

ENUM: The View from Washington

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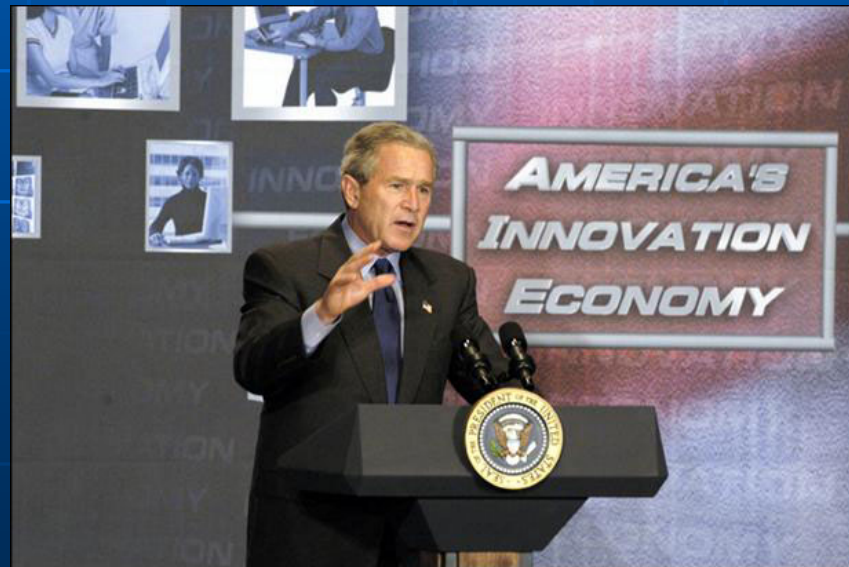


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www.ntia.doc.gov



Overview

- The President's Broadband Vision
- Driving Broadband Demand
- ENUM



We're Number 12!?!

“Hold the champagne. Before you start celebrating America’s global dominance in technology...the United States is lagging significantly behind Europe and Japan.”

“The reason for European and Japanese dominance is a stunner: They’re been helped by coherent government planning...The United States...has been hindered by a chaotic free market.”

“Bureaucratic rule-setting and centralized economic planning – as opposed to US laissez-faire – has enormous economic benefit.”

Not So Fast!!!

Status of the 2006 Wireless Market

GROWTH:

- In 2005, U.S. cell phone subscriptions topped 194.5 million, up 14.5 million from the previous year. Carriers' revenues reached \$55.7 billion for the first six months of 2005. (CTIA 2005).

PRICING:

- Cingular Wireless announced a new service called BroadbandConnect to compete with Verizon and Sprint for \$60 a month for unlimited use of its services.
- On average, monthly cell phone bills were \$50.64 last year. By comparison, the average monthly bill in December 1987 was \$96.83. (CTIA)

SPEED & AVAILABILITY:

- Verizon Wireless and Sprint's New Evolution Data Only (EV-DO) offers speeds from 600-700 kbps. Verizon offers service in 180 major U.S. markets. Sprint offers service in 100 major U.S. markets.
- Cingular's High Speed Downlink Packet Access (HSDPA) offers speeds up to one megabit per second in 16 major cities. Even the lowest speed the U.S. companies promise, 400kbps, is faster than the maximum speed of today's common European systems

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

Overarching Goal: Promoting Economic Growth

Thanks to the President's policies, America's economy is strong:

- GDP grew 1.1% in 4Q05 and 3.5% in 2005, above the averages of the past 3 decades. During 2005, EU25 GDP grew 1.3% and euro-zone GDP grew 1.2%.
- The economy has shown job growth for 30 straight months and added nearly 4.8 million new jobs since August 2003 – more than Canada, France, Germany, Great Britain, and Japan combined.
- From 2000 to 2004, productivity grew at its fastest 4-year rate in over 50 years.
- 243,000 new jobs added in Feb. 2006 – the U.S. unemployment rate is 4.8% (Feb. 2006), while the EU25 unemployment rate is 8.4% (Dec.).
- Manufacturing activity (ISM index) has been growing for 30 straight months – the longest period of growth in 16 years.
- National homeownership was 69.0% (4Q-05), near its record high of 69.2% in 4Q04.

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 → Verizon passed 3 million homes with fiber by the end of 2005, with an additional 3 million homes in 2006. (Source: Prudent Speculator 3/6/06) Verizon expects to spend more than \$5 billion total on its FiOS fiber project. (Source: Communications Daily 10/26/05)
- SBC will invest \$800 million in video and high-speed Internet technology in Texas. SBC's Project Lightspeed plans to install about 5,500 miles of fiber-optic wire and related network technology throughout the state. (Source: BusinessWire/Yahoo 11/17/05)

