

# Governor Barbour's Agriculture and Rural Renewal Conference

## "Promoting Broadband Deployment in Rural America"

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# The National Telecommunications and Information Administration (NTIA)

- NTIA, under the leadership of Commerce Secretary Don Evans, serves as the President's principal adviser on telecommunications and information policy matters, but is not the regulator of telecommunications, which is the job of the independent Federal Communications Commission.
- Our second major function is to be the manager of the nation's airwaves, or radio spectrum, by federal government agencies, including the military. We have joint jurisdiction with the FCC over spectrum allocation and use.
- NTIA's goal is to enhance the public interest by promoting quality service, competition, consumer welfare, and economic and social opportunities for all.



# 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 3.0% in the first quarter of 2004; economic growth in second half of 2003 was the fastest in nearly 20 years.
  - The BLS household employment survey saw jobs soar with 629,000 more people finding work in July 2004.
  - 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.
  - Productivity in the non-farm business sector rose an estimated 5.5% in 2003, following a 4.4% gain in 2002 – the first time in the past 50 years that annual productivity gains have exceeded 4% in two consecutive years.
  - In May 2004 the Department of Agriculture forecasted that U.S. agricultural exports would set a new record in 2004, totaling an estimated \$61.5 billion.
  - Consumer confidence about the economy reached a 2-year high in July 2004.

# Economic Growth in Mississippi

Mississippi's economy is getting stronger:

- Mississippi's per capita income growth rate has exceeded the national average over the past decade (1990-2000): Mississippi's growth rate: 58.9%; U.S. growth rate: 50.5%.
- Mississippi has a civilian labor force of nearly 1.3 million with a low three percent average absenteeism rate and a low five percent turnover rate among workers.
- Mississippi now has an unemployment rate lower than the national average. It's unemployment rate fell by 0.4 percentage point from January to June 2004, equaling 5.3%.

# Mississippi Has Strong High-Tech Resources

- Mississippi has more than 195,000 miles of fiber optics in place with more being put into the ground every day. Mileage relative to population density is among the highest in the nation.
- More than 18,000 Mississippians are currently employed in telecommunications related industries.

# 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.

# Benefits of Broadband

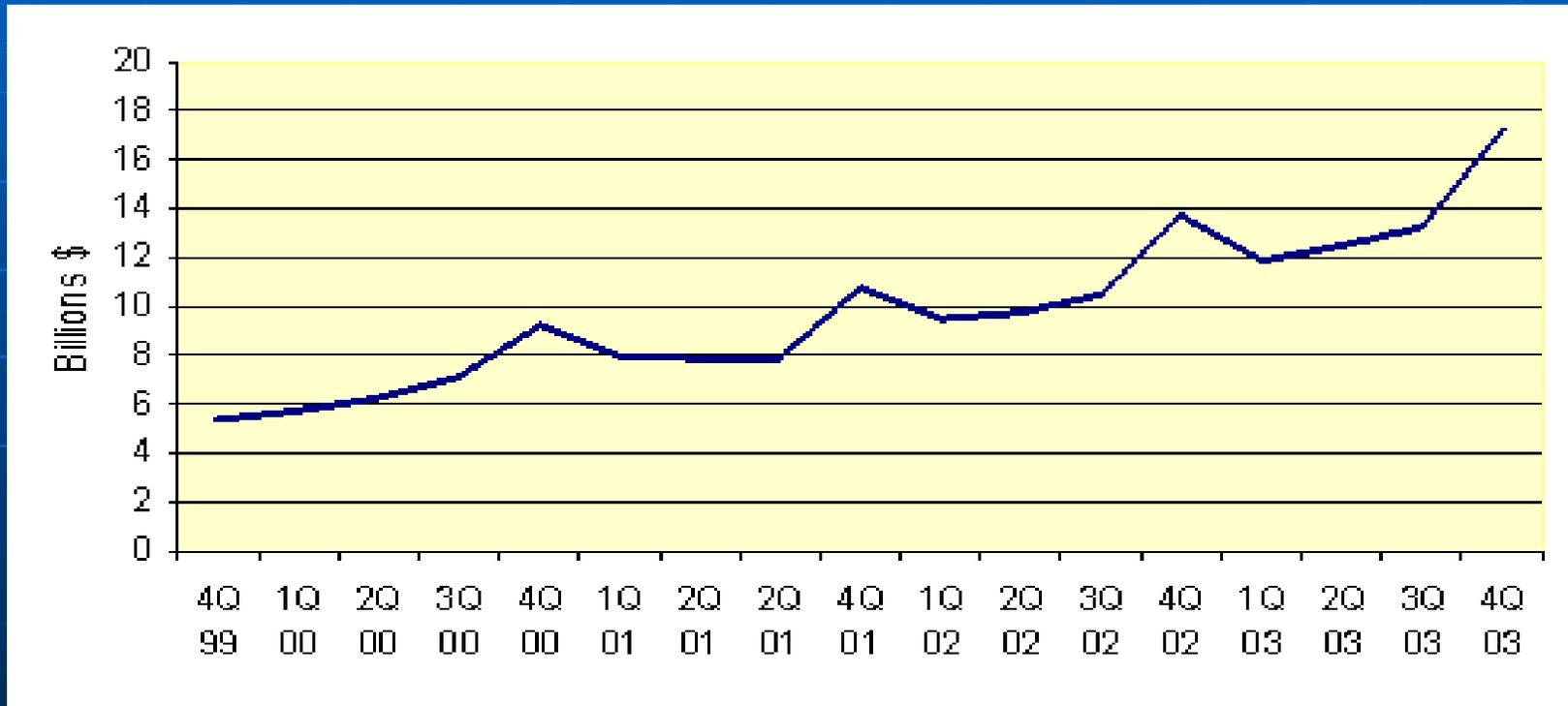
*“[B]roadband will not only help industry, it’ll help the quality of life of our citizens.”*

