.74%

Which state's consumers have benefited more?

the consumers of deregulated Massachusetts.

the consumers of regulating Connecticut.

**The Key to Preemption:****How Regulation Fails the Test**

Regulation leads to higher prices because:

- It alerts competitors in advance and creates a forum -- the state Public Utilities Commission (PUC) -- where the rate decrease can be fought by procedural means:
 - In California resellers have repeatedly used the PUC to stop discount and promotional plans.
 - A new wireless entrant used the PUC to stop LA Cellular's proposed price reductions.
 - Annually, California consumers pay @ \$240.5 million more because of regulation.
 - ***In California alone, in 1993, rate regulation cost consumers \$250 million in rate decreases which the state PUC delayed or rejected.***
 - In Hawaii, competitors have used the tariff protest process to delay the effectiveness of new plans -- often by as much as a year.

**The Key to Preemption:****How Regulation Fails the Test**

Wireless companies compete for consumers by innovating, applying new technologies, offering new applications, and reducing the effective cost of service by offering:

- Competitive prices
- Extended calling areas
- Discount calling plans
- Packaged offerings -- combining service and equipment together to reduce prices, reducing entry barriers and promoting the use of cellular service
 - 1989 - top-of-the-line celphone cost @ \$3,200
 - 1995 - a similar phone cost @ \$300
 - 1995 - average walk-away price @ \$100
 - **1995 - some plans lower the price to a dollar or less**

**The Key to Preemption:****How Regulation Fails the Test**

State regulation denies consumers the benefits of competitive prices and innovative, pro-consumer service plans.

- California requires a fixed margin between wholesale and retail rates, serving the interests of competing resellers instead of consumers by limiting retail competition.
- California has repeatedly delayed or limited the implementation of service plans which would reduce roaming rates, offer promotional discounts to customers, or increase the number of free minutes available to subscribers.
- California's regulators also force consumers to pay higher prices by prohibiting packaging, maintaining both higher equipment prices and higher service prices.
 - California's anti-packaging regulations have increased the cost to consumers by requiring Atlantic Cellular to sell phones for \$200 instead of the \$50 charged in other states.
 - California's restrictions on "discount" phone offerings forces equipment prices upward to a range from \$100 to \$250 -- compared with packaged offerings around the country which can offer rates as low as \$1.



The Key to Preemption:

How Regulation Fails the Test

The Failure of State Regulation is Widely Recognized:

San Francisco Chronicle

NORTHERN CALIFORNIA'S LARGEST NEWSPAPER

WEDNESDAY, DECEMBER 7, 1994

How State Cellular Rule Has Failed

By Peter Sinton
Chronicle Senior Writer

California is the only state where consumers have the option of buying cellular phones separately from cellular service.

In other states, phones and services are typically bundled and in many cases, consumers can get phones for little or nothing if they sign up for a long-term service contract.

In California, consumers may choose to buy hardware and service at the same time, but the equipment vendor is prohibited from discounting the phone more than 10 percent or \$20 below the wholesale price, whichever is higher.

The unique California regulation was supposed to spur competition and reduce rates for both phones and phone service. The state wanted to prevent service providers from using their near-monopoly powers and profits to subsidize phones and undercut smaller phone retailers.

But it hasn't worked out that way.

Ben Kahrnoff, general manager in California for GTE Mobilonet, one of the Bay Area's two cellular service providers, estimates that local rates are about 10 percent to 15 percent higher than in most of the 50 other markets served by his company.

Except for an occasional promotional pricing plan for new customers, since 1994

basic monthly access and usage charges in California remain virtually unchanged and are among the highest in the nation," said Assemblywoman Gwen Moore, D-Los Angeles.

Equipment prices are higher, too. The most popular Motorola flip-phone model that sells for \$199 in the Bay Area might cost nothing in Reno or Chicago so long as customers sign a one-year local service contract.

Doug Dade, a supervisor with the Califor-

nia Public Utilities Commission, said the PUC has not to regulate such commissions.

