

National Association of Regulatory Utility Commissioners Telecommunications Committee 2004 Summer Meetings

“Creating the Environment for Entrepreneurial Growth”

Michael D. Gallagher

Assistant Secretary for Communications and Information

U.S. Department of Commerce

National Telecommunications and Information Administration

www.ntia.doc.gov

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Overview

- State of the Economy
- The Role of the States
- The President's Broadband Vision
- New Technologies and their Implications
- Conclusion

Overarching Goal: Promoting Economic Growth

- Thanks to the President's policies, America's economy is strong:
 - U.S. economy grew at a real GDP rate of 3.9% in the first quarter of 2004; economic growth in second half of 2003 was the fastest in nearly 20 years.
 - Payroll employment increased by 112,000 in June, with ten straight months of job growth and 1.5 million jobs created since August 2003.
 - Jobless claims have fallen to their lowest levels since October 2000.
 - There has been a sharp pickup in business spending on capital equipment.
 - Homeownership is presently at its highest level ever – 68.6 % in the first quarter of 2004.
 - Advance estimates of U.S. retail and food services sales for May 2004 were \$336 billion, an increase of 1.2% from the previous month and up 8.9% from May 2003.

Wires: The Core of State Regulation

- Wireline Carriers
 - ILEC authorization to serve and exit
 - ILEC rates – price caps or alternatives
 - Interconnection – rates and procedures
 - Service quality/ Network reliability
 - State Universal Service programs
- Cable Companies
 - Ten States engage in franchise regulation
- Wireless Carriers
 - “Terms and conditions”

The Telecom Act Provides States with Significant Wire Authority

- General Jurisdiction

“nothing in this Act shall . . . give the [FCC] jurisdiction with respect to charges, . . . for or in connection with intrastate communication[s].”

- Interconnection

The FCC “shall not preclude the enforcement of any . . . State commission [regulation] that (A) establishes access and interconnection obligations of local exchange carriers....”

