

# “Bucks for Broadband Summit”

## Promoting Broadband Deployment in Rural America

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[www.ntia.doc.gov](http://www.ntia.doc.gov)

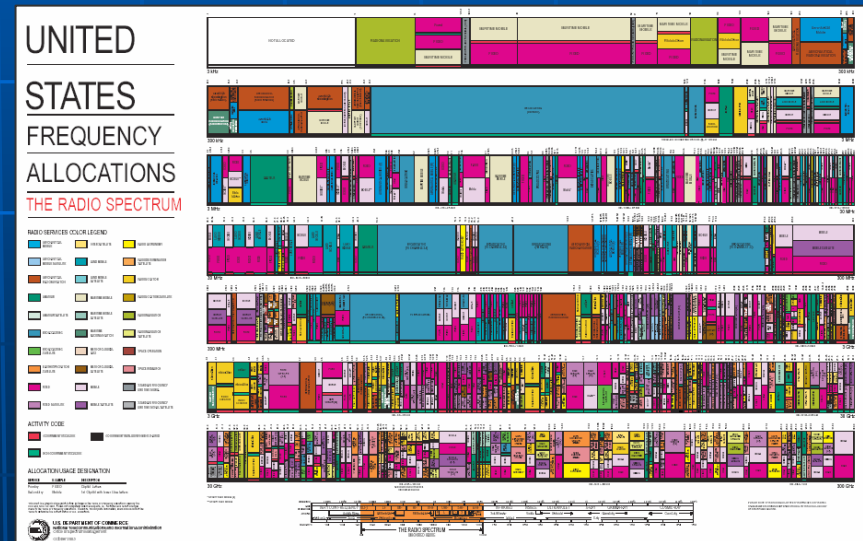


Frankfort, Kentucky  
January 12, 2005



# The National Telecommunications and Information Administration (NTIA)

- Principal adviser to the President on telecommunications and information policy issues
- Represent the Executive Branch in international & domestic telecommunications policy activities
- Manage Federal Government use of frequency spectrum
- Perform telecommunications research and engineering for both the Federal Government and the private sector



- BASED ON THE TELECOMMUNICATIONS AUTHORIZATION ACT OF 1992

# Overarching Goal: Promoting Economic Growth

- Thanks to the President's policies, America's economy is strong:
  - Over the past four quarters the U.S. economy grew at a real GDP rate of 4.0%; compared to GDP growth in Europe of 2.1%.
  - The economy has shown job growth for 15 straight months and added 2.4 million new jobs – more than Canada, France, Germany, Great Britain, and Japan combined.
  - The U.S. unemployment rate is 5.4%, while the unemployment rate in Europe was 9.0% (Sept. 2004).
  - There has been a sharp pickup in business spending on capital equipment.
  - Homeownership rate was a record high of 69.0% in the third quarter of 2004.
  - Manufacturing activity (ISM index) has been growing for 20 straight months and employment has been growing for 14 straight months.

# Economic Growth in Kentucky

Kentucky's economy is getting stronger:

- Kentucky's per capita income growth rate has slightly exceeded the national average over the past decade (1990-2000).  
Kentucky's growth rate: 50%; U.S. growth rate: 48%.
- Kentucky's unemployment rate of 4.5% is lower than the national average.
- Homeownership in Kentucky in 2003 was 74.4%, above the national level of 69%.
- Kentucky has added 25,300 new jobs in the past 18 months.

# Kentucky's Vision for an IT Future

- KY is the first state with 100% of its school districts online with an integrated voice, video, and data network. (Source: [www.thinkkentucky.com](http://www.thinkkentucky.com))
- According to ConnectKentucky's 2003 Report:
  - 2 million Kentuckians use the Internet regularly
  - KY consumers spend \$894 million online
  - 25% Kentuckians have broadband Internet at home
  - Full-scale broadband deployment could create 14,000 new jobs and add more than \$5 billion to the Gross State Product (GSP) in KY
- Governor Fletcher's "Prescription for Innovation: Delivering Broadband Technology for a 21<sup>st</sup> Century Kentucky" promises broadband deployment throughout the state by 2007, leveraging state, federal, and private investment.