In addition, the government has done a poor job in policing its regulations, especially in Southern California. Dade said some states have required consumers to buy service before they buy phones and a few even hand out used phones to those who sign up for new service. Both practices are against the law in California, but regulators have a tough time because their powers extend to service companies, but not retailers.

Some observers including Moore, head of the Assembly Utilities and Commerce Subcommittee, believe the problem is not state regulation but the fact that the Federal Communications Commission limits service competition by allowing no more than two cellular carriers in each market.

The California PUC is re-examining the way it oversees the multibillion-dollar cellular phone business. Some industry sources expect the PUC will alter its anti-bundling stance in the next few weeks, which could lead to lower equipment prices.

Bill Murphy, owner of the De Line cellular phone store in San Francisco, wouldn't be surprised to see the packaging of equipment and service contracts within a year. "It would make life difficult for any small dealer," he said.

The idea was to make cellular service companies compete for customers by offering lower rates

nia Public Utilities Commission, said the idea behind the state's "anti-bundling" policy was to make cellular service companies compete for customers by offering lower rates, not cheaper phones.

But the strategy hasn't worked in most markets for two main reasons.

First, cellular service companies pay hefty commissions — \$100 or more per customer — to equipment dealers who sign up

**The Key to Preemption:****How Regulation Fails the Test**

Regulation delays or impedes customers' access to service:

- California regulations delayed U S WEST NewVector's offering of flat roaming rates for a full year, and limited the final approval to a one year period, requiring the filing of a further formal application for any extension of the offering.
- California regulations have imposed limits on Gift and Airtime Credit Promotions, further reducing consumer benefits.
- California regulations caused U S WEST NewVector to not offer a bulk purchase plan which is available to large users in all of U S WEST NewVector's other markets -- because in California all such users would be required to obtain Certificates of Public Convenience and Necessity from the PUC.
- California regulations prevented Atlantic Cellular from implementing its Toll Freedom USA plan, which provides to Atlantic's customers in its other markets toll-free unlimited nationwide long distance calling for \$15 a month.
- The California PUC has still not acted on a July 1993 request for relief from the antipackaging rule.



The Key to Preemption

How Regulation Fails the Test

The FCC has found tariffs can inhibit competition by:

“(1) taking away carriers’ ability to make rapid, efficient responses to changes in demand and cost, and remove incentives for carriers to introduce new offerings; (2) impede and remove incentives for competitive price discounting, since all price changes are public, which can therefore be quickly matched by competitors; and (3) impose costs on carriers to ascertain competitors’ prices and any changes to rates, which might encourage carriers to maintain rates at an artificially high level...[and] may simplify tacit collusion.” Second Report and Order, GN Docket No. 93-252, 9 FCC Rcd. at 1479.

Nonetheless:

- The Wyoming PSC wants wholesale cellular carriers to file price lists.
- The California PUC requires not only tariffing, but wholesale “clones” of retail offerings on a rate element-by-rate element basis, permitting resellers to appropriate the marketing and pricing innovations of their competitors.
- The difficulty in fashioning such wholesale “clones” of retail offerings has resulted in certain pricing plans not being offered in California at all -- depriving consumers of the option of those plans entirely.

Conclusion: Tariffing has not provided consumer benefits in the competitive wireless marketplace.



The Key to Preemption

How State Regulators Failed to Meet Their Burden

No state has met its burden under the proper standard of the Omnibus Budget Act of 1993.

No state has demonstrated a market failure for CMRS or that regulation provides consumers with benefits superior to those of competition.