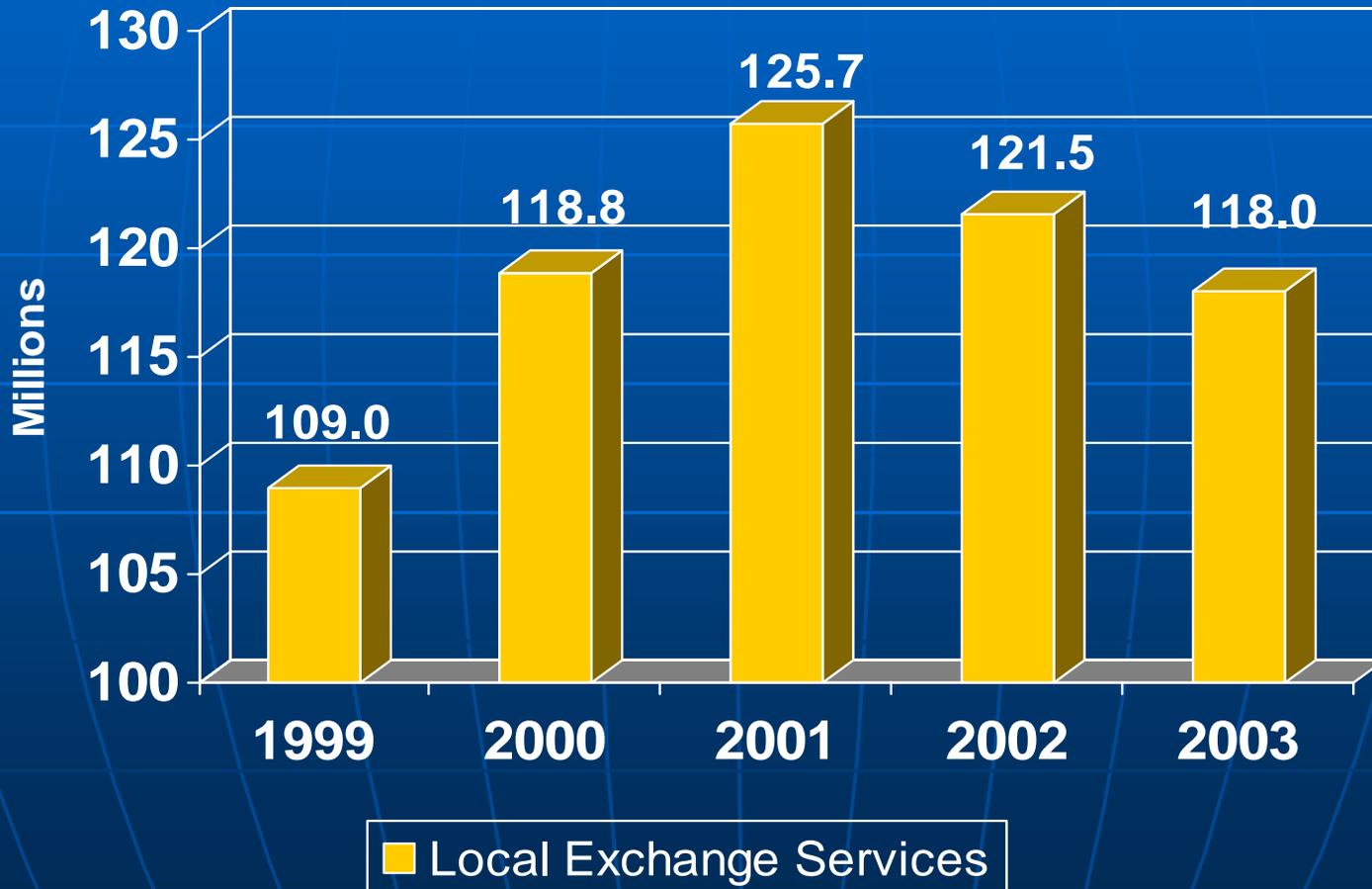
- Arbitration

“In resolving by arbitration . . . any open issues and imposing conditions upon the parties to the [interconnection] agreement, a State commission shall (1) ensure that such resolution and conditions meet the requirements of section 251, . . .; (2) establish any rates . . . according to subsection (d); and (3) provide a schedule for implementation of the terms and conditions by the parties to the agreement.”

- Rights-of-Way

“Nothing in this section affects the authority of a State or local government to manage the public rights-of-way or to require fair and reasonable compensation. . .on a competitively neutral and nondiscriminatory basis, for use of public rights-of-way.”

“Wire” Revenues



Source: Telecommunications Industry Association, 2004

Dynamic Groundbreaking Developments Outside of State Regulation

- Licensed Wireless:
 - Digital
 - “Computer in your hand”
 - Data/SMS
 - Photos/Video
 - Multi-billion dollar Broadband Deployments

- Video Services
 - Cable: 85% of US Households passed
 - Satellite: 20 million subscribers
 - Transition to High-definition

- Broadband

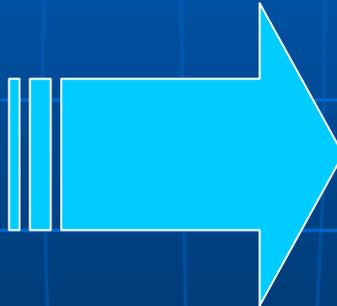
- Most IP Applications
 - VoIP*
 - Peer to Peer
 - Ecommerce

- Unlicensed Wireless

Since the Enactment of the Telecom Act in 1996 America Has Embraced the Future

Then...

Wireless Revenues \$23.6 billion
Wireless Subscribers 44 million
Wireline Households 101 million
E-Commerce Revenue \$5.4 billion (4Q99)



