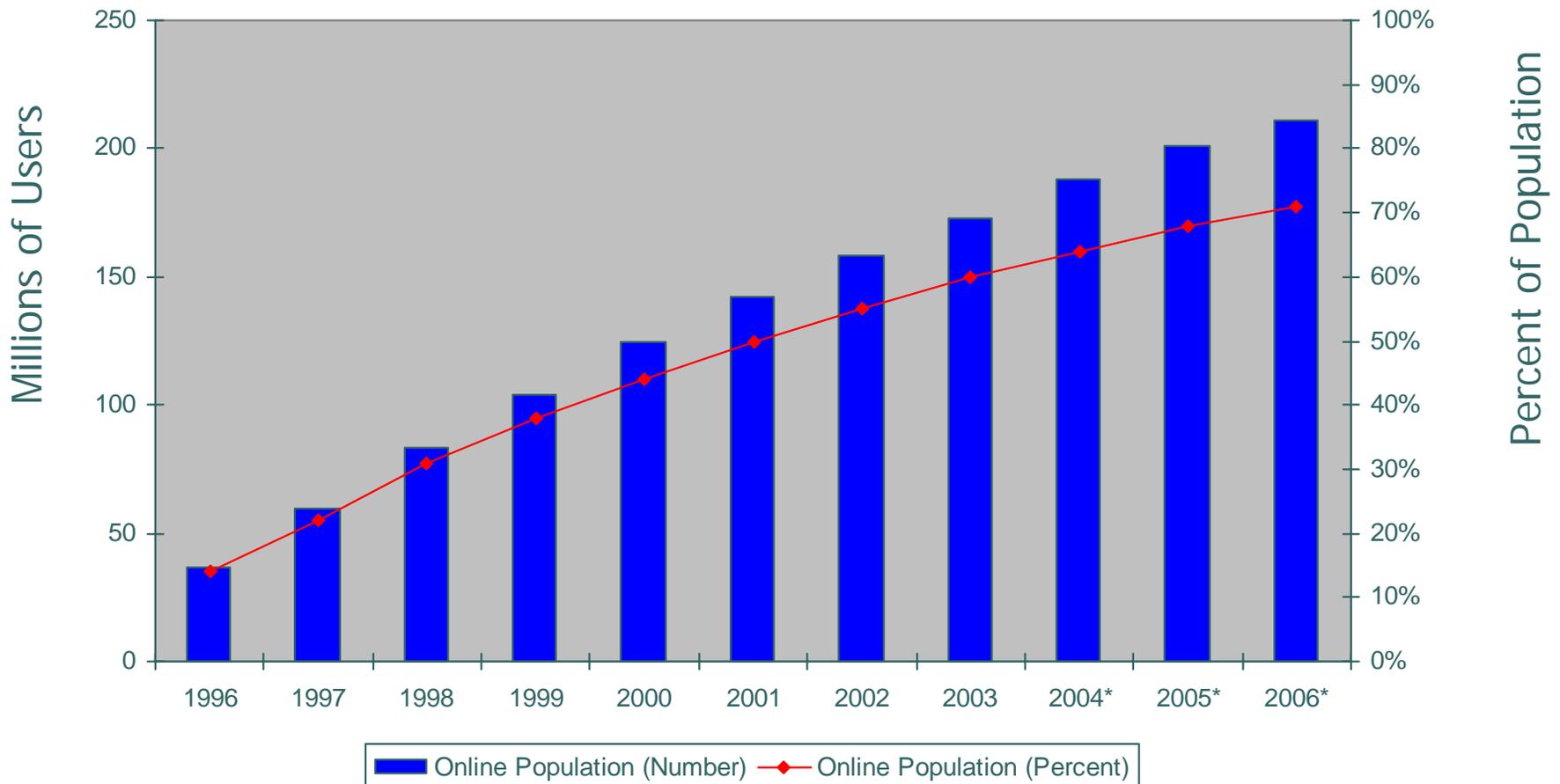




“Bucks for Broadband Summit”
Frankfort, Kentucky

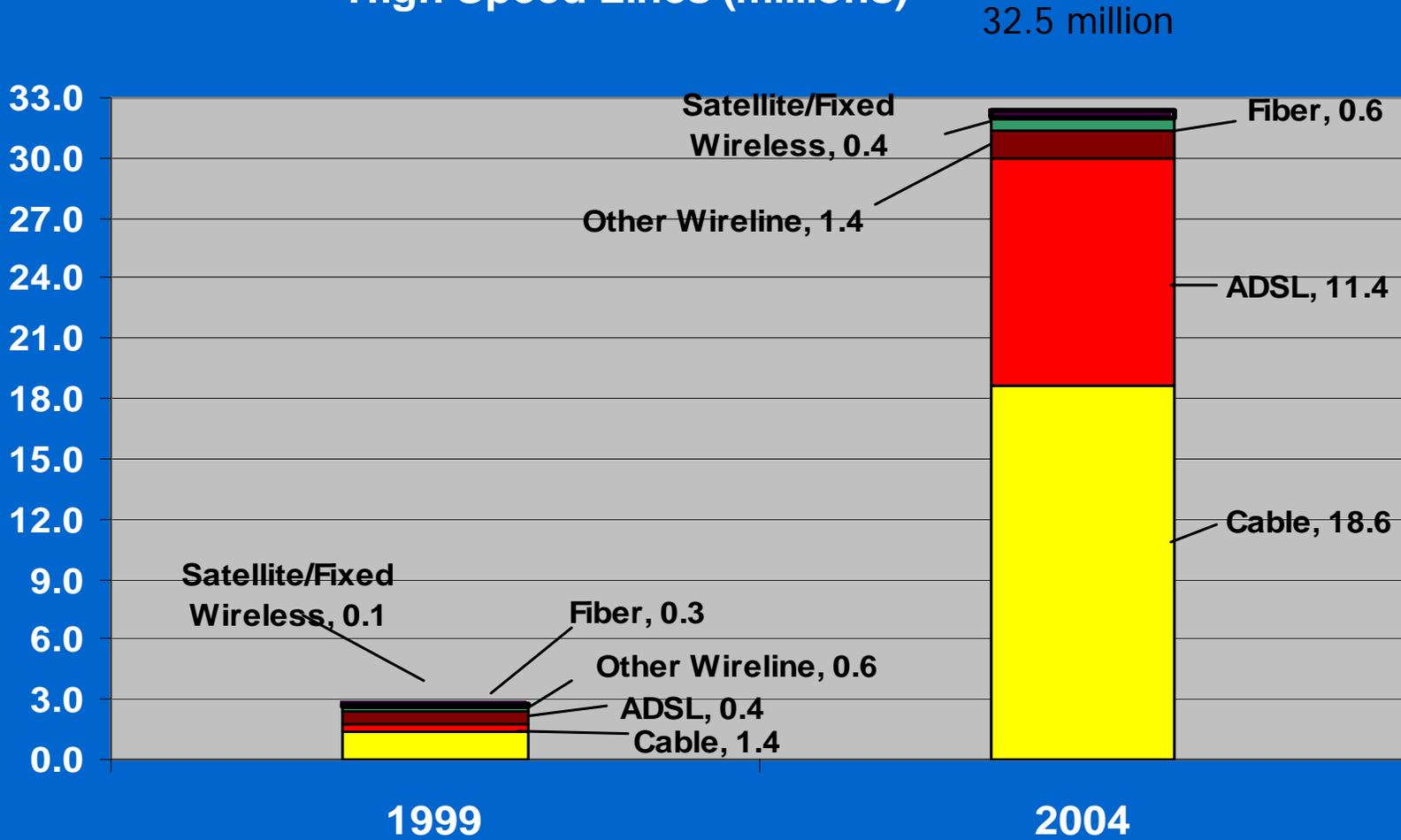
January 12, 2005

Internet Growth—US Households Online



High Speed Line Growth 1999-2004

High Speed Lines (millions)



Population and Broadband

Top 5 States - # of BB Subscribers (mil)