# 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



# 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 to November 1, 2007; support making the moratorium permanent
  - Extension of the research and experimentation tax credit; support making it permanent



# Removing the Regulatory Underbrush

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

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

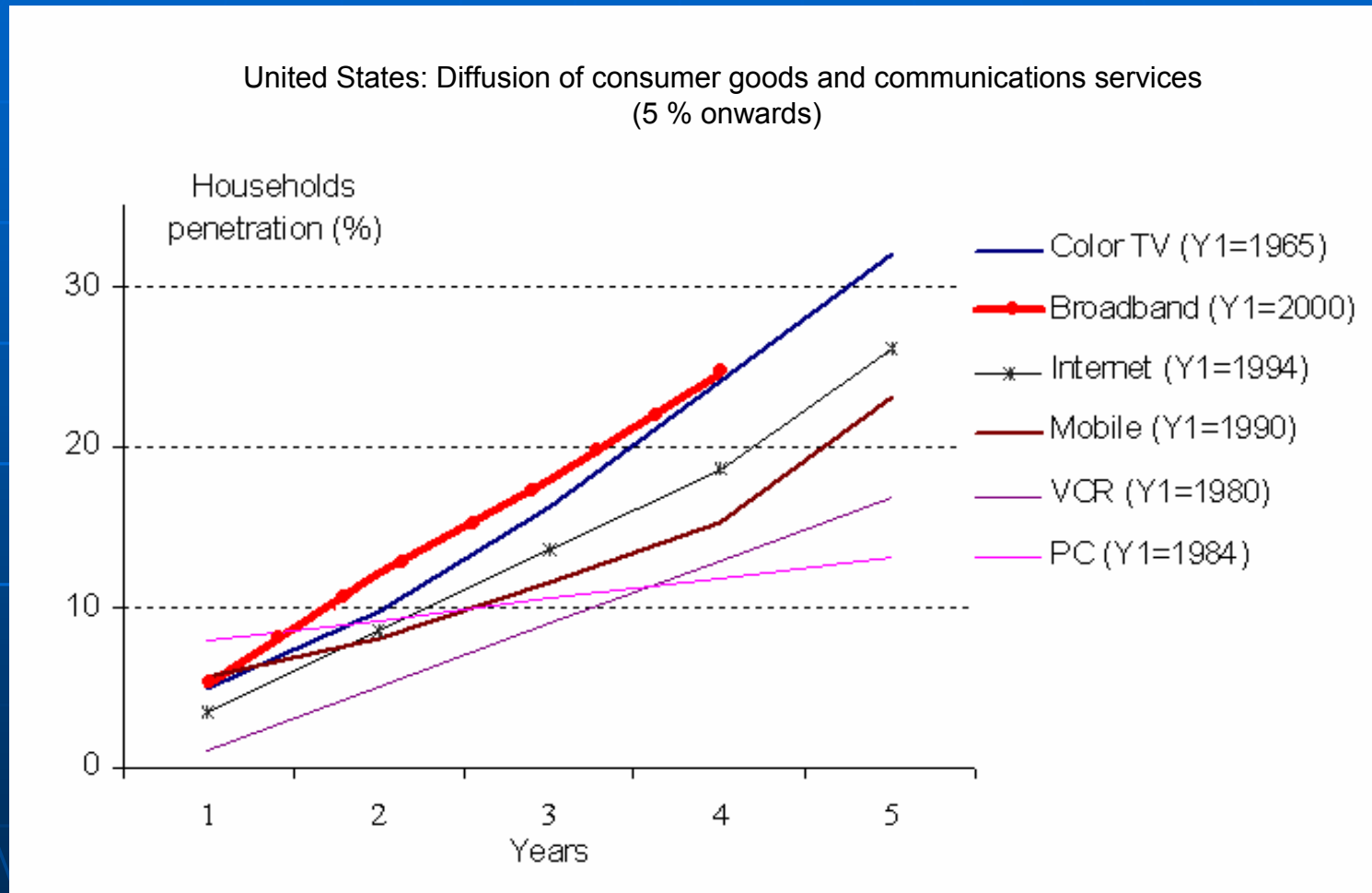
## Reducing Legacy Regulation of Broadband Services:

- The Administration supports the FCC’s order freeing newly deployed broadband infrastructure from legacy regulation.
- Verizon, SBC, and Bell South announced they will wire at least an additional 20 million homes with fiber-optic cable by 2007 → Total investment is expected to be more than \$6 billion over next several years.
  - Bell South aims to provide 150,000 households with fiber per year and plans to increase the number of homes equipped with a fiber platform by 40% in 2005.
  - SBC will bring video and broadband via fiber to 18 million homes in the next 2-3 years.
  - Verizon aims to connect more than 2 million homes and businesses by next year.