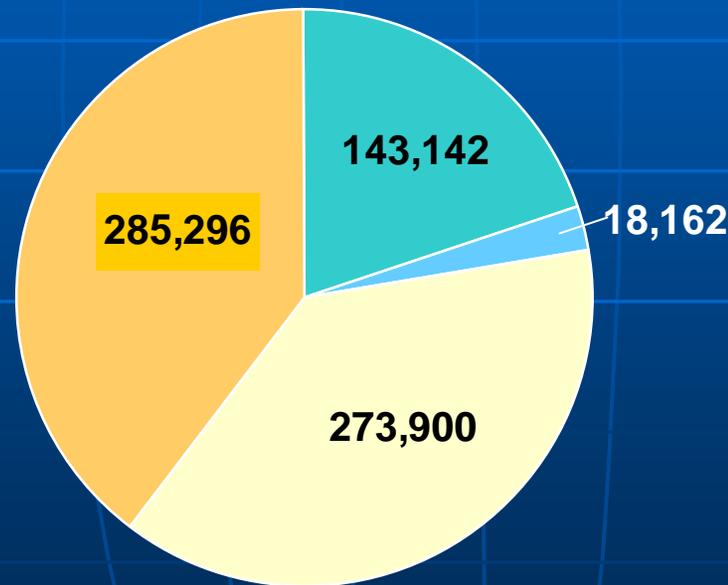
Now

Wireless Revenues \$87.6 billion
Wireless Subscribers 165.6 million
Wireline Households 113 million
E-Commerce Revenue \$15.5 billion (1Q04)

U.S. Telecom Market Continues to Grow...

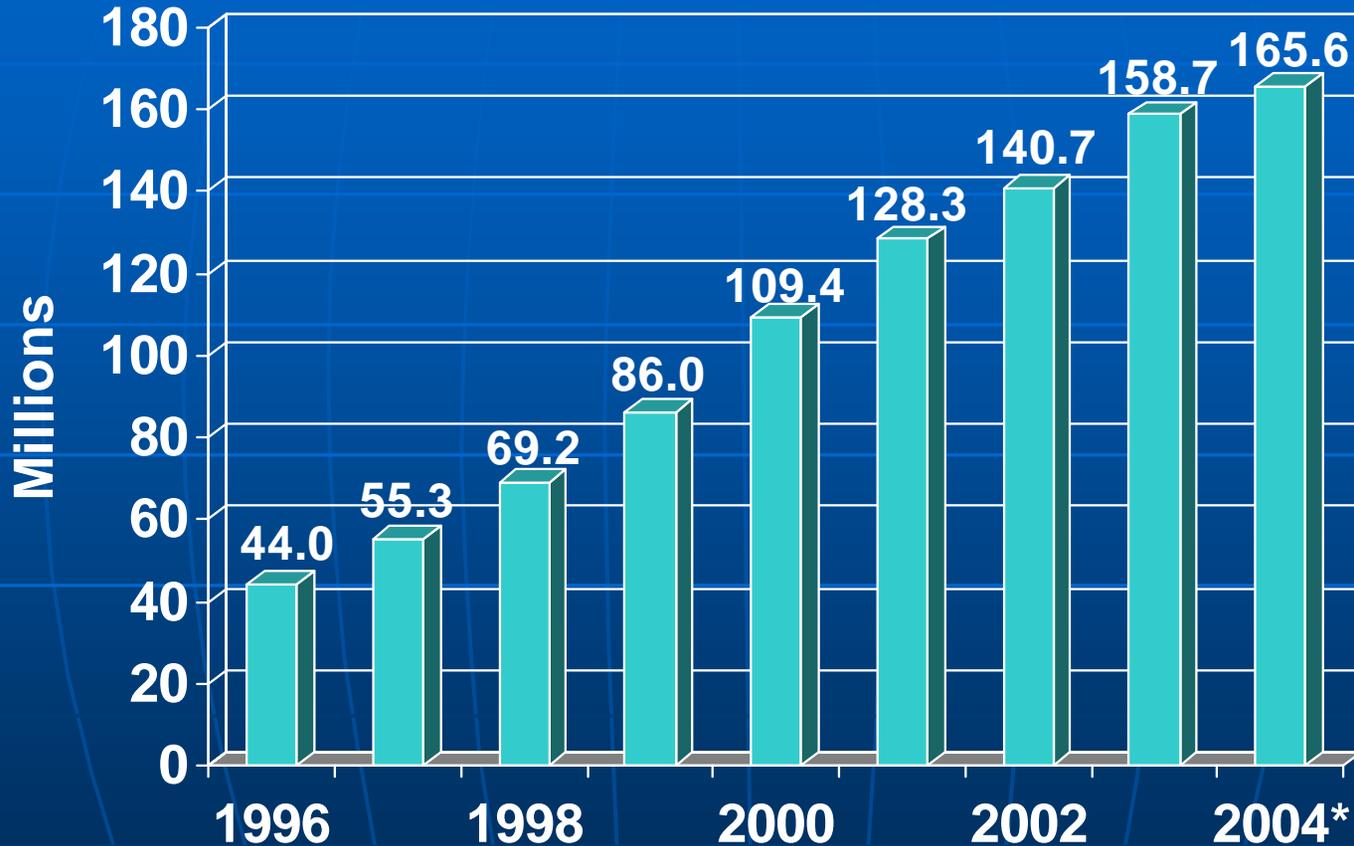
(\$ Millions)

