

Mississippi Technology Alliance Sixth Annual Conference on High Technology

“Promoting U.S. Broadband Deployment and
Economic Growth”

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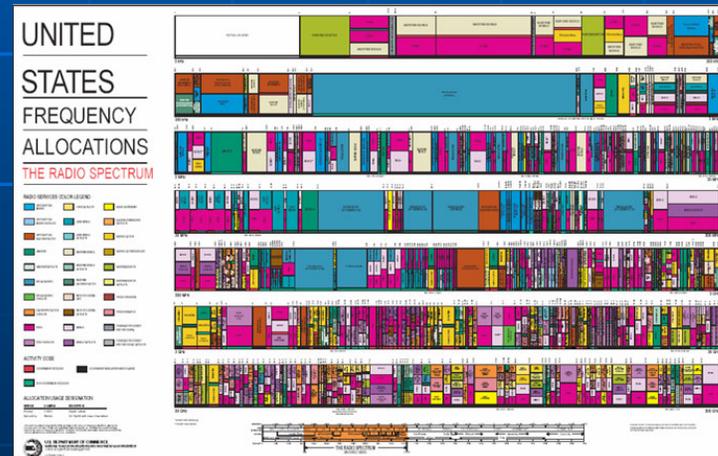


Jackson, Mississippi
November 9, 2005



The National Telecommunications and Information Administration (NTIA)

- Principal advisor 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

The President's Broadband Vision



President Bush speaking at the U.S. Department of Commerce June 24, 2004

“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

“[B]roadband will not only help industry, it’ll help the quality of life of our citizens.” -- President George W. Bush, Dept. 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 until Oct. 31, 2007; support making the moratorium permanent
 - An 18-month extension of the research and experimentation tax credit; support making it permanent
 - President's FY 2006 budget requests a record \$132 billion for research and development.

Removing the Regulatory Underbrush

- The Administration supports the FCC's order freeing newly deployed broadband infrastructure from legacy regulation.
- As a result → the number of communities with fiber build outs has increased 83% from 217 communities to 398 communities in 43 states. The number of homes passed by fiber grew from 970,000 in October '04 to 1.6 million in April '05. Many of the communities are outside the "big cities". (Source: FOCUS, FTTH Council and TIA, 5/10/05)

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 fiberoptic cables and putting up transmission towers on federal lands."

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

- 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.