**Building The
Wireless Future™**

CTIA

**REINVENTING
COMPETITION:
The Wireless
Paradigm
& The
Information
Age**

Table of Contents

	Page
Wireless is <i>The Model</i> for the Information Age.....	3
1. <i>Success of the Wireless Paradigm:</i>	
Competition Produces Declining Prices.....	3
2. <i>Success of the Wireless Paradigm:</i>	
Competition Produces Innovation.....	4
3. <i>Success of the Wireless Paradigm:</i>	
Competition Begets Competition.....	6
4. <i>Success of the Wireless Paradigm:</i>	
Competition Builds New Platforms for Universal Service.....	8
Yet the Wireless Model is Under Attack (Even for Wireless).....	10
1. <i>Attacking the Wireless Paradigm:</i>	
State Rate Regulation Raises Prices.....	11
2. <i>Attacking the Wireless Paradigm:</i>	
Local Regulation Limits Competition.....	13
3. <i>Attacking the Wireless Paradigm:</i>	
Local Regulation's Hidden Taxes.....	15
4. <i>Attacking the Wireless Paradigm:</i>	
"Unbundled Interconnection" Threatens Investment and Jobs.....	16
5. <i>Attacking the Wireless Paradigm:</i>	
Competitors Seek to Use Government to Limit Competition.....	19
A. What is "Equal" Access?.....	19
B. How Does "Equal" Access Apply to Wireless Today?.....	19
C. "Equal" Access is Anticompetitive in the "Local Service Market".....	20
D. "Equal" Access is Anticompetitive in the "Long Distance Market".....	21
E. "Equal" Access Raises Consumers' Bills.....	23
F. "Equal" Access Relates to Yesterday's Technology.....	25
G. "Equal" Access is Anti-New Technology and Services.....	26
H. "Equal" Access Means Huge Regulatory and Administrative Burdens.....	27
6. <i>Attacking the Wireless Paradigm:</i>	
Current Universal Service Funding is Anti-Competitive.....	30
7. <i>Attacking the Wireless Paradigm:</i>	
Investment Rules Discourage International Growth.....	30
8. <i>Attacking the Wireless Paradigm:</i>	
Numbers Are a Critical Resource Demanding Fair Administration.....	31
Moving Forward Under the Wireless Paradigm.....	32



Reinventing Competition: The Wireless Paradigm and the Information Age

The "information highway" has been more of a debater's promise than a deliverable. Yet, while policymakers have been debating how to structure cyberspace, the wireless telecommunications industry has delivered a telecommunications revolution which, in the process, has road-tested the policy model for the information age.

Wireless telecommunications is an American success story because wireless has existed and grown in an environment of *competition in lieu of government intervention*.

As FCC Commissioner (and former Interim Chairman) James H. Quello recently indicated in a letter to Senator Larry Pressler:

It is important . . . to distinguish between the wired and wireless segments of the telecommunications industry. Given the rapid growth of cellular, paging and other wireless networks and services, more attention than ever is needed to distinguish the competitive wireless industry as severable from the regulation overseeing the monopoly local wired telephone industry. Over the past decade, Congress and the Federal Communications Commission have worked diligently to create a robust, competitive wireless marketplace.

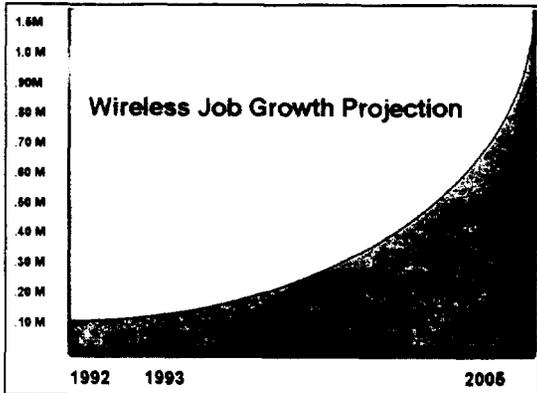
It is important to guard against the instinctive application of traditional monopoly-based regulatory-based tools to the wireless marketplace -- a marketplace which has been competitive from its inception and which will grow even more competitive with the introduction of numerous PCS channels in each market.¹

As Commissioner Quello stressed: "In my 20+ year tenure at the FCC, my colleagues and I have voted to create a competitive wireless telecommunications industry. The goal of competition is to allow the marketplace, rather than government regulation, to determine how best to serve the public. As you begin the historic review of telecommunications, I encourage you to allow the wireless telecommunications industry to remain unshackled by intrusive regulation and free to respond to the marketplace."²

¹ Letter from Honorable James H. Quello, Commissioner, FCC, to the Honorable Larry Pressler, Chairman, Committee on Commerce, Science and Transportation, January 20, 1995.