Total: \$720,500 (4.7% growth over 2002)



- Equipment Services (-0.7% growth over 2002)
- Specialized Services (34.2% growth over 2002)
- Support Services (11.6% growth over 2002)
- Transport Services (0.2% growth over 2002)

Wireless Service Has Grown Dramatically



*June 2004

Source: CTIA

The President's Broadband Vision

Goal

"This country needs a national goal for broadband technology . . . universal, affordable access for broadband technology by 2007."

— President George W. Bush, Albuquerque, NM, March 26, 2004

Government's Role

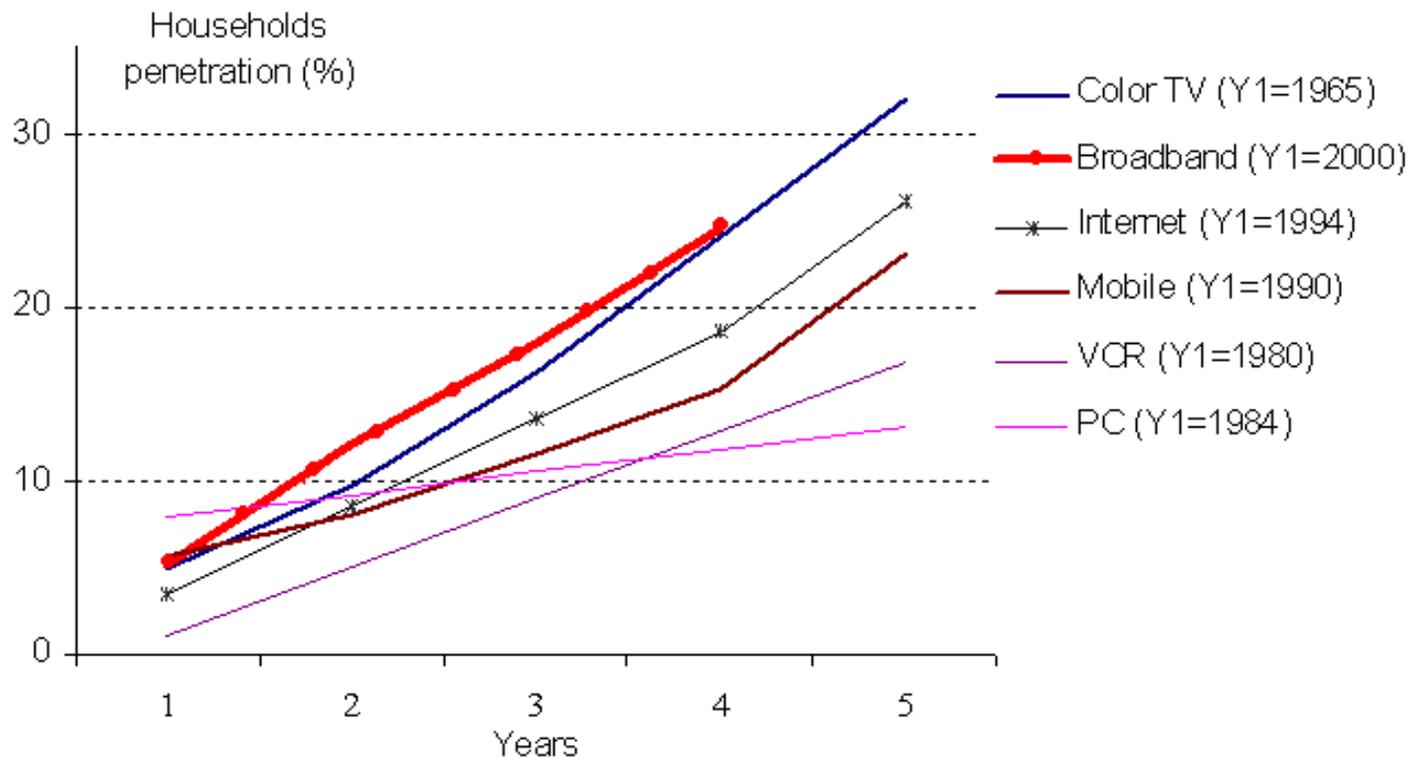
"The role of government is not to create wealth; the role of our government is to create an environment in which the entrepreneur can flourish, in which minds can expand, in which technologies can reach new frontiers."