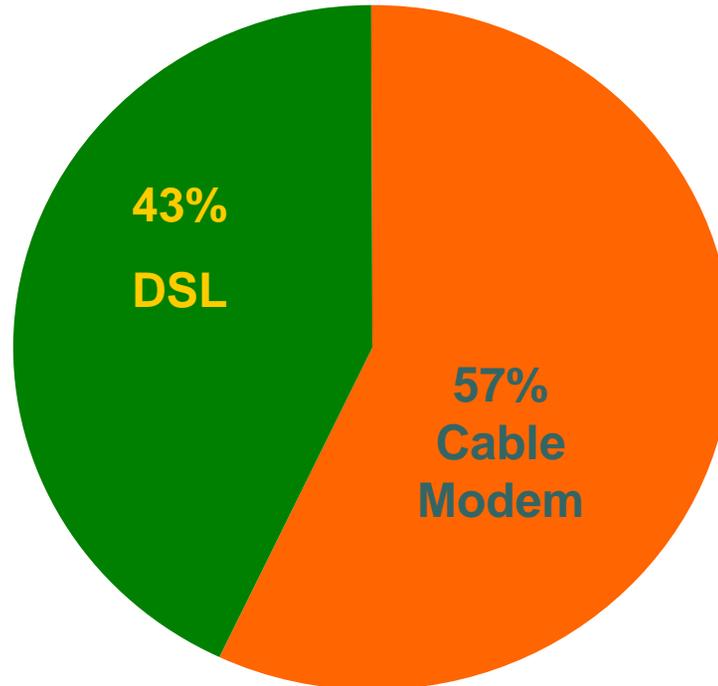
1	California	3.0
2	New York	2.0
3	Florida	1.4
4	Texas	1.3
5	Illinois	0.7

Top 5 States – BB Penetration

1	Massachusetts	24%
2	New Jersey	23%
3	California	23%
4	Washington, DC	22%
5	Alaska	21%

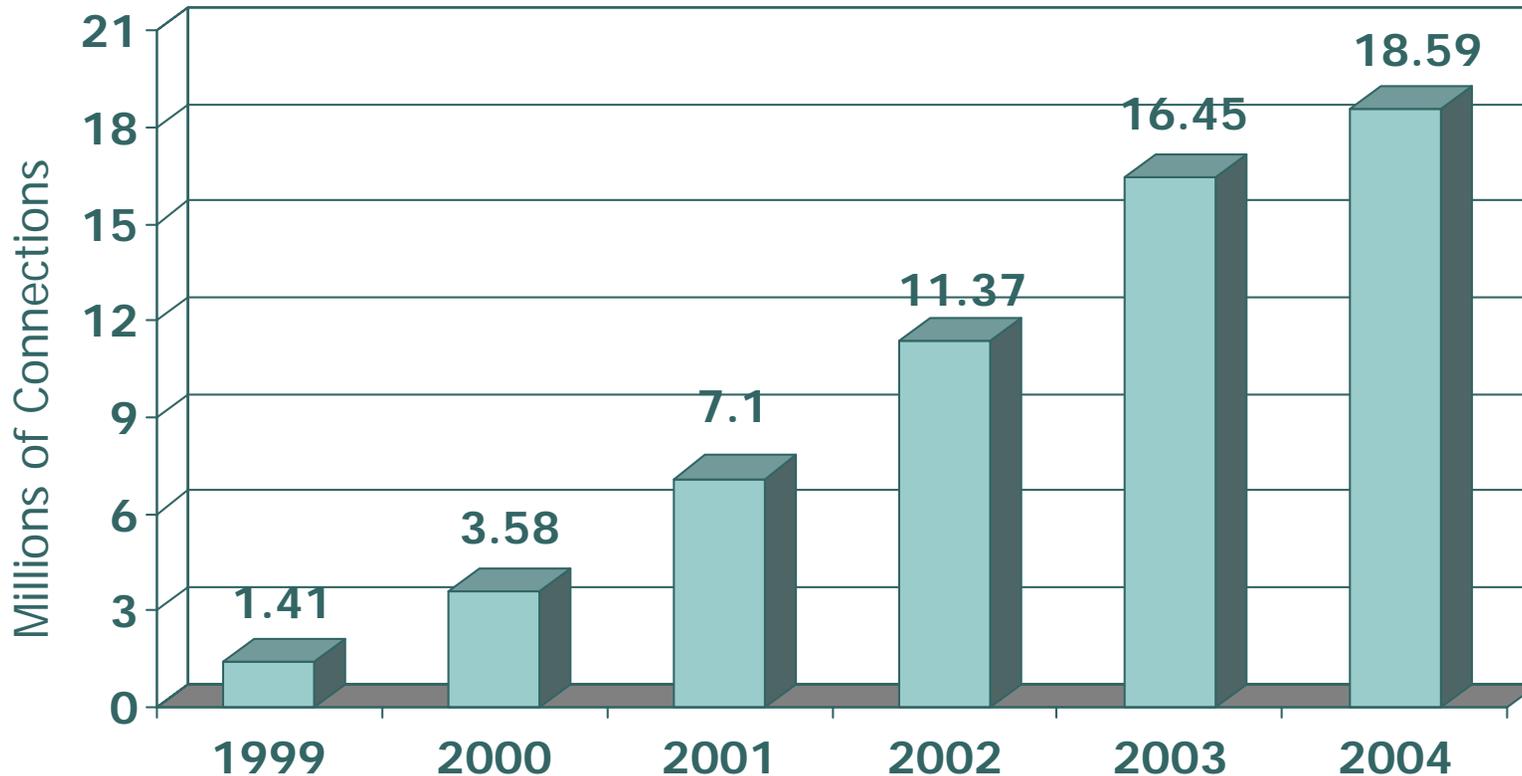
Source: FCC Data and *Telephony*

Cable vs. DSL broadband subscribers in the U.S.