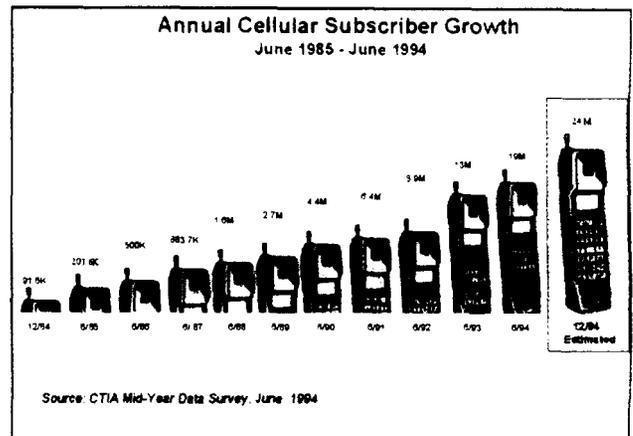
² *Id.*

Indeed, this new wireless paradigm has produced record growth and investment.



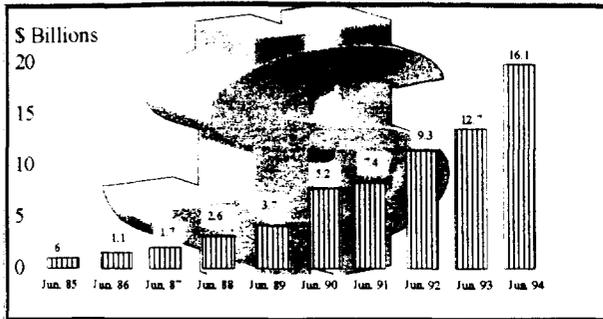
The wireless paradigm of competition in lieu of regulation has resulted in 200,000 new jobs over the past ten years -- **projected to climb to a million new jobs over the next ten years.**³

The wireless paradigm of competition in lieu of regulation has resulted in one of the fastest growing consumer electronics products in history -- **climbing to 25 million subscribers in just eleven years.**



³FCC Chairman Reed E. Hundt, November 1, 1994, announcing broadband personal communications service applicants.

Cumulative Capital Investment
June 1985 - June 1994



Source: CTIA Mid-Year Data Survey, June 1994

The wireless paradigm of competition in lieu of regulation **has resulted in over \$16 billion in private capital investment -- projected to rise to over \$50 billion in the next ten years.**⁴

Wireless is *The* Model for the Information Age

The telecommunications policy model for the future must be able to generate the kind of growth, investment and expanding services which are typified by the wireless experience. In examples of successful policy illustrated by the preceding charts, the wireless regulatory experience has demonstrated that:

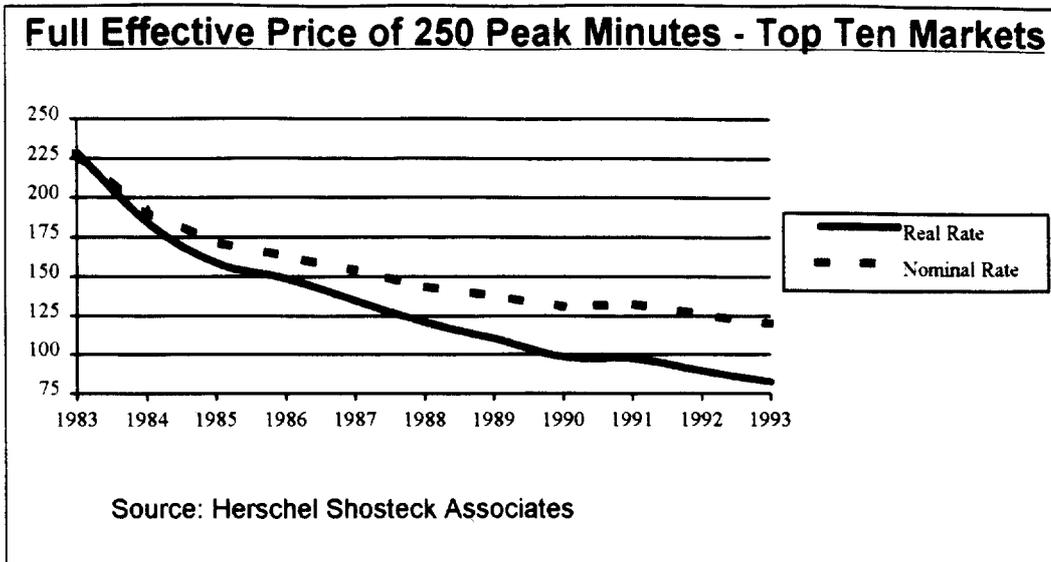
1. *Success of the Wireless Paradigm:* Competition Produces Declining Prices