— President George W. Bush, Technology Agenda, November, 2002.

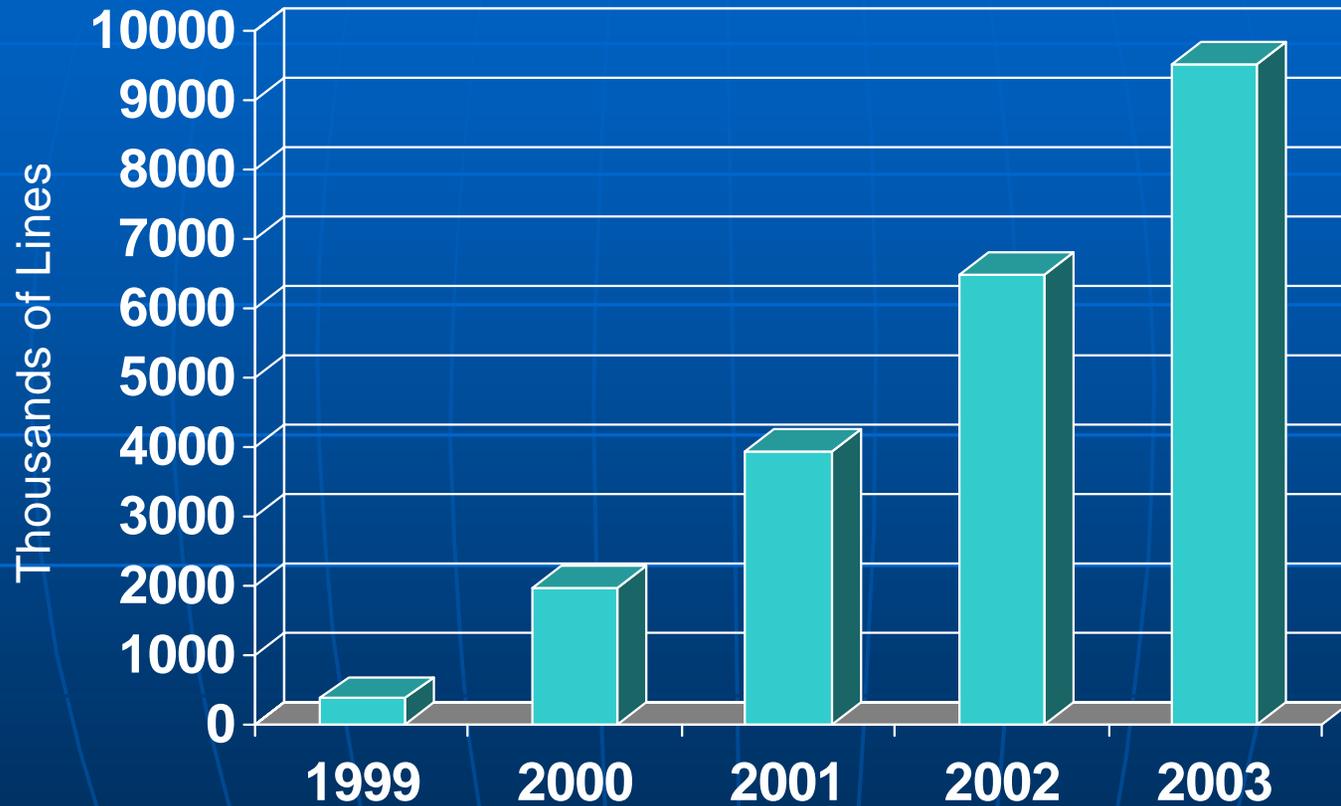
"If you want something to be used more, you don't tax it."