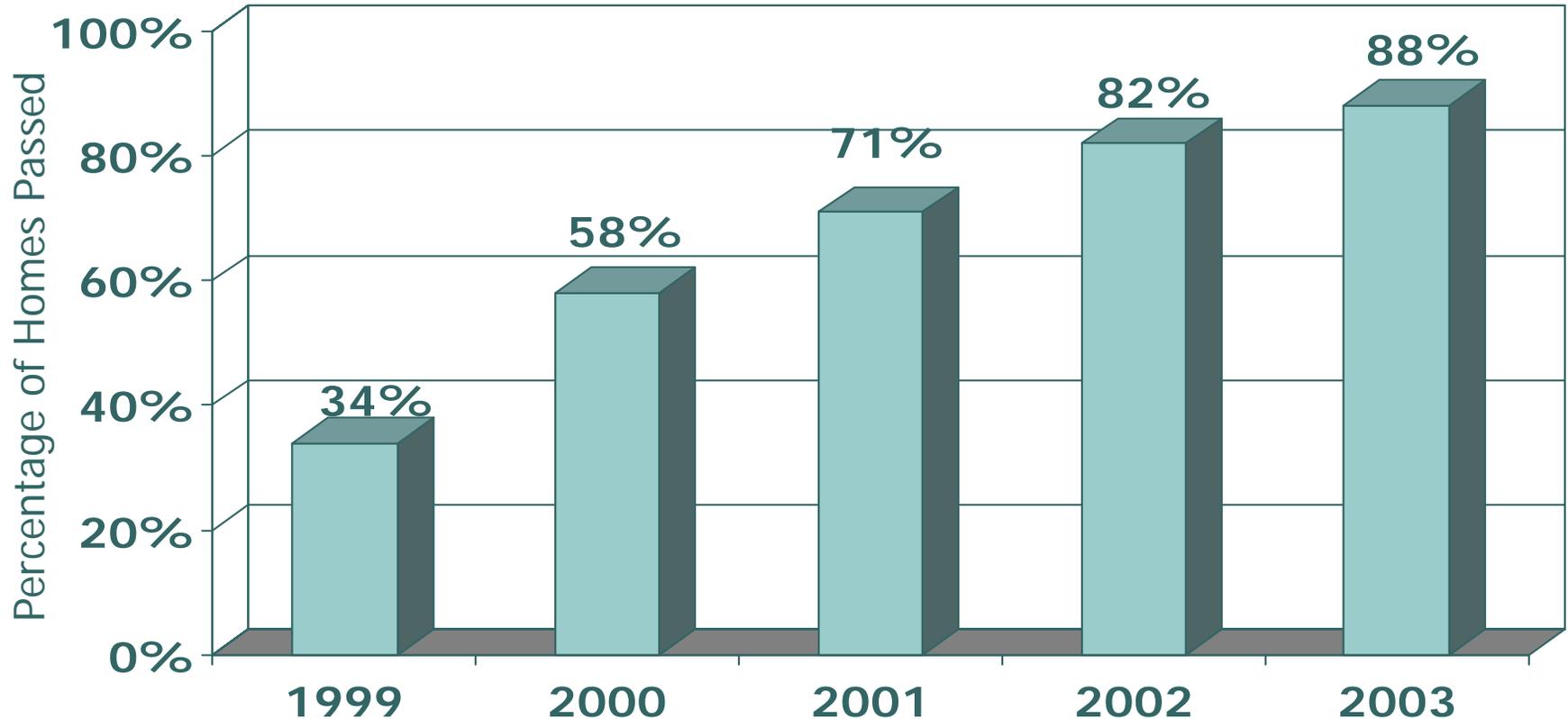


32.5 million total broadband connections in U.S. as of 2004
11.4 million DSL connections; 18.6 million cable modem connections;
2.5 million other connections (e.g. fiber, wireless, or satellite)

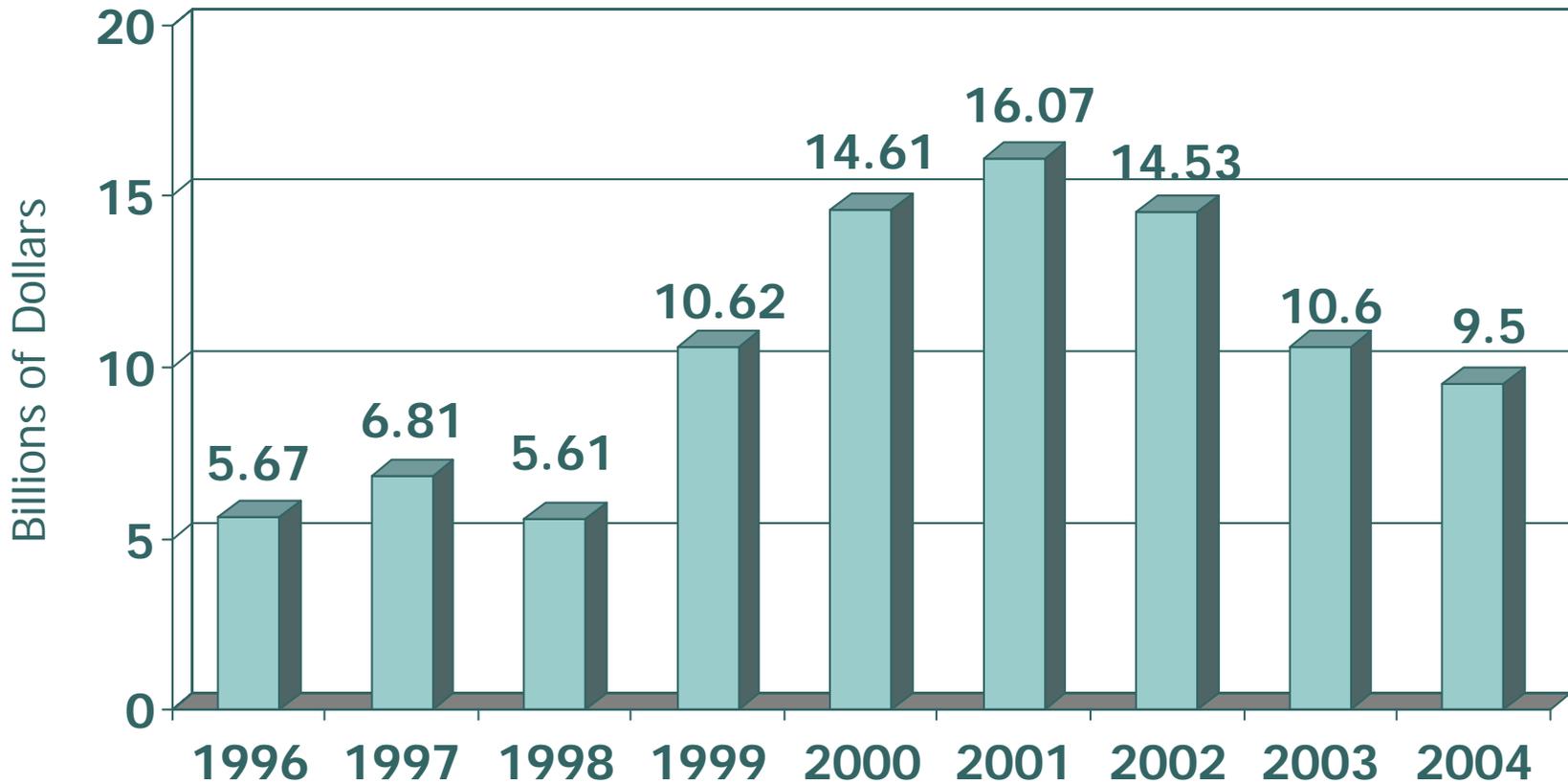
Cable Modem Growth in the U.S.