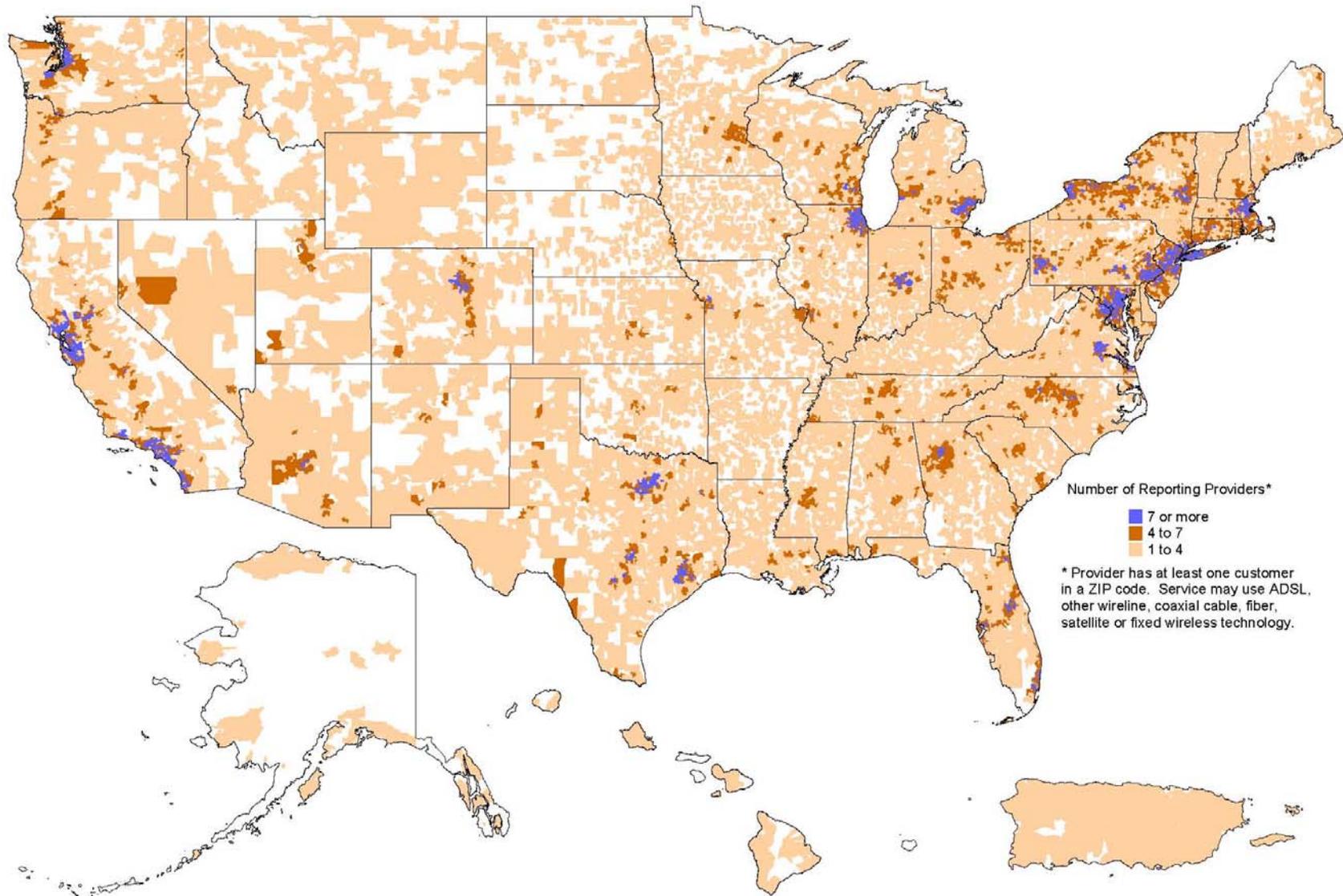
President's Spectrum Policy Initiative

“The existing legal and policy framework for spectrum management has not kept pace with the dramatic changes in technology and spectrum use.”