— President George W. Bush, US Department of Commerce, June 24, 2004

- Tele-Medicine
- Distance Learning
- Tele-Work
- National Security
- Jobs and Economic Growth

# The Growth of E-Commerce

## Estimated Quarterly U.S. Retail E-commerce Sales: 4th Quarter 1999 – 4th Quarter 2003



Source: U.S. Census Bureau, 2004

# Creating Economic Conditions For Broadband Deployment

*“We ought not to tax access to broadband. If you want something to flourish, don’t tax it.”*

– President George W. Bush in Baltimore, Maryland on April 27, 2004

- Tax relief has given businesses powerful incentives to invest in broadband technology
  - Accelerated depreciation for capital-intensive equipment
  - Extension of the Internet tax moratorium; support making the moratorium permanent
  - Extension of the research and experimentation tax credit; support making it permanent
  - President's FY 2005 budget requests a record \$132 billion for research and development.

# Removing the Regulatory Underbrush

## Improving Access to Rights-of-Way:

*“[B]roadband providers have trouble getting across federal lands...that’s why I signed an order to reduce the regulatory red tape for laying fiber optic cables and putting up transmission towers on federal lands.”*

– President George W. Bush, U.S. Department of Commerce, June 24, 2004

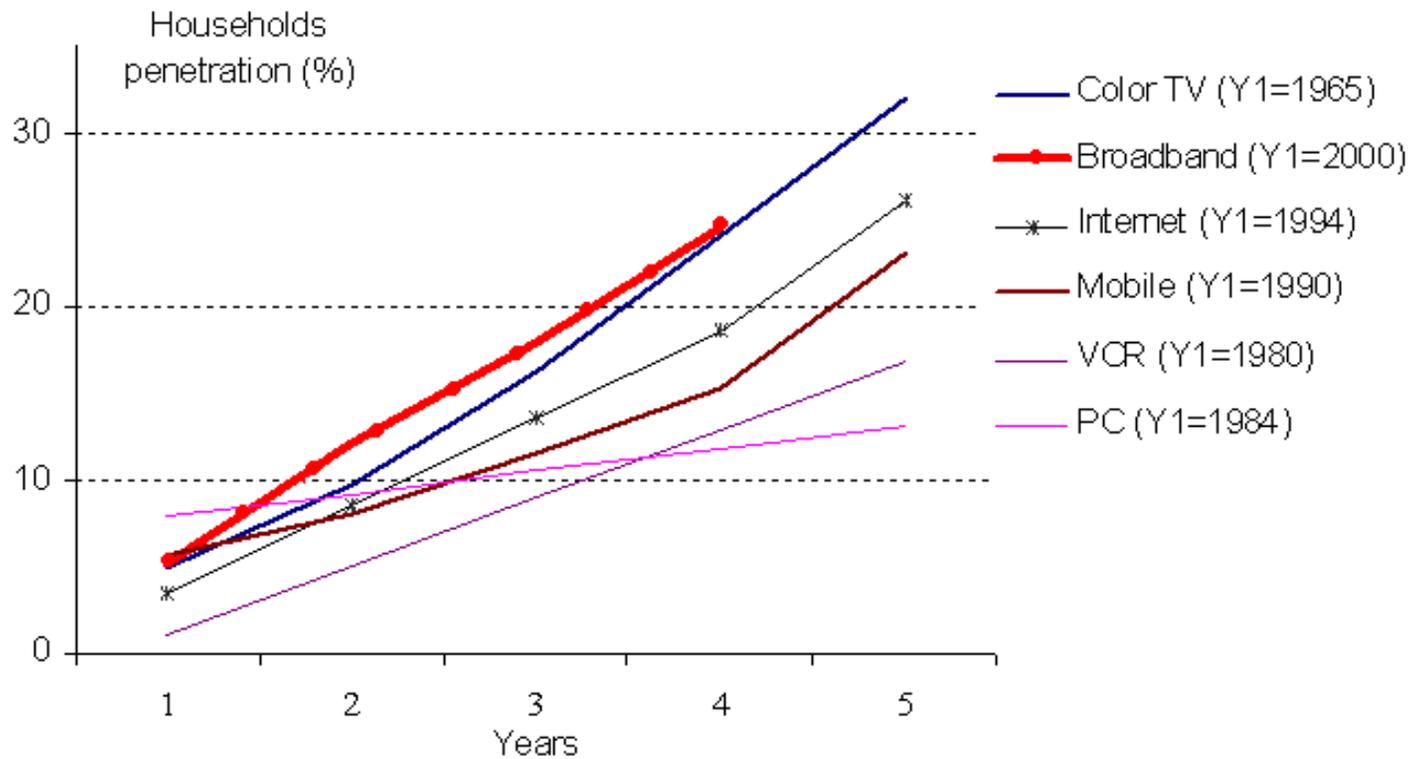
- A Federal Rights-of-Way Working Group set out recommendations to improve access to rights-of-way management across federal lands to promote the deployment of broadband. The called for improvements in: (1) Information Access and Collection, (2) Timely Processing, (3) Fees and Other Charges, and (4) Compliance.
- On April 26, 2004, the President signed an executive memorandum directing federal agencies to implement these recommendations.

## Reducing Legacy Regulation of Broadband Services:

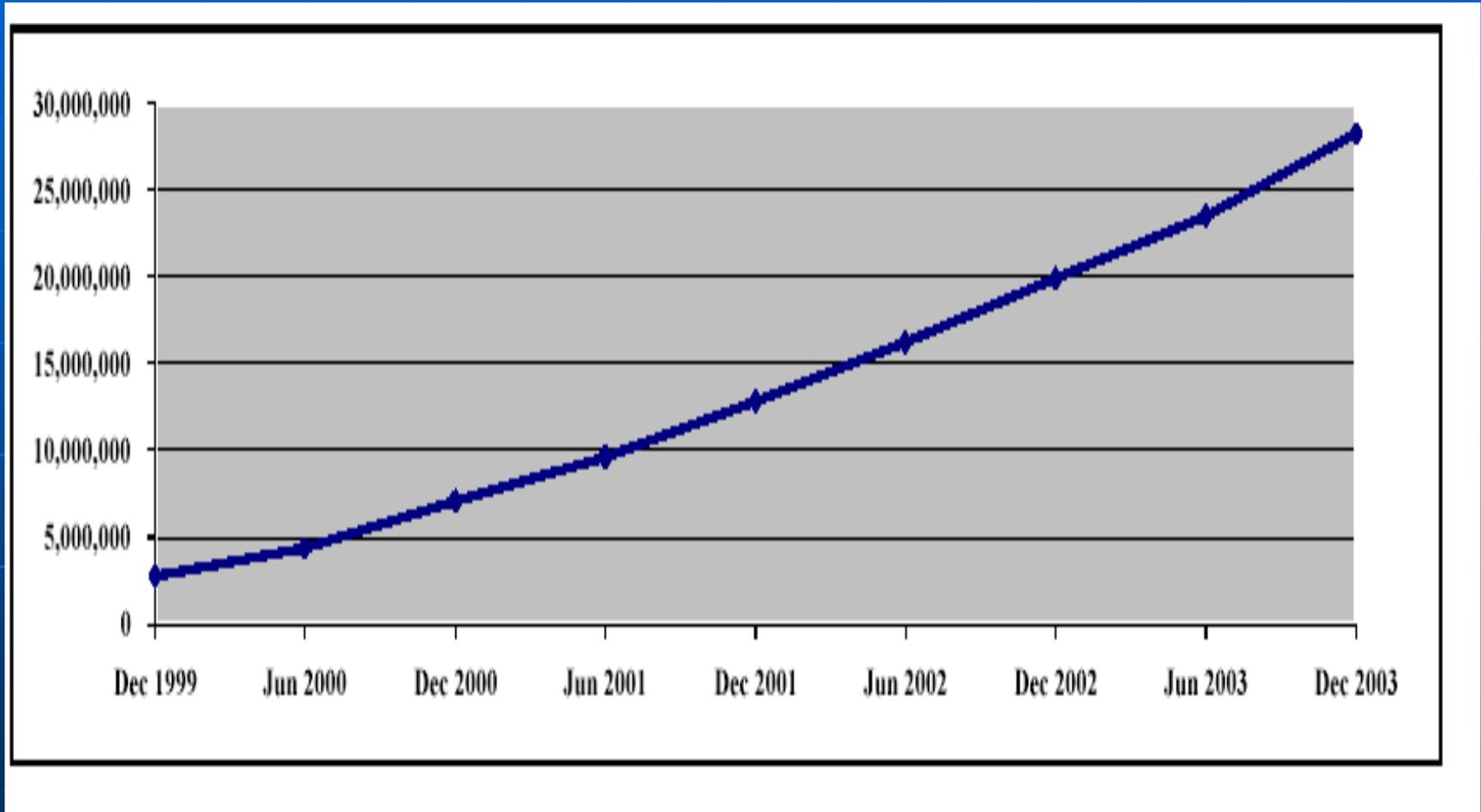
- The Administration supports the FCC’s order freeing newly deployed broadband infrastructure from legacy regulation