FCC Chairman Reed Hundt recently observed that monthly cellular rates declined 12 percent in the last year.⁵ This continues the trend of declining rates which has marked cellular service throughout its twelve year history.

As the following chart illustrates, in its first 10 years, cellular rates declined 63.8 percent in real terms.

⁴ *Id.*

⁵ Chairman Reed E. Hundt, Speech Before the Personal Communications Industry Association Conference, December 14, 1994, at 2.



2. *Success of the Wireless Paradigm:* **Competition Produces Innovation**

Competition creates clear benefits by fostering innovation in wireless services and technologies, creating a dynamic in which manufacturers and service providers work together to meet evolving consumer demands.

As Robert E. Litan, Deputy Assistant Attorney General for Antitrust observed in a speech on October 6, 1994, **“competition must remain as the central governing principle of the information age. Competition will best promote continued innovation. Competition will guarantee consumers the lowest prices for telecommunications and information services. And by securing low prices, competition is an essential means for promoting the availability of these services.”**⁶

The superiority of competitive market forces, combined with a light governmental hand, quickly becomes evident if you compare the record of innovation in wireless services with innovations in other services.

⁶Robert E. Litan, “Antitrust Enforcement and the Telecommunications Revolution: Friends, Not Enemies,” Speech Before the National Academy of Engineering, October 6, 1994, at 11 (emphasis supplied).

Wireless Innovation	Government Decision-Making
Car → Pocket	HDTV
Mobile → Fixed	VDT
Analog → Digital	AM Stereo
Voice → Voice + Data	Computer III

Over the past twelve years, wireless competition has fostered innovations which have been submitted to consumers for their judgment.

- Evolution from car phones to bag phones to lightweight portable phones.
- Evolution from mobile to fixed services, such as monitoring and control of agricultural activities, as well as basic fixed voice service in areas without wired telephone service.
- Evolution from analog to (multiple) digital technologies, fostering more efficient use of spectrum.
- Evolution from primarily a voice service to a wide variety of other services such as wireless data transmission.

By comparison, government involvement in other technologies has produced delay.

- In 1987, the FCC initiated its High Definition Television (HDTV) docket. Though the FCC has issued many orders and notices on HDTV, no product has yet reached American consumers.⁷
- Since 1987, the ability of telephone companies to deliver video over telephone lines has been the subject of several protracted FCC proceedings. The FCC adopted a decision in 1992 permitting telephone companies to provide "Video Dial Tone" -- transport and gateway functions -- under certain conditions. **However, the "mother may I" nature of the regulatory process has provided competitors with both the**

⁷ See *Notice of Inquiry*, Docket No. 87-268, *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, 2 FCC Rcd. 5125 (1987); *Tentative Decision and Further Notice of Inquiry*, 3 FCC Rcd. 6520 (1988); *First Report and Order*, 5 FCC Rcd. 5627 (1990); *Second Report and Order*, 7 FCC Rcd. 3340 (1992). See also Advisory Committee on Advanced Television Services, *Interim Report* (June 1988), *Second Interim Report* (April 1989), *Third Interim Report* (March 1990), and *Fourth Interim Report* (March 1991).