- President George W. Bush, Presidential Memorandum,
May 29, 2003

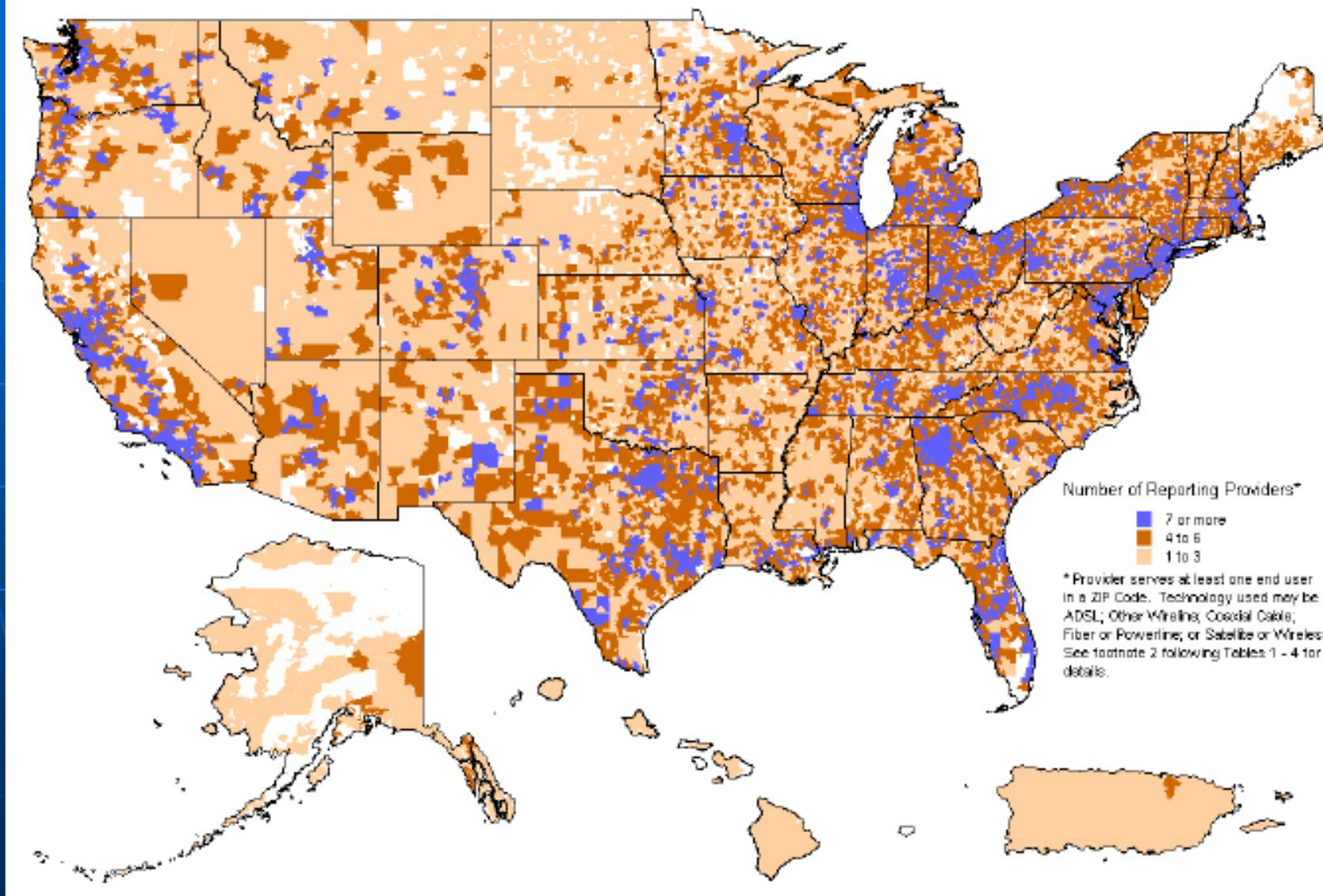
- Committed the Administration to develop a comprehensive U.S. spectrum policy for the 21st century.
- The Secretary of Commerce was charged to lead this initiative.
- Established a Federal Government Spectrum Task Force – membership includes the Departments of State, Treasury, Defense, Justice, Interior, Agriculture, Transportation, Energy, Homeland Security, and NASA, OMB, OSTP and Project SAFECOM.

High-Speed Providers by ZIP Code (As of December 31, 2000)



Source: FCC

High-Speed Providers by ZIP Code (As of December 31, 2004)



Source: FCC

Promising Technology Solutions to the Rural Challenge

- **Wi-Fi**: As many as 95% of laptops could have WiFi as standard feature by the end of 2005. Airgo Networks announced plans to sell Wi-Fi chips with data rates up to 240 Mbps by 4th quarter 2005 – 4x the speed of current Wi-Fi chips at 54 Mbps.
- **WiMAX**: With a range of up to 40 miles, WiMAX may be a promising solution for delivering broadband to rural areas. Although WiMAX is still under development, the FCC and FEMA authorized deployment of a WiMAX network (15 mile range with 45 Mbps bandwidth – 30x faster than standard 1.5 Mbps DSL connections) to link Wi-Fi hotspots in an effort to restore communications damaged by hurricane Katrina.
- **BPL**: Manassas , VA -- a suburb of Washington, DC – recently deployed the nation's first citywide broadband-over-power-line (BPL) system and is available to about 10,000 of the city's 12,500 homes. Central VA Coop, a rural cooperative, also is developing a BPL network in that state.
- **WISPs**: Wireless Internet service providers, approximately 3,000 in the U.S., traditionally provide broadband connectivity in areas not reached by cable or DSL. WISPs are also expanding into urban areas.