— President George W. Bush, Waco, TX August 3, 2002

United States: Diffusion of consumer goods and communications services (5 % onwards)

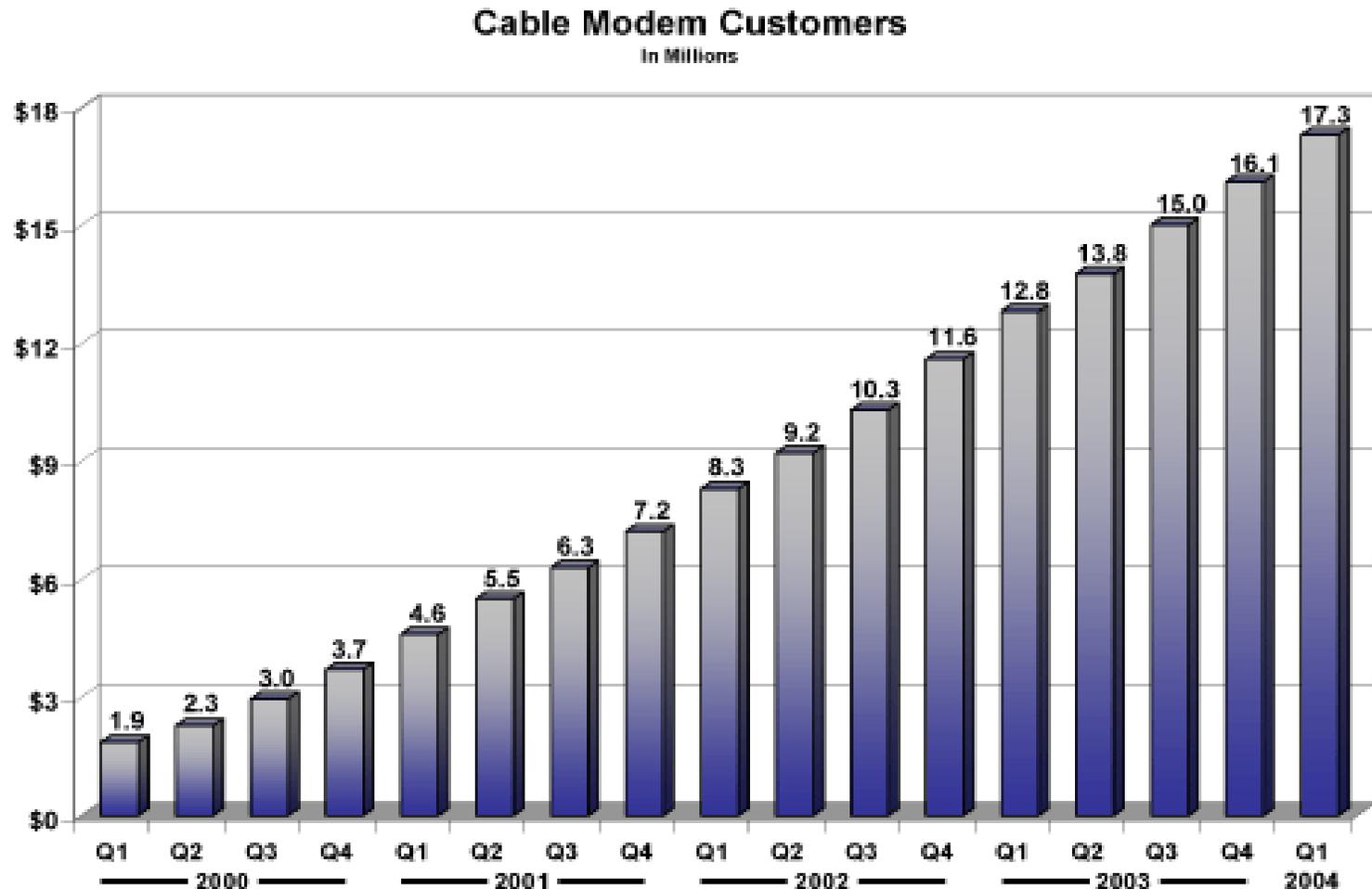


DSL Lines Have Continued to Grow



Source: FCC

Cable Modem Subscriptions Have also Experienced Significant Growth



Moore Meets Marconi: Wireless Broadband and New Technologies

“The other promising new broadband technology is wireless. The spectrum that allows for wireless technology is a limited resource . . . [a]nd a wise use of that spectrum is to help our economy grow, and help with the quality of life of our people.”