## Improving Access to Rights-of-Way:

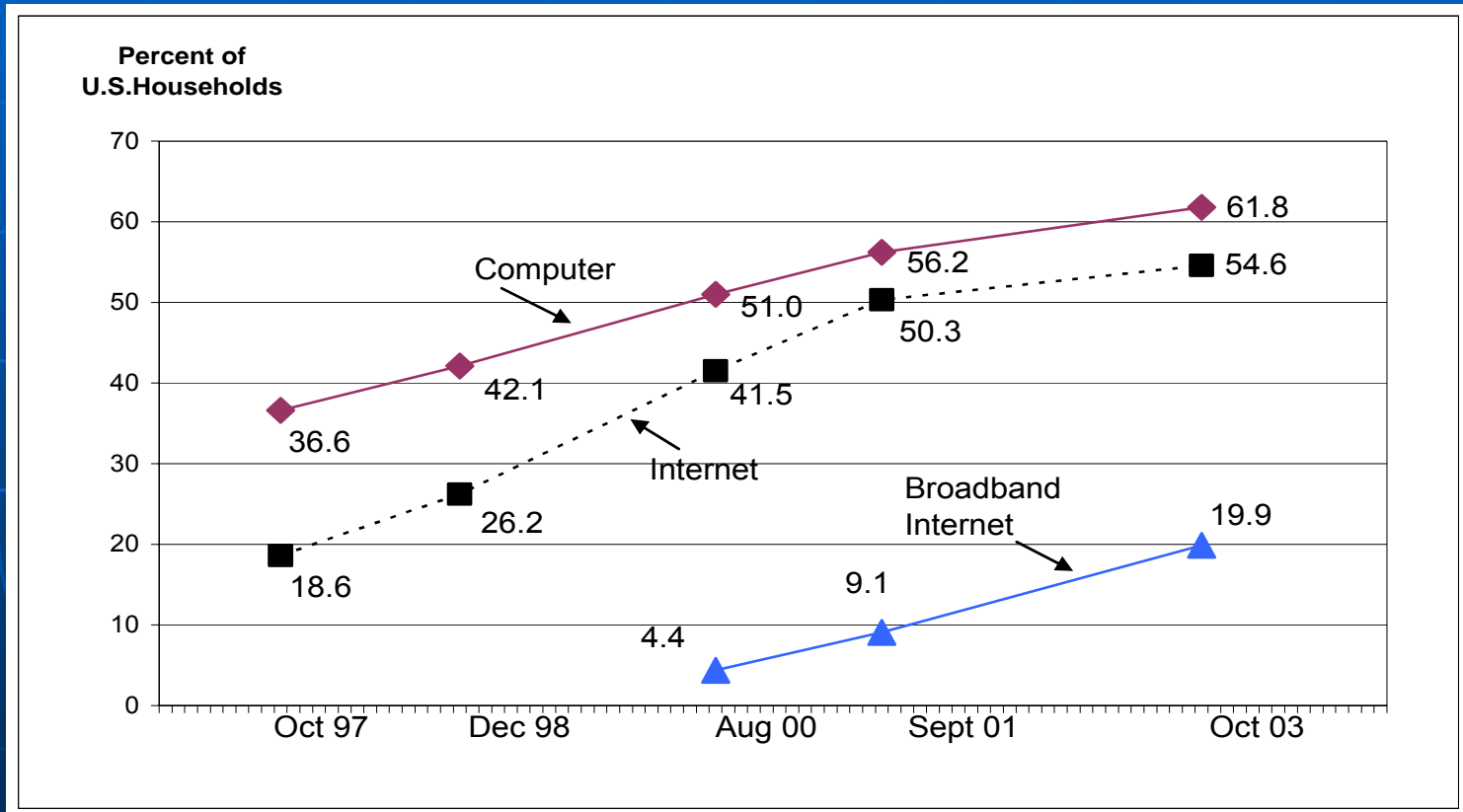
- On April 26, 2004, the President signed an executive memorandum directing federal agencies to implement recommendations set out by the Federal Rights-of-Way Working Group. They called for improvements in: 1) Information Access and Collection, 2) Timely Processing, 3) Fees and Other Charges, and 4) Compliance.