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.”

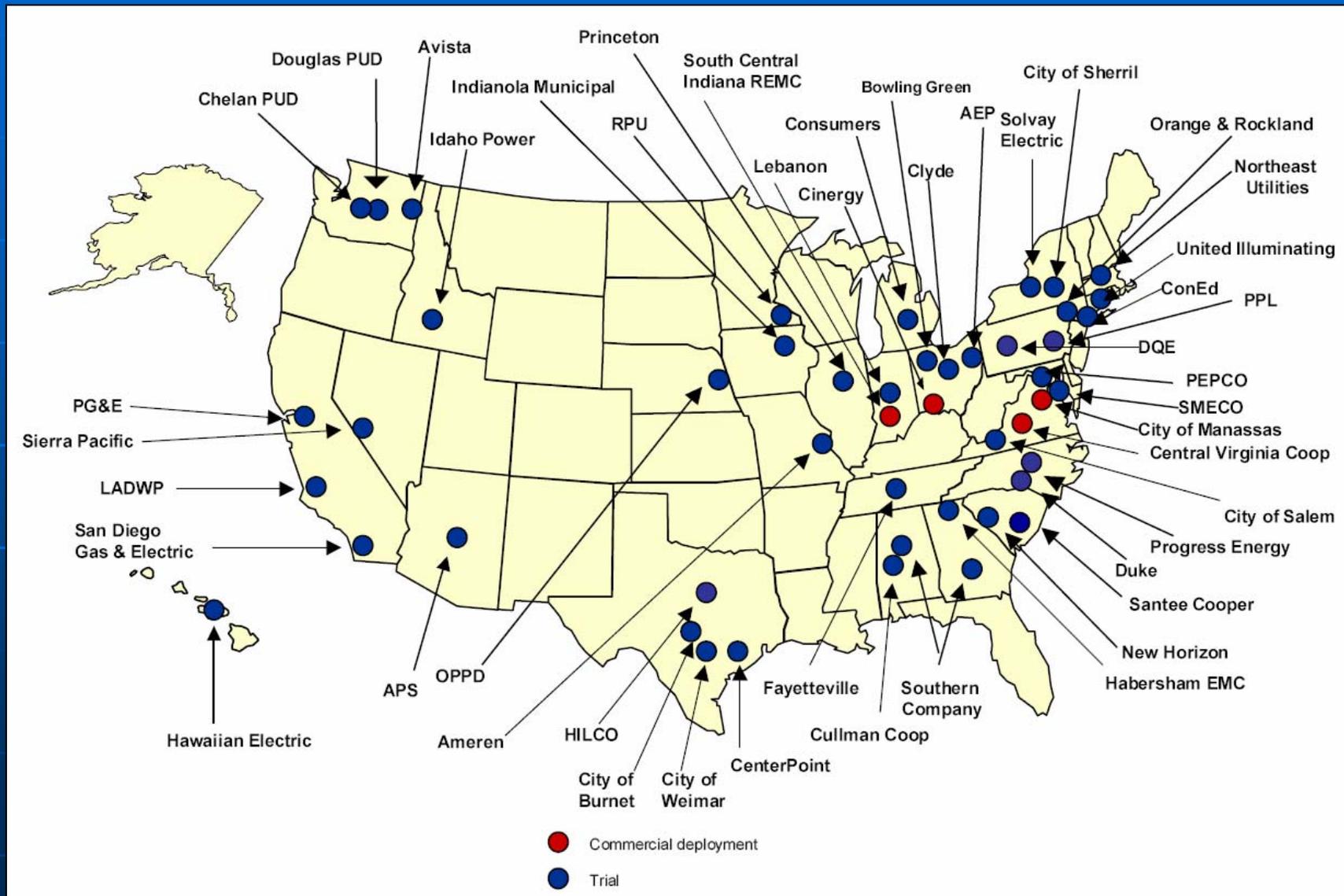
— President George W. Bush, US Department of Commerce, June 24, 2004

- 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.