-- President George W. Bush, June 24, 2004

The Administration has made more radio spectrum available for wireless broadband technologies:

- Advanced Wireless Services (“3G”)
- Ultra-wideband
- 5 GHz Spectrum
- 70/80/90 GHz

Wi-Fi Hot Spots

- There are over 20,000 hotspots in the United States. (Intel's Hotspot Finder)
- City-wide hot spots:
 - Spokane, WA
 - Cerritos, CA
 - Chaska, MN
 - Athens, GA
- Some Communities developing major free hot spots:
 - Long Beach, CA
 - San Jose, CA
 - Washington, DC
 - New York, NY
 - Austin, TX
- WiMax is coming Fast

Broadband Over Power Lines: The Third Wire

“We need to get broadband to more Americans . . . one great opportunity is to spread broadband throughout America via our power lines.”

— President George W. Bush, June 24, 2004

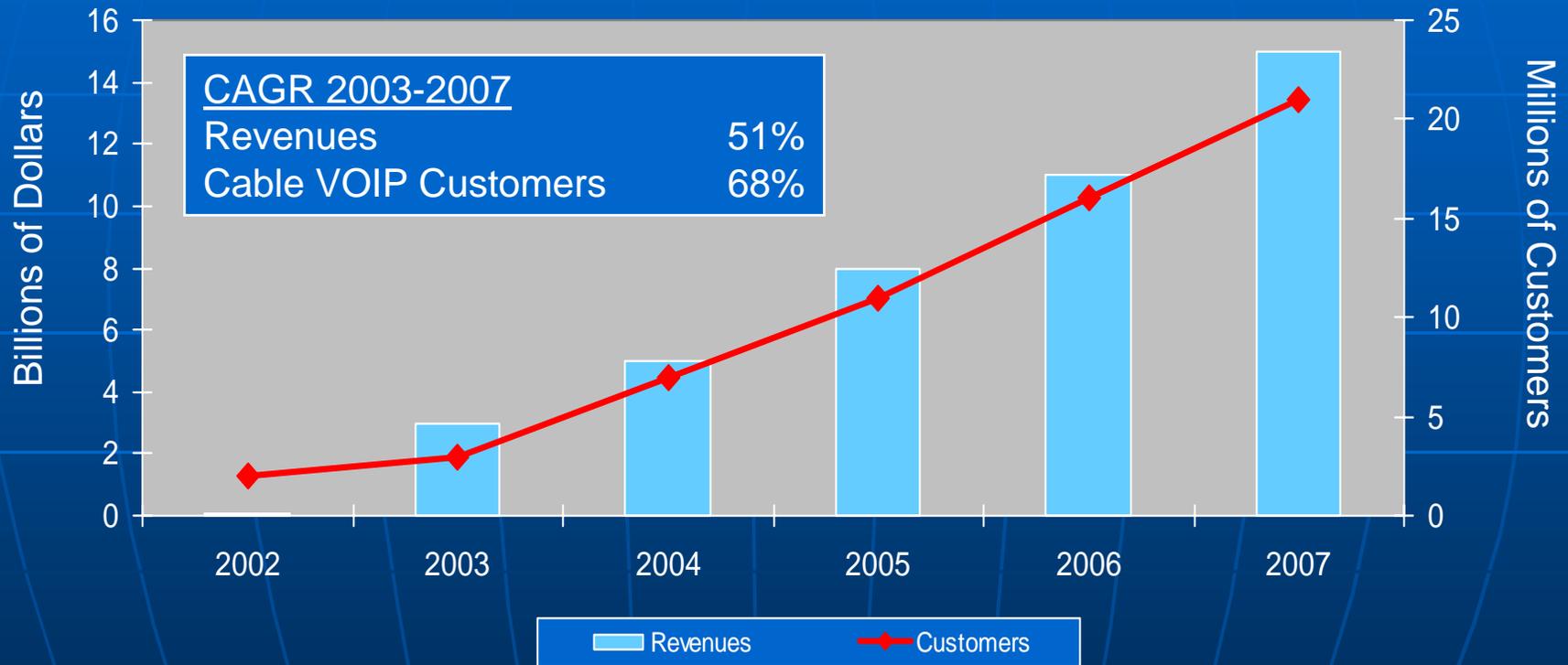
- Principal concern is the risk that BPL systems might interfere with federal government radio communications or other state and private radio operators.
- FCC began BPL rulemaking on February 12, 2004.
- On April 27, 2004, NTIA submitted to the FCC a Phase 1 interference report, which suggested interference mitigation techniques to protect critical government radio systems.
- On June 4, 2004, based on additional analyses, NTIA recommended several supplements to the FCC proposed BPL rules to reduce further any risk of harmful BPL interference