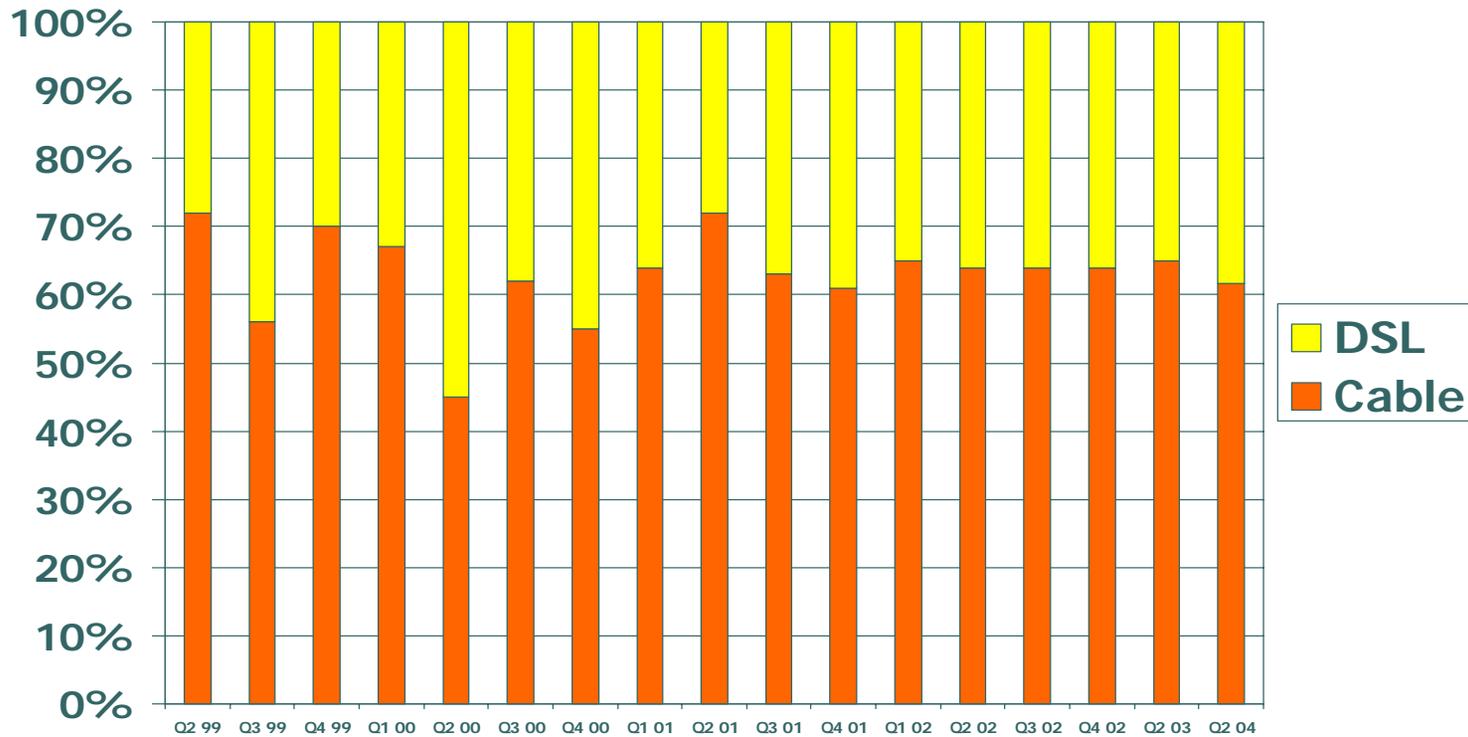
Cable Broadband Availability



US Cable Industry Infrastructure Expenditures



Historical Residential Broadband Market Share

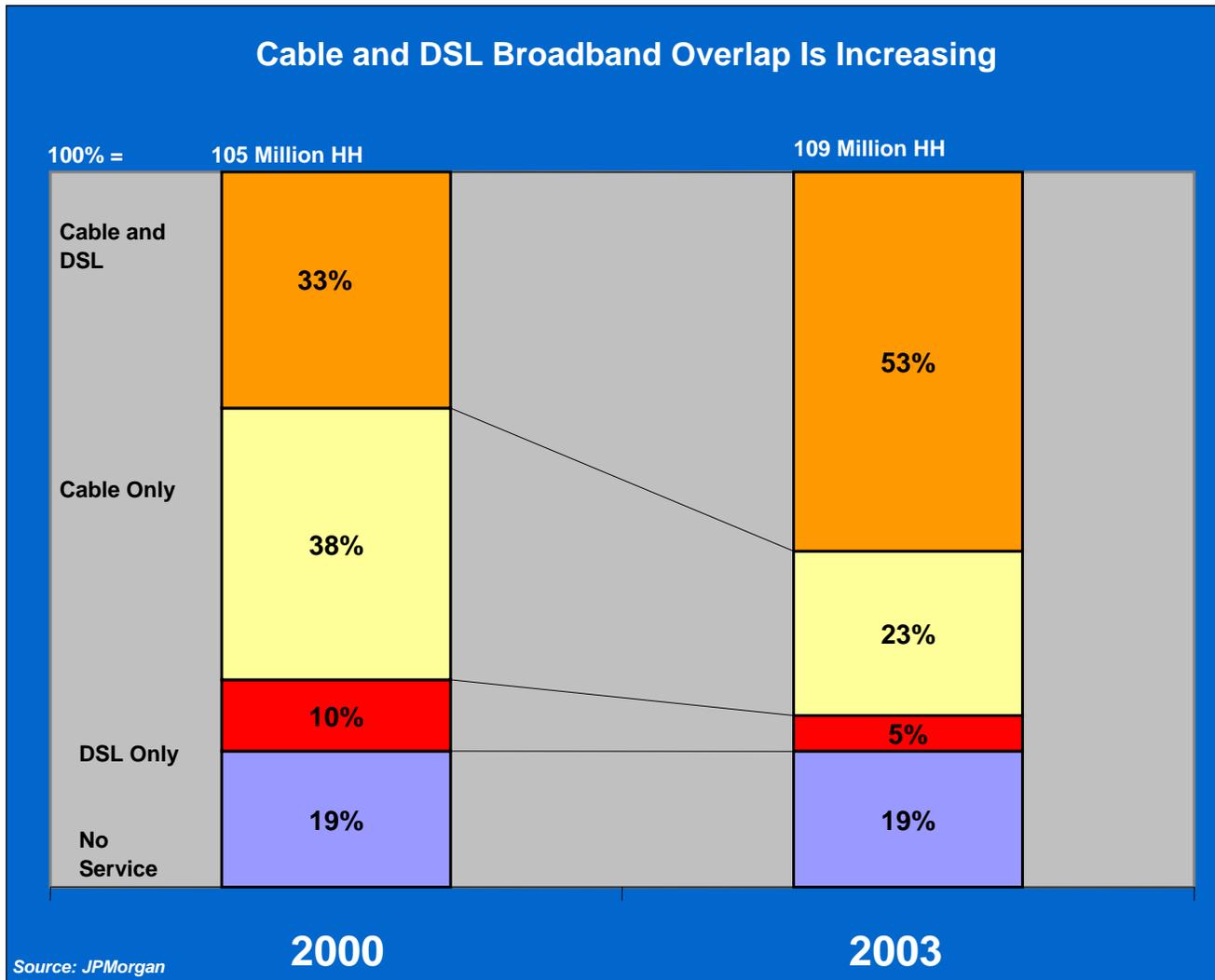


Broadband Investment

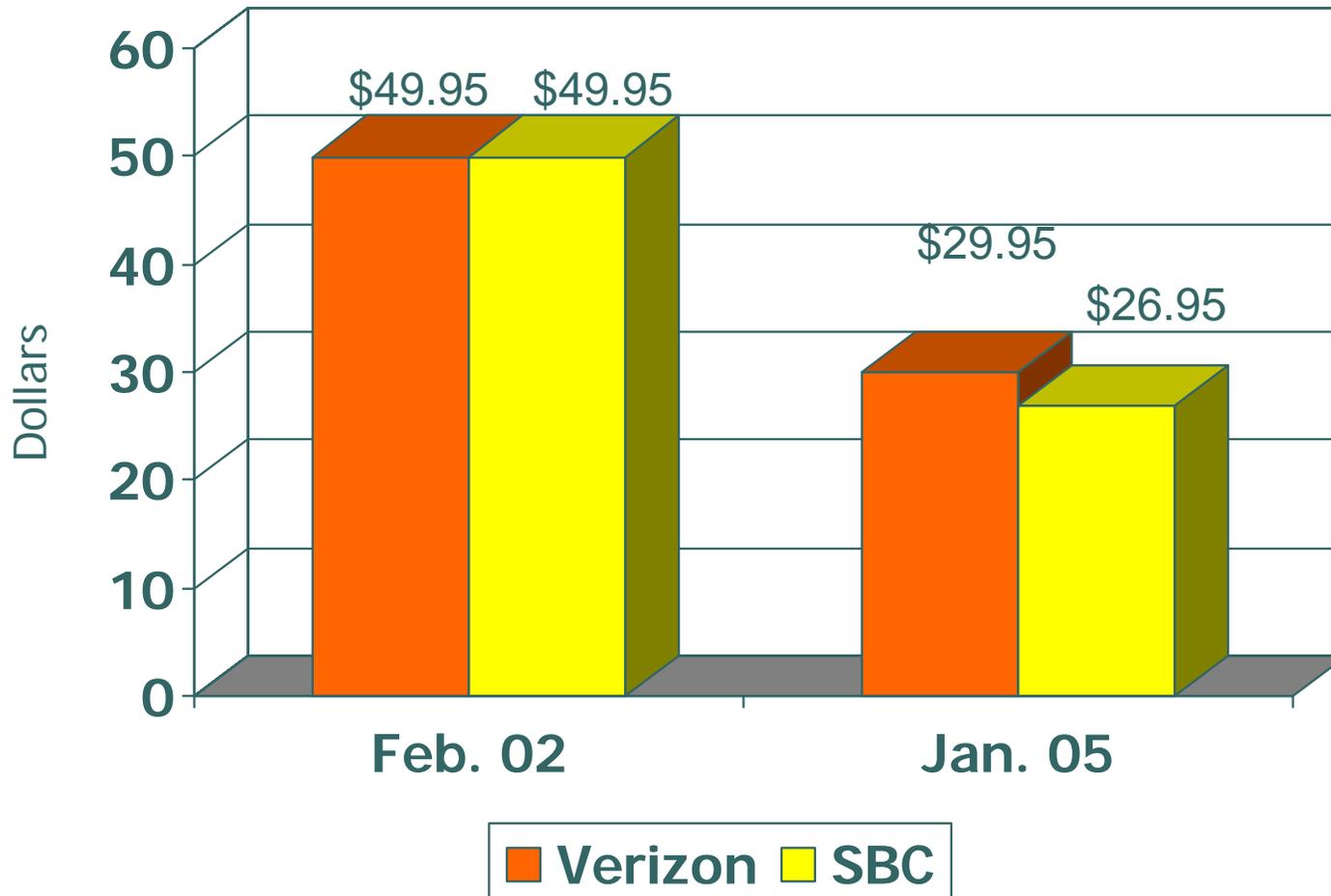
○ Next Generation Telecommunications Networks