Broadband Over Power Lines: Current Deployments



Source: UPLC 2005

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 and EDA grants maximize 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.
- The President's Strengthening America's Communities Initiative will consolidate 18 existing federal economic and community development programs, including EDA. The Administration's proposed FY 2006 budget focuses on robust funding for this Initiative. As a result, no funds are proposed for EDA grant programs in the 2006 budget.

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

- 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 received EDA investments for:
 - 92 projects
 - \$30 million
 - 12 technology projects, totaling \$7.6 million
- Examples of recent technology investments to Mississippi:
 - \$1.7 million to the Jackson City Port Authority to support a new Northrop Grumman Integrated Systems facility
 - \$100,000 to the Mississippi Technology Alliance to support technology transfer activities.

USDA Rural Development's Rural Utilities Service (RUS) Broadband Programs

RUS Broadband Loan Program:

- During FY 2005, no less than \$2.157 billion will be made available for loans and loan guarantees for the construction, improvement, and acquisition of facilities and equipment for broadband service in eligible rural communities

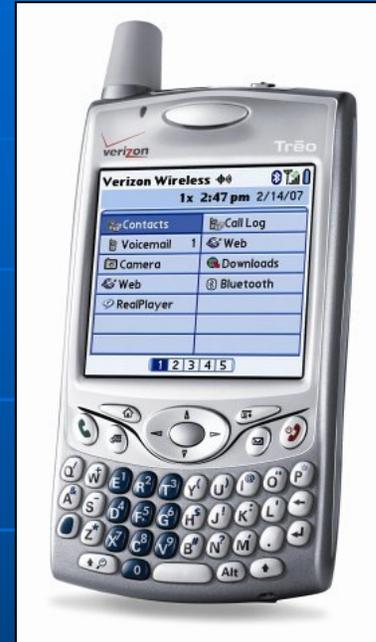
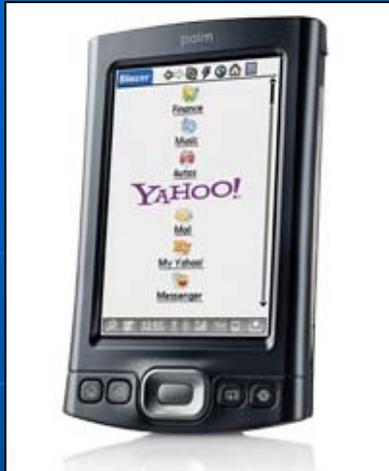
RUS Community Connect Broadband Grant Program:

- \$9 million in grant funds available to provide first-time broadband in rural communities. Recent grant awards in Mississippi include:
 - \$325,405 to the village of Glendora to connect library, clinic, police and fire departments, and a community center
 - \$343,638 to the town of Schlater to create broadband network, provide Internet connection

Distant Learning and Training (DLT) Program

- DLT loans, grants, and loan-grant combinations provide funding for distance learning and telemedicine networks to enhance opportunities in rural areas.
- 2004 DLT grants in Mississippi include:
 - \$500,000 education grant to Delta State University
 - \$500,000 education grant to East Tallahatchie School District

The Vision for Spectrum Policy Reform



Conclusion

- The President has a vision for making advanced technologies available to all Americans – by creating the economic and regulatory environment to enhance competition and promote innovation.
- The telecom sector is growing, and many new technologies – particularly wireless in nature – show great potential for expanding broadband deployment in rural communities.
- The President's goal will ensure that all Americans have the personal and economic benefits of high-speed Internet applications and services.