HomePlug Modem
can turn an electrical
outlet into an
Internet connection.

VoIP and Other IP Applications Will Continue to Change the Market

Cable VoIP Market



Source: Kaufman Brothers, "A General Flavor of Mild Decay," July 14, 2003

ENUM and IPv6 Will Enable New IP Capabilities

- ENUM promises true convergence by facilitating the integration of telephone numbers and IP addresses, providing a foundation for development and deployment of new Internet-based communications devices and applications
- IPv6 developed during 1990's as replacement for existing Internet Protocol version 4 (IPv4)
- Enhanced capabilities of IPv6 as compared to IPv4 would:
 - Exponentially increase the number of available Internet addresses
 - Enable the proliferation of enhanced mobile services/applications
 - Increase Security

Technology is Also Transforming Media Businesses

■ The advent of DVDs

- In 1997, DVD players retailed for \$500 to \$800, and 315,136 units sold that year
- Last year, almost 22 million DVD players sold at prices as low as \$30
- In 2003, Americans spent \$22.5 billion on home video entertainment compared to \$9.2 billion at the box office. DVD sales boosted home video sales by 37% last year, and represented a \$4.3 billion annual increase over 2002
- DVD sales and rentals accounted for 40% of movie studio revenues in 2003, compared to less than 1% in 1997
- Warner Home Video launched the format with less than 100 titles. Now every major studio relies on sales and rentals of the more than 40,000 DVD titles currently available

Moore's Law and IT Hardware Sales Suggest a Changing World

- Worldwide sales of semiconductors jumped 36.9% to \$17.3 billion in May 2004 to their highest level since December 2000
- Intel, the world's largest semiconductor maker, said that it expected revenue of \$8 billion to \$8.2 billion in the quarter ending June 26, 2004, with a gross profit margin of 60 percent to 61 percent, about the same as in the first quarter and roughly 10 points higher than a year earlier
- Moore's Law = declining memory costs: Computer memory prices on the spot market have fallen about 24% since early April 2004 to about \$4.80 at the end of May from an early-April peak of \$6.30 for 256 megabits of DDR SDRAM (double data rate synchronous dynamic random access memory).
- Cisco had \$4.9 billion in net product sales related to routers in fiscal 2003
- Life on the "Edge" is good!
 - Much Less Expensive PCs
 - Digital Cameras
 - MP3 Players
 - PVRs
 - Plasma/LCD/DLP
 - XM/Sirius Satellite Radio
 - Digital Radio
 - USB/Livewire/Bluetooth

The Global View

- The US is the world's Innovation and Integration leader. We are 5% of the world's population, but account for 1/3 of world economic production
- 3 billion people have joined the world economy in the last 10 years
- A regulatory climate that fosters investment is an essential part of a country's ability to compete. As articulated by Chairman Powell before NARUC at the 2004 Winter Meetings:

“If we do not create a regulatory climate that attracts and encourages investment in our states and in our Nation, we will face the rude reality that opportunity can and will go elsewhere. If the regulatory climate is hostile, the information age jobs go to India not Appalachia. If regulatory costs are excessive, email, voice and video servers will be set up in China not California. Unlike the earth-bound networks and businesses of the past, there is nothing I, or you, can do to keep economic activity in your state.” (Washington, DC March 10, 2004)

Conclusion

- State and Federal officials share the same goal: Creating an environment for economic growth, productivity, and protection of our homeland
- Markets not regulation represent the best means of achieving these goals
- Welcome, adapt to, and promote Moore's Law
- We must create a climate that facilitates and embraces technological innovation
- We all must see beyond our jurisdiction