# Rate of Broadband's Diffusion is Remarkable



# Broadband's Takeup Rate Exceeds Even That of Computers and the Internet

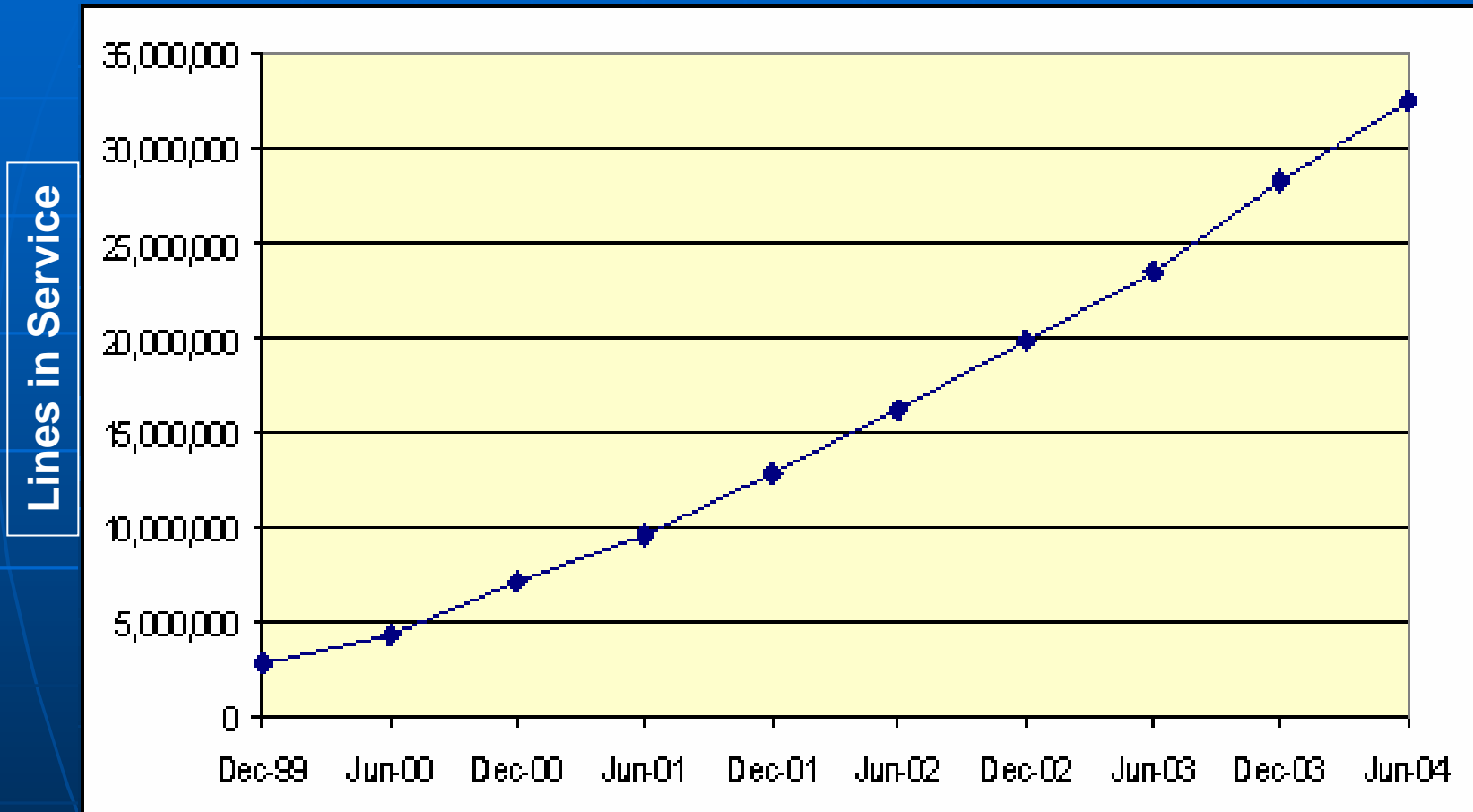
## Percent of Households with Computers and Internet Connections, Selected Years, 1997-2003\*



\* NOTE: 2001 and 2003 reflect 2000 Census-based weights and earlier years use 1990 Census-based weights.