- Established less regulated environment
- Removed unbundling obligations for new investment
- Adjusted wholesale pricing for new investment

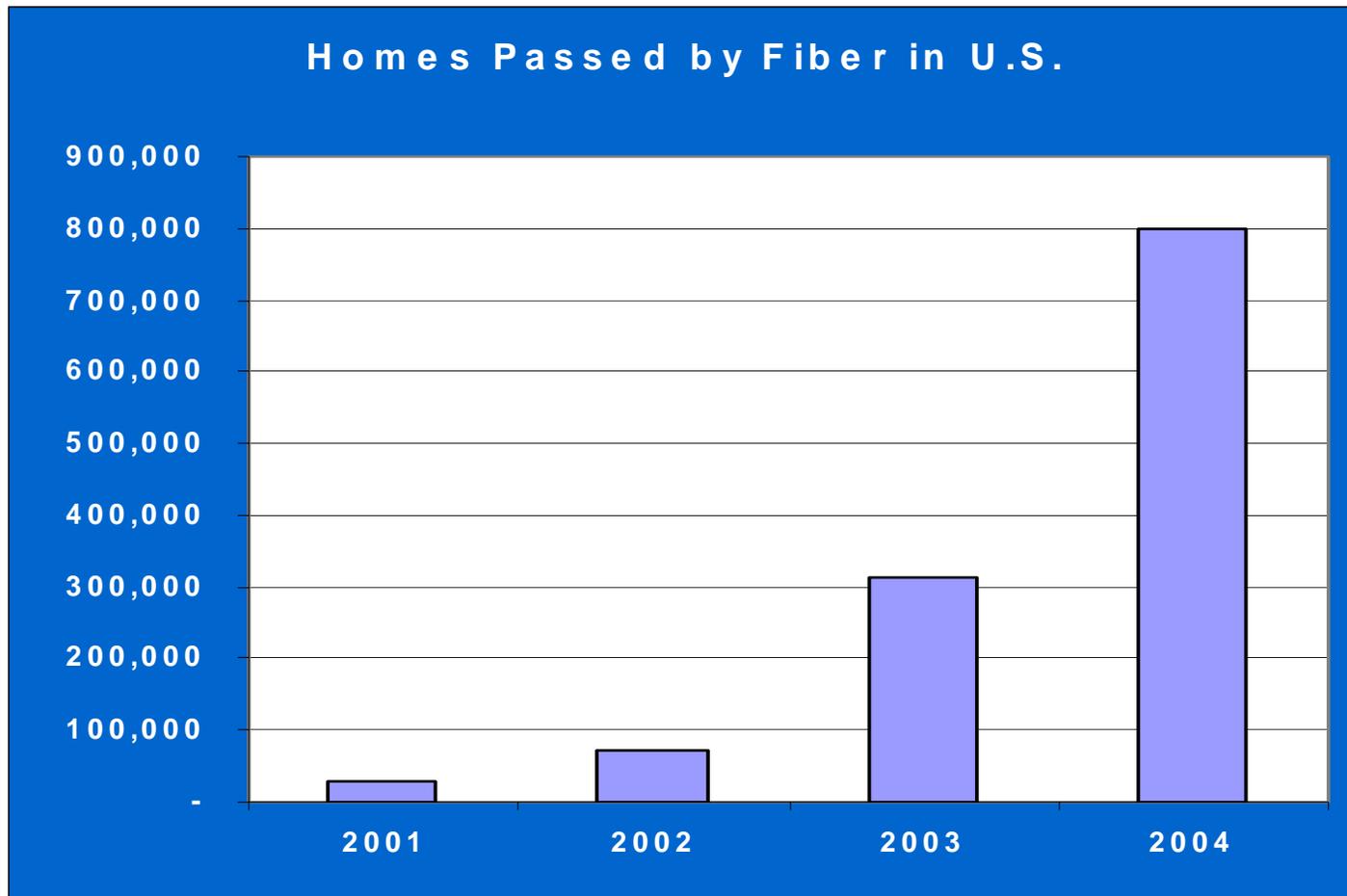
Cable/DSL Availability Overlap



DSL Price Drop



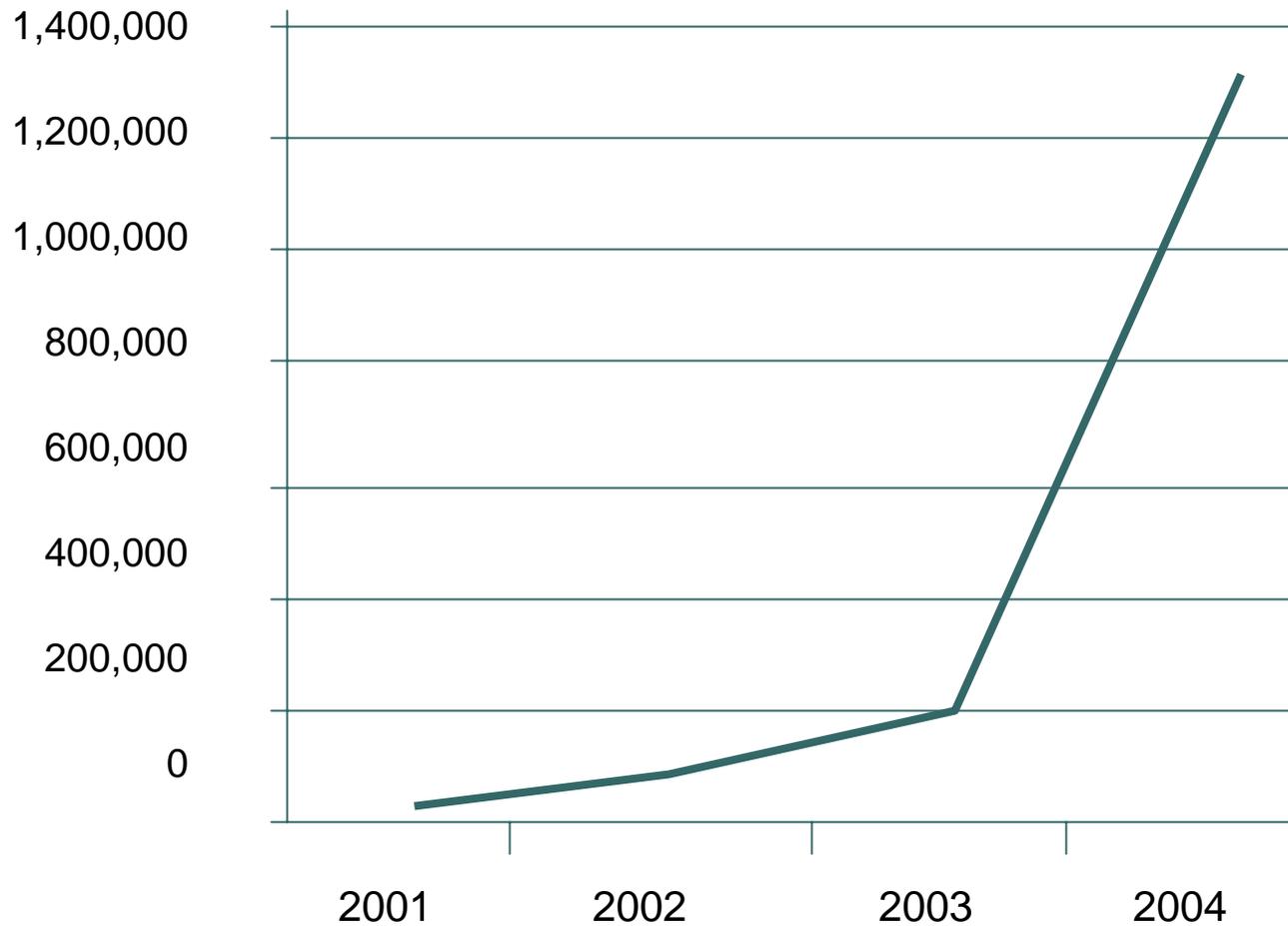
FTTH



States with FTTH Deployment



FTTH Homes Passed



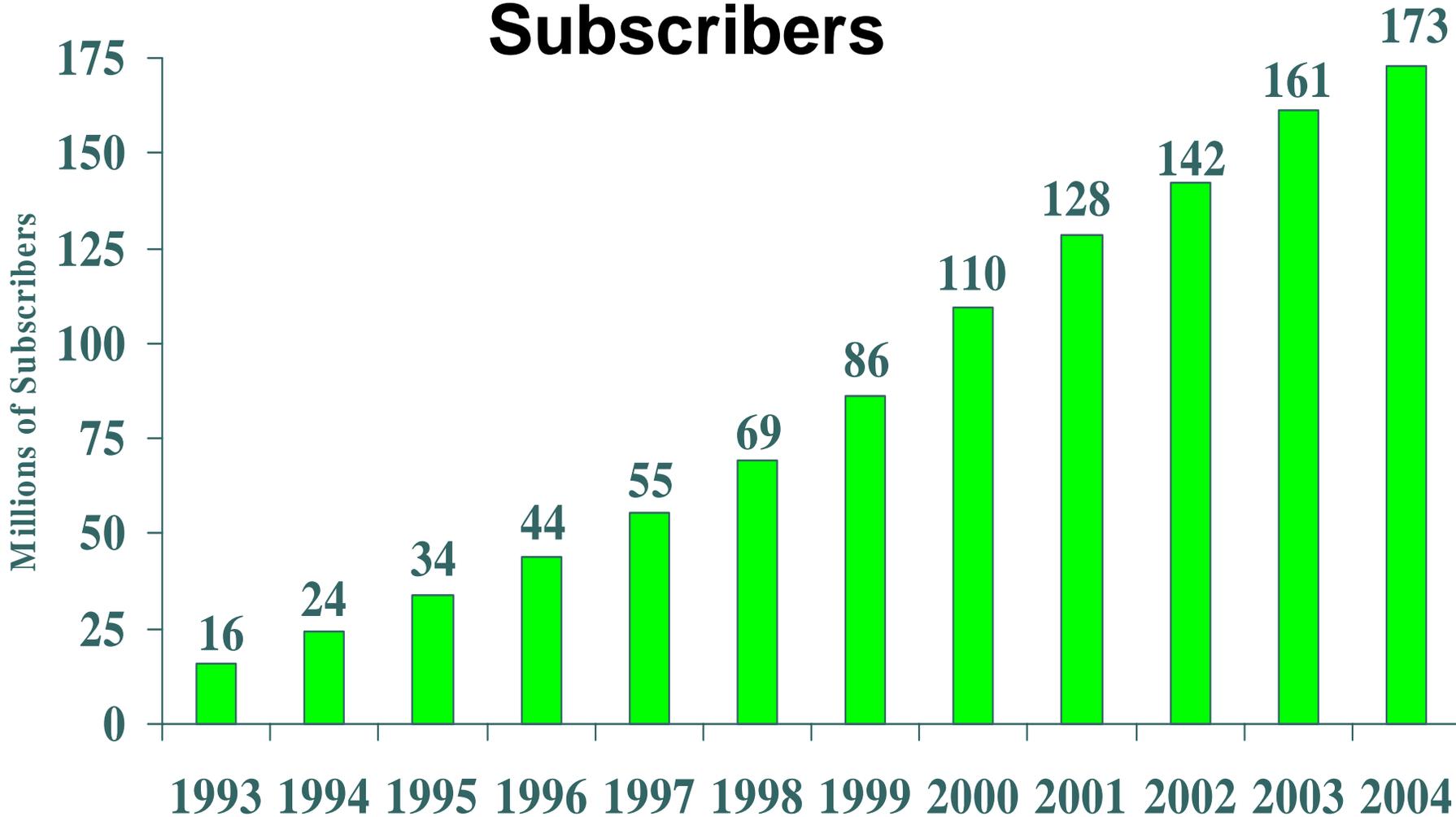
Other New Broadband Technologies

- **Wireless Broadband**
 - Licensed
 - Unlicensed (Wi-Fi and WiMax)

- **Broadband Over Powerline**