# Rate of Broadband's Diffusion is Strong

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

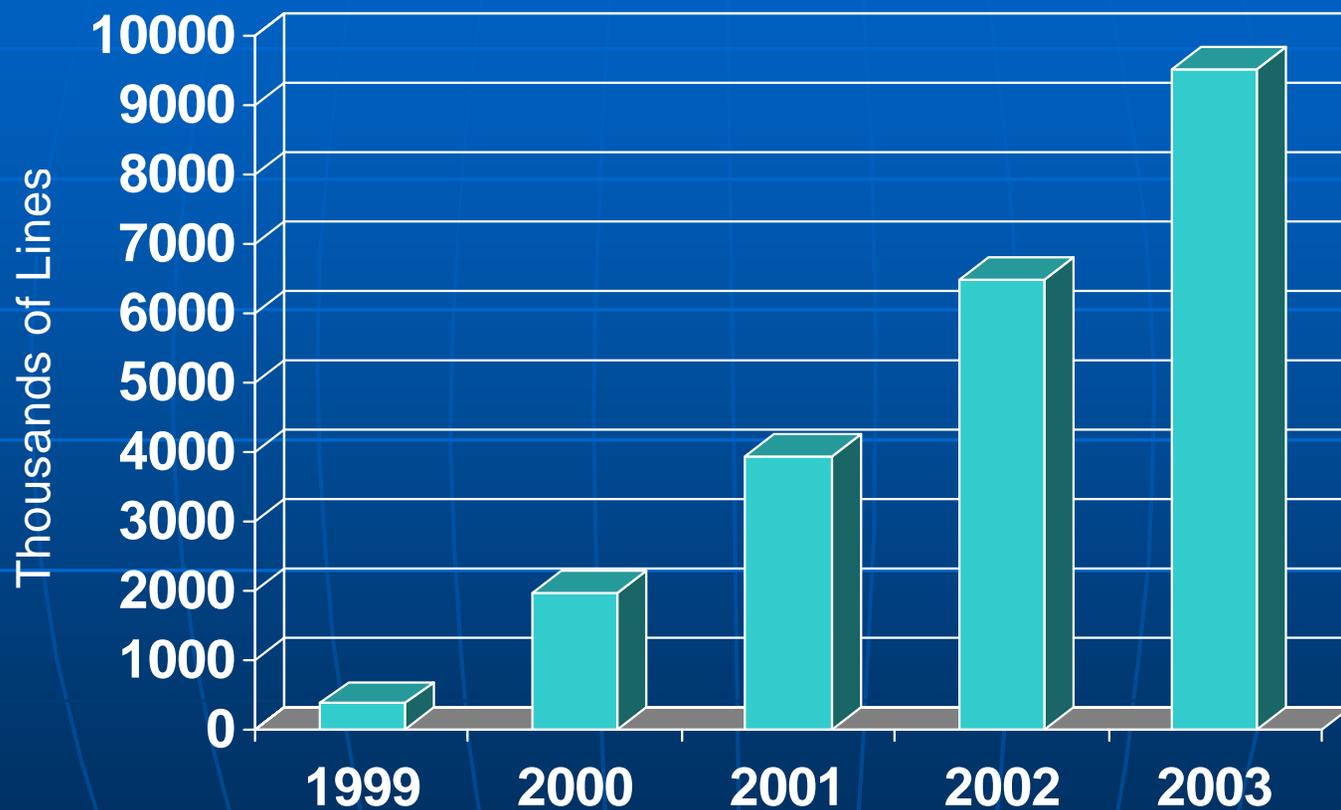


# Total High Speed Lines



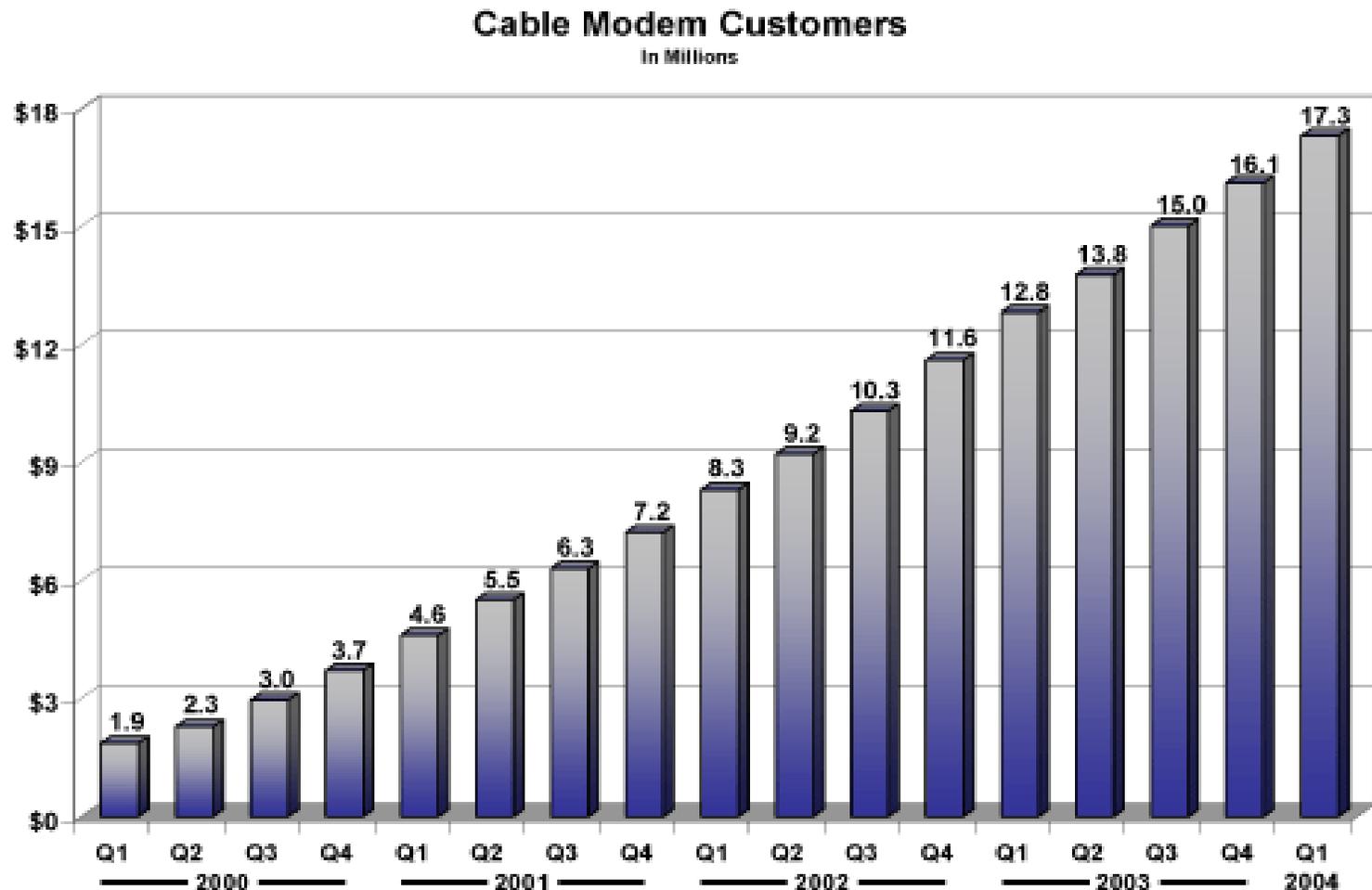
Source: FCC, 2004

# DSL Lines Have Continued to Grow



Source: FCC

# Cable Modem Subscriptions Have Also Experienced Significant Growth



# 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, U.S. Department of Commerce, 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