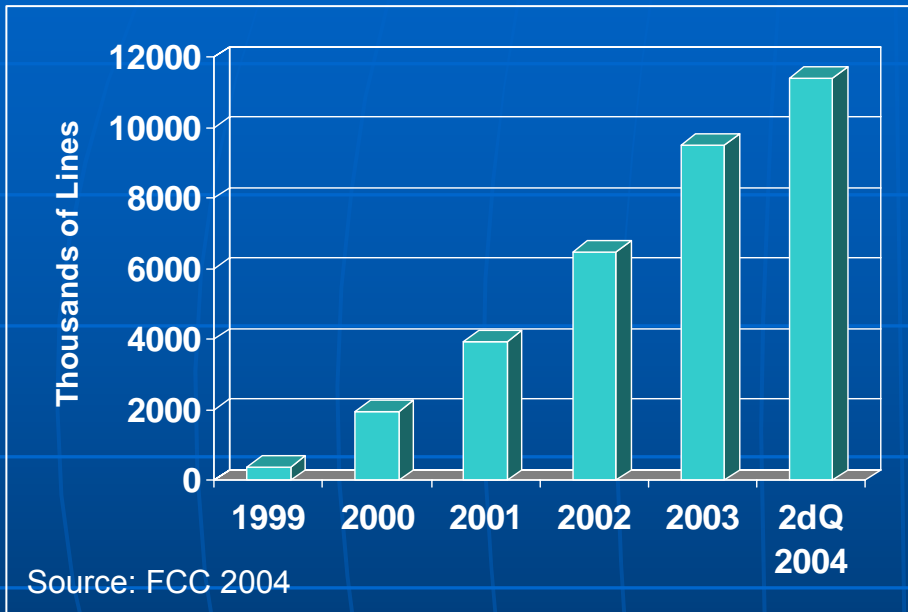
Source: *A Nation Online: Entering the Broadband Age* (September 2004, using October 2003 Census data).

# Total High Speed Lines in the U.S.

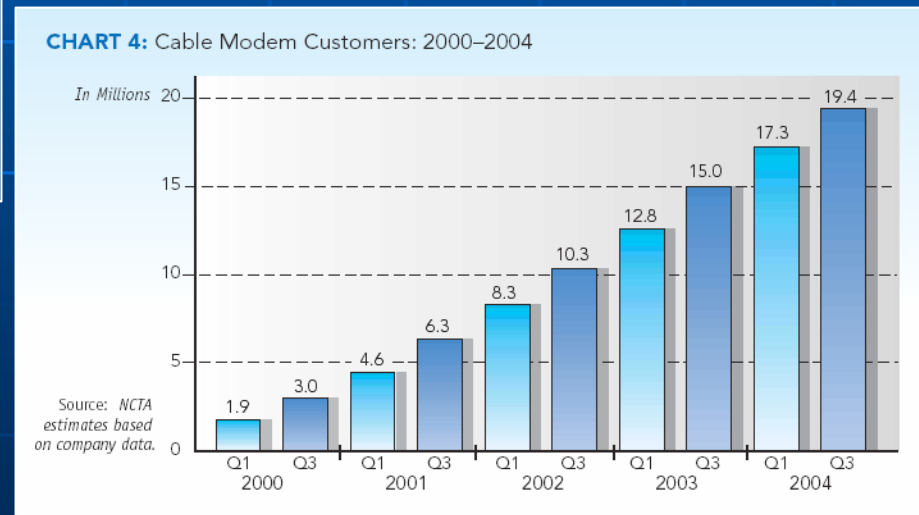


Source: FCC, December 2004

# DSL Lines Continue to Grow...



# ...Cable Modem Subscriptions Have Also Experienced Significant Growth



Source: NCTA 2004 Year-End Industry Overview

# 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 21,000 hotspots in the United States. (Intel's Hotspot Finder)
- City-wide hot spots:
  - Athens, GA
  - Cerritos, CA
  - Chaska, MN
  - Oklahoma City, OK
  - Philadelphia, PA
  - Spokane, WA
  - Walla Walla, WA
- Some Communities developing major free hot spots:
  - Austin, TX
  - Las Vegas, NV
  - Long Beach, CA
  - New York, NY
  - San Jose, CA
  - Washington, DC