- **Satellite**

Total US Mobile Telephone Wireless Subscribers



Wireless: More Than Just Voice

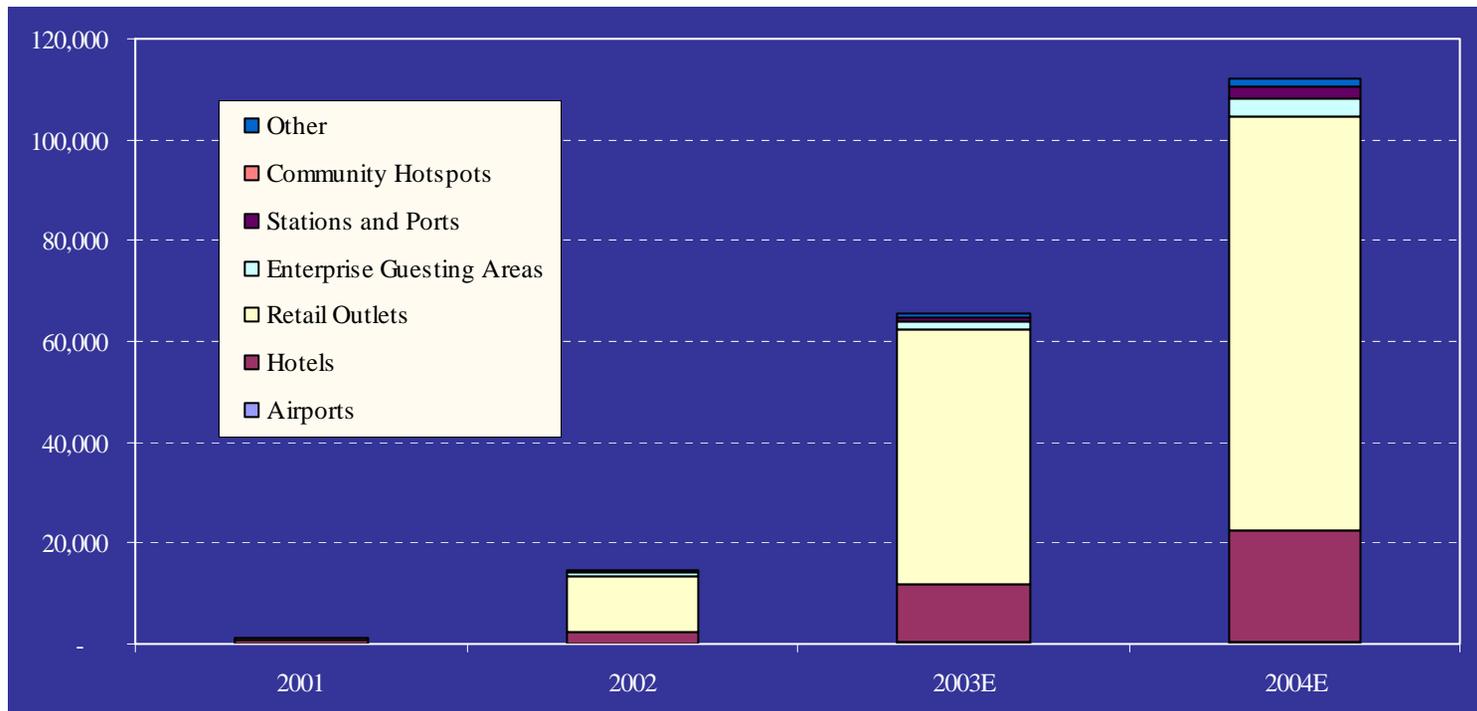
- **2 Billion messages per month**
(doubled between 2002-2003)
- **25% of users send text messages**
- **Advanced applications:**
 - ↑ **Picture messaging:** Verizon users alone share
7 Million pictures per month
 - ↑ **Ring tones:** **\$3.5 Billion industry worldwide** (2003)
 - ↑ **Games:** **12.2 million Americans** (2003)
 - ↑ **Web browsing**