# WiMax

- WiMax or 802.16 is designed to provide wireless broadband access in a Metropolitan Area Network (MAN), operating at speeds up to 75 Mbps over a 30 mile radius.
- WiMax connectivity is fast enough to support more than 60 businesses with T1-level connections and hundreds of homes with DSL-rate connectivity using only 20 MHz of channel bandwidth.
- Intel plans to build WiMax into its Centrino chip platforms, which power 80% of all PCs, by 2006. Motorola plans to commercially offer integrated radio access networks that can handle 3G, Wi-Fi, WiMax and other future wireless innovations. AT&T, Siemens, and Alcatel are also backing WiMax technology.
- Industry analysts predict six-fold growth in WiMax sales over the next three years.

# 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, US Department of Commerce, 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.

# NTIA Rural Wireless Broadband Project Team (RWBPT)

- In February, NTIA released Request for Comment on Usage of 3650-3700 MHz considering:
  - Protection of Existing Government Radar Sites
  - Technical Sharing Criteria
  - Workable Solutions for Industry
  - Promoting transparency in NTIA decision making process
- NTIA is preparing technical report of comments and recommendations for FCC
- RWBPT also reviewing industry white papers and functional descriptions to provide core of expertise within NTIA on Rural Wireless Broadband deployment and requirements
  - Developing database of technical descriptions
  - Reviewing Manufacturer requirement documents
  - Developing Industry Contact list

# Commerce Department's Economic Development Administration Supports Technology

- EDA provides assistance to rural and urban areas for economic development and revitalization.
- EDA's Public Works Program supports projects to expand and upgrade physical infrastructure, including broadband and telecommunications infrastructure, skill training facilities, and business incubator facilities.

From FY 2001 to date, Mississippi has received EDA funds for:

- 72 projects
- Totaling \$22,140,500
- 7 of the 72 are technology projects, totaling \$5.6 million

# USDA Rural Development Rural Utilities Service (RUS) Broadband Programs

## RUS Broadband Loan Program:

- FY 2002-04 funds available: \$2.2 Billion
- As of August 12, 2004:
  - Received 106 applications for \$1.46 Billion
  - Approved 27 for \$396 Million
  - Processing 30 for \$426 million
- A \$57 Million loan to a Memphis, Tennessee project will serve rural Mississippi communities via licensed wireless

## RUS Community Connect Broadband Grant Program:

- \$9 Million in grant funds available on a competitive basis to provide first-time broadband in rural communities
  - FY 2004 application window closes September 13
  - RUS will announce winners October 31
- In first two years of this program, 3 Mississippi projects won grants totaling \$1,461,979

# Characteristics of USDA Rural Development RUS Broadband Programs

- Technology neutral
- Examples of approved loan technologies:
  - Fiber to the home
  - Digital Subscriber Line
  - Unlicensed wireless
  - Hybrid Fiber Coax
  - Licensed wireless
- Available to communities up to 20,000 in population
- Loans are competitively neutral – we can fund the second provider in an area.
- <http://www.usda.gov/rus/telecom/broadband.htm>

# USDA Rural Development RUS Distance Learning and Telemedicine (DLT) Program

- DLT loans, grants, and loan-grant combinations provide funding for distance learning and telemedicine networks to enhance opportunities in rural areas.
- Funding of up to \$500,000 goes towards equipment (e.g., desktop computers and labs), as well as training and infrastructure.
- 3 distance learning grants awarded in Mississippi in 2003:
  - Jackson County School District; Vancleave, MS  
\$500,000
  - Tri-District Partnership for Distance Learning; Decatur, MS  
\$500,000
  - South Central Mississippi Consortium for Educational Excellence and Development; Hattiesburg, MS  
\$500,000

# Conclusion

- Broadband deployment in the U.S. is robust.
- President Bush's economic policies have helped to fuel and sustain broadband investment, deployment and competition.
- The President's goal will ensure that all Americans have the personal and economic benefits of high-speed Internet applications and services.