# WiMax

- WiMax or “IEEE 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

- The FCC began a BPL rulemaking on February 12, 2004.
- Principal concern was the risk that BPL systems might interfere with radio communications.
- NTIA submitted to the FCC a Phase 1 study that defined interference risks and potential mitigations (April 2004).
- Based on additional analyses, NTIA recommended several supplements to the FCC proposed BPL rules to reduce risk of BPL interference (June 2004)
- The FCC adopted rules incorporating most NTIA recommendations on October 14, 2004.
- Today, many utilities, hotel operators and others are deploying experimental and operational BPL systems.



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

# Commerce Department's Economic Development Administration (EDA) Supports Technology

- EDA, the only federal entity with domestic economic development as its sole purpose, provides assistance to rural and urban areas for economic development and revitalization.
- EDA manages a \$2 billion portfolio across the country and “invested” more than \$1 billion in federal grants over the past four years.
- EDA has evolved from a grant-making entity toward a “private sector venture capitalist”, maximizing private sector investment per federal dollar input. Over the past four years, EDA has increased private sector investment from \$9 per EDA \$1 to an average of \$44 per EDA \$1.
- EDA grants are focused on locally-developed, regionally-based economic development initiatives that achieve high return on taxpayers’ “investment”, create higher-skilled, higher-wage jobs, and directly contribute to economic growth.

# EDA Investment in Kentucky

- Since its inception in 1965, EDA has made 1,134 investments in Kentucky totaling over \$317 million.
- In FY04, EDA made 15 investments in Kentucky totaling \$13 million. These investments helped save or create 2,243 jobs and has stimulated \$291 million in private capital investments.
- Recent examples:
  - City of Carrollton (Carroll County, 2003) – Regional Wastewater Treatment Plant – EDA grant \$1.5 M, private investment \$265 M, 1,000 jobs.
  - Cave Run Water Commission (Menifee, Montgomery & Morgan counties, 2003) – Development of a water treatment plant – EDA grant \$1.5 M, 340 jobs.
  - Western Kentucky University (Warren County, 2003) – Renovation of space in the old Bowling Green mall to house a small business incubator and technology center – EDA grant \$851,000, 220 jobs.
  - City of Franklin (Simpson County, 2002) – Infrastructure to an industrial park where two new manufacturers have located – EDA grant \$1.1 M, 190 jobs.
- EDA also supports the ongoing work of 14 Economic Development Districts in Kentucky.

# EDA Investment in Broadband Deployment

- EDA supports the proliferation of broadband networks as a key priority for regional economic growth.
- Recent examples:
  - \$6 M grant in Mid-Atlantic Broadband Cooperative, Inc. (Southside, VA) for investment in installation of 300 miles of fiber optic cable in nine counties and three cities; providing significant opportunities for economic growth in the region, in addition distance learning and telemedicine capabilities.
  - \$2 M grant to Northern Enterprises, Inc. (St. Albans, VT) and Vermont Electric Cooperative, Inc. (Johnson, VT) to help build a 424 mile fiber optic broadband telecommunications network in rural northern Vermont that will connect small and medium-sized businesses to international markets. This investment is expected to retain over 2,000 jobs, create 500 jobs, and generate as much as \$58 M.
- EDA's overall national investment budget is approximately \$224 million for FY05 and EDA grants are highly competitive.
- EDA encourages communities eligible for specific broadband programs, such as those offered by USDA's Rural Utility Service, to access those programs before applying for EDA investment dollars.

# EDA Contacts

- **Website:** [www.eda.gov](http://www.eda.gov)
- **Headquarter Information :** U.S. Department of Commerce  
Economic Development Administration  
1401 Constitution Avenue, N.W.  
Washington, D.C. 20230.
- **For information on EDA programs, investment policies, and funding opportunities, please contact your local regional office.**
- **Atlanta Region:** Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

401 West Peachtree Street, NW  
Suite 1820  
Atlanta, GA 30308-3510  
404-730-3002  
404-730-3025 fax

- William J. Day, Jr., Regional Director ([wday1@eda.doc.gov](mailto:wday1@eda.doc.gov))

# 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.