Wireless Broadband

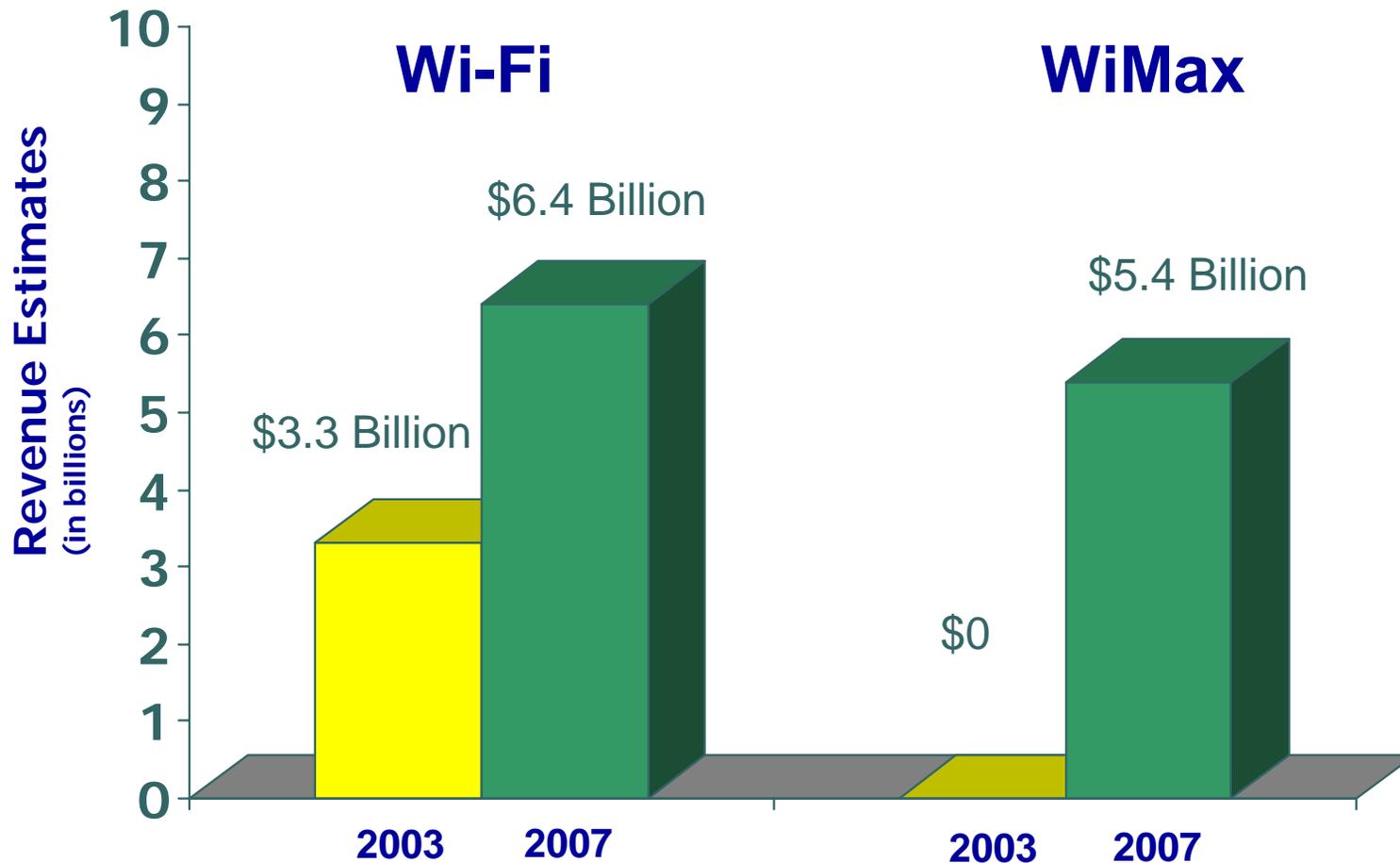
- Carriers continue to invest in new wireless broadband offerings-- such as EV-DO and UMTS.
- FCC has provided additional spectrum that can be used for broadband and advanced wireless services
- FCC recently announced that it intends to auction licenses for certain advanced wireless services -- “3G”

Wi-Fi Hotspots by Location

(Worldwide 2001-2004)



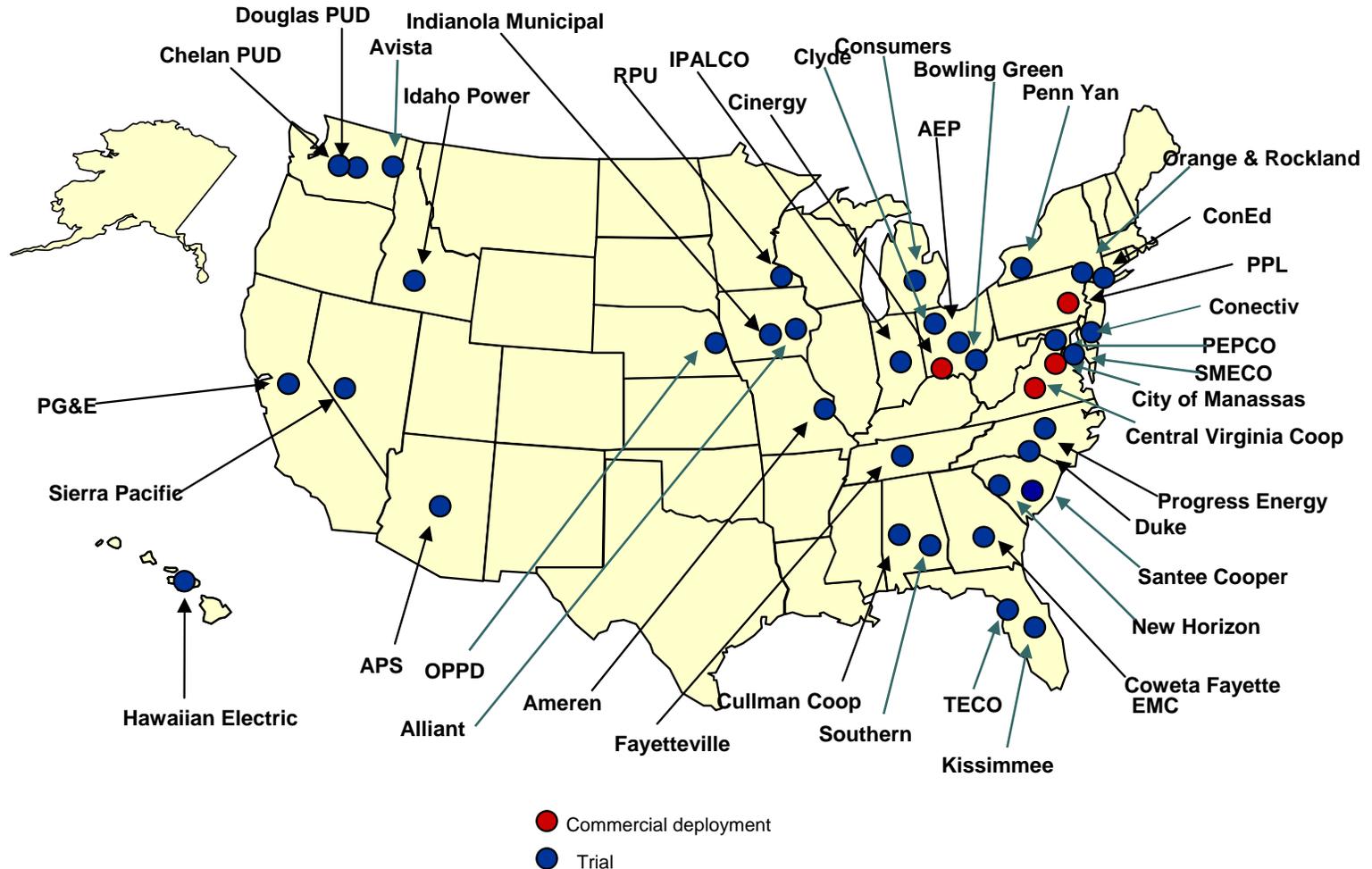
Wireless Innovations



Broadband Over Power Line

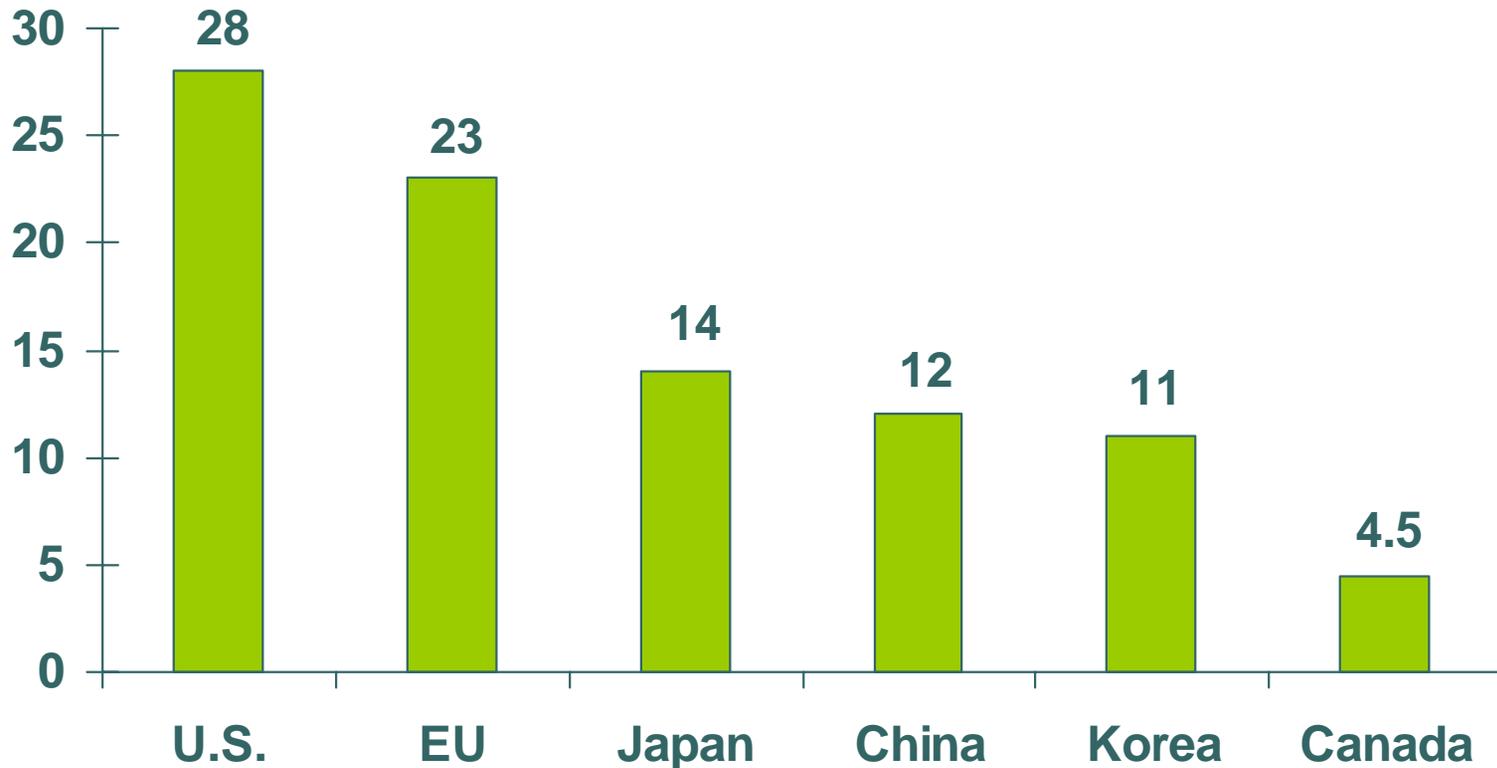
- Provides broadband services to consumers over existing power lines.
- Third “pipe” into the home providing competition to DSL and Cable Modems
- “In House” BPL allows for networking of electronic devices over existing wiring in the home

U.S. Utility Deployments



Largest Broadband Markets in the World

(Millions of broadband subscribers)



Universal Service

- FCC promotes access to telecommunications services nationwide through the Federal Universal Service Fund.
- Four components of the Federal Universal Service Fund:
 - Low-Income Program
 - Rural High-Cost Program
 - Schools and Libraries Program
 - Rural Health Care Program

Universal Service – Low Income

Low Income Program provides discounts on telephone installation and monthly telephone service to qualifying consumers

- LinkUp America: helps qualified low-income consumers to connect to the telephone network (offsets 50% of the initial hook-up fee, up to \$30 for qualified households)
- Lifeline Assistance: provides discounts on monthly service for qualified subscribers. Federal discount = \$9.50 a month
 - Kentucky -- \$ 6.6 million low income support (2003)

Universal Service – High Cost

- Provides financial support to carriers providing service in rural, high-cost, and insular areas
- Enables rural Americans to access telecommunications and information services at rates that are reasonably comparable to similar services in urban areas
 - Kentucky carriers received over \$60 million in federal high cost support in 2003

Universal Service—Schools and Libraries

○ E-Rate Program

- Eligible schools and libraries receive discounts on telephone service, Internal connections (i.e. network wiring) within schools and libraries buildings.
- Discounts range from 20% to 90% depending on household income level of students in the community.
 - Kentucky schools and libraries received over \$19.7 million in E-rate funds in 2003.

Universal Service – Rural Health Care

- Annual \$400 million program provides telemedicine funding:
 - Enables public and non-profit health care providers in rural areas to receive discounts on monthly telecommunications charges, satellite services for mobile medical clinics, and Internet access
 - Rural health care providers use the program to provide a variety of patient services, such as transmitting x-rays from remote areas for diagnosis by health care professionals in urban areas
 - FCC is examining whether network infrastructure should be funded by the rural healthcare program
 - Kentucky -- \$77,000 in Rural Health Care Support (2003)

FCC Rural Broadband Initiatives

- FCC initiated a partnership with the Appalachian Regional Commission to raise awareness of the rural health care program
- FCC and USDA-RUS Created a Joint Federal Rural Wireless Outreach Initiative with private industry to coordinate activities and essential information on programs, financial and other assistance regarding telecommunications opportunities for rural communities.

Universal Service: Progress Continuing

- High Level of National Telephone Penetration in Households: 93.8% (Kentucky 91.9%)
- Highest-Ever Level of Internet Access in Public Schools: 99%
- Highest-Ever Level of Internet Access in Public School Instructional Rooms: 92%
- Highest-Ever Level of Funding to Rural Hospitals: 72% Increase

Universal Service: Ultimate Goal

“This country needs a national goal for...the spread of broadband technology by the year 2007, and then we ought to make sure as soon as possible thereafter, consumers have got plenty of choices when it comes to [their] broadband carrier.”

-- President George W. Bush, March 26, 2004