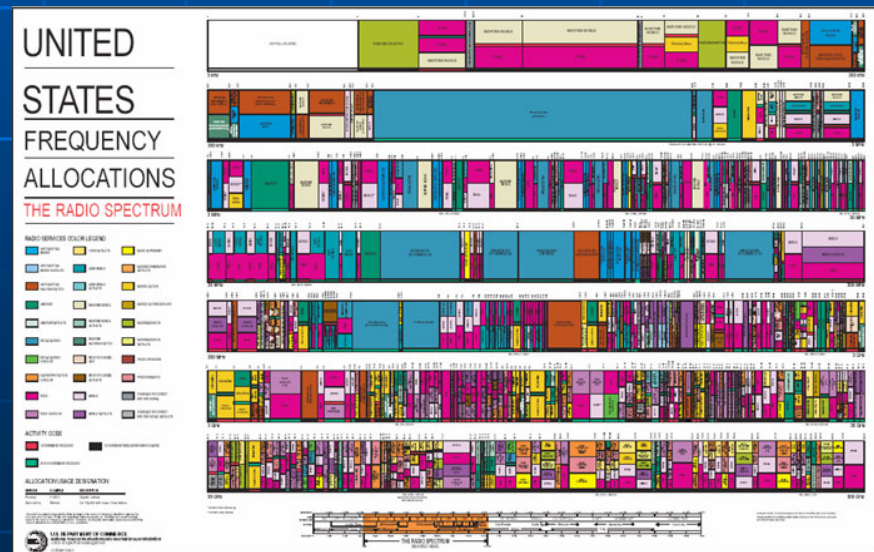
Moore Meets Marconi: Wireless Broadband and New Technologies

“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”) – WiMAX, HSDPA, CDMA2000 1xEV-DO Revision A**
- **Ultra-wideband**
- **5 GHz Spectrum – Wi-Fi**
- **70/80/90 GHz**



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

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

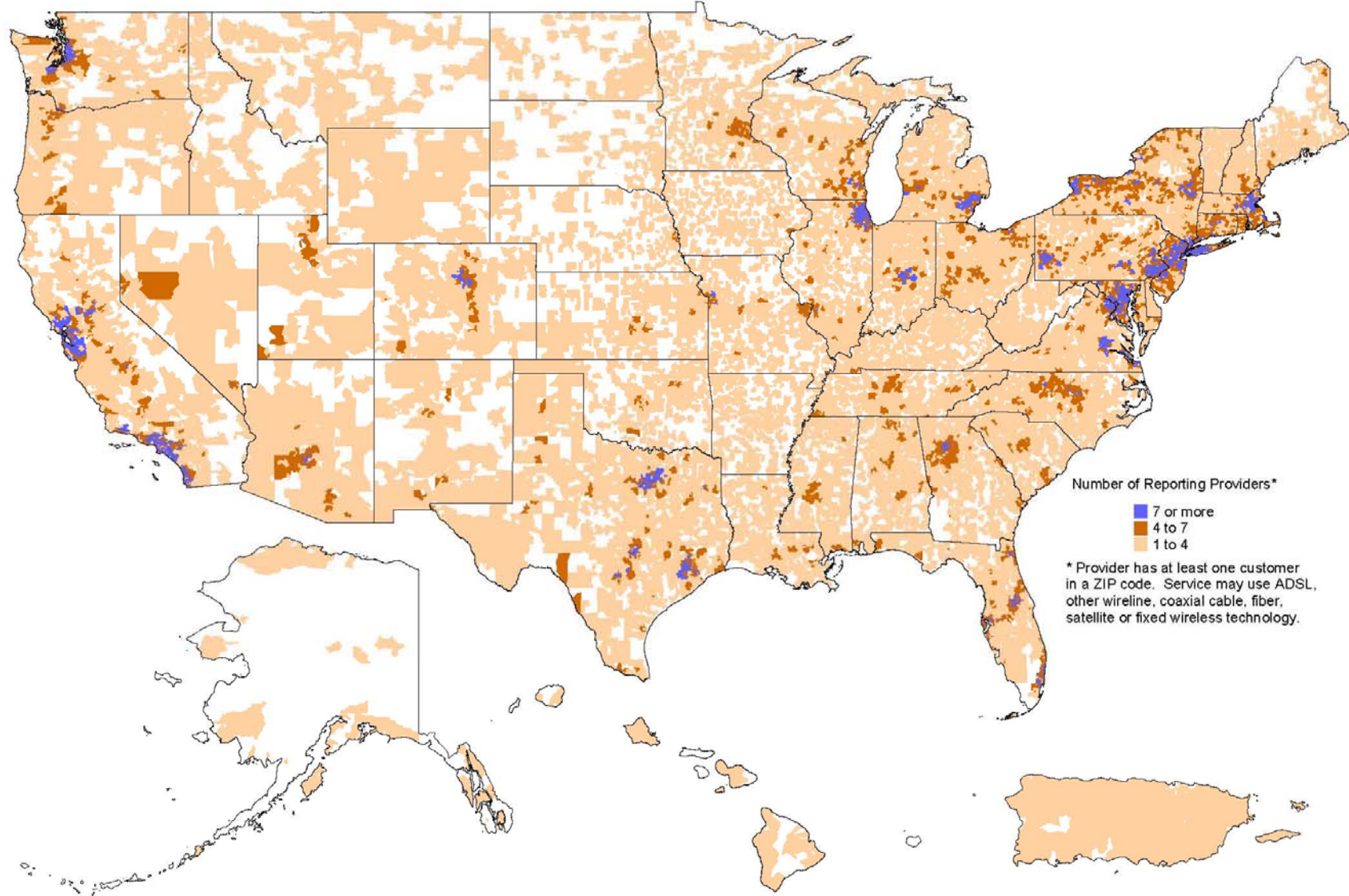


HomePlug Modem
can turn an electrical
outlet into an
Internet connection.

U.S. Investment in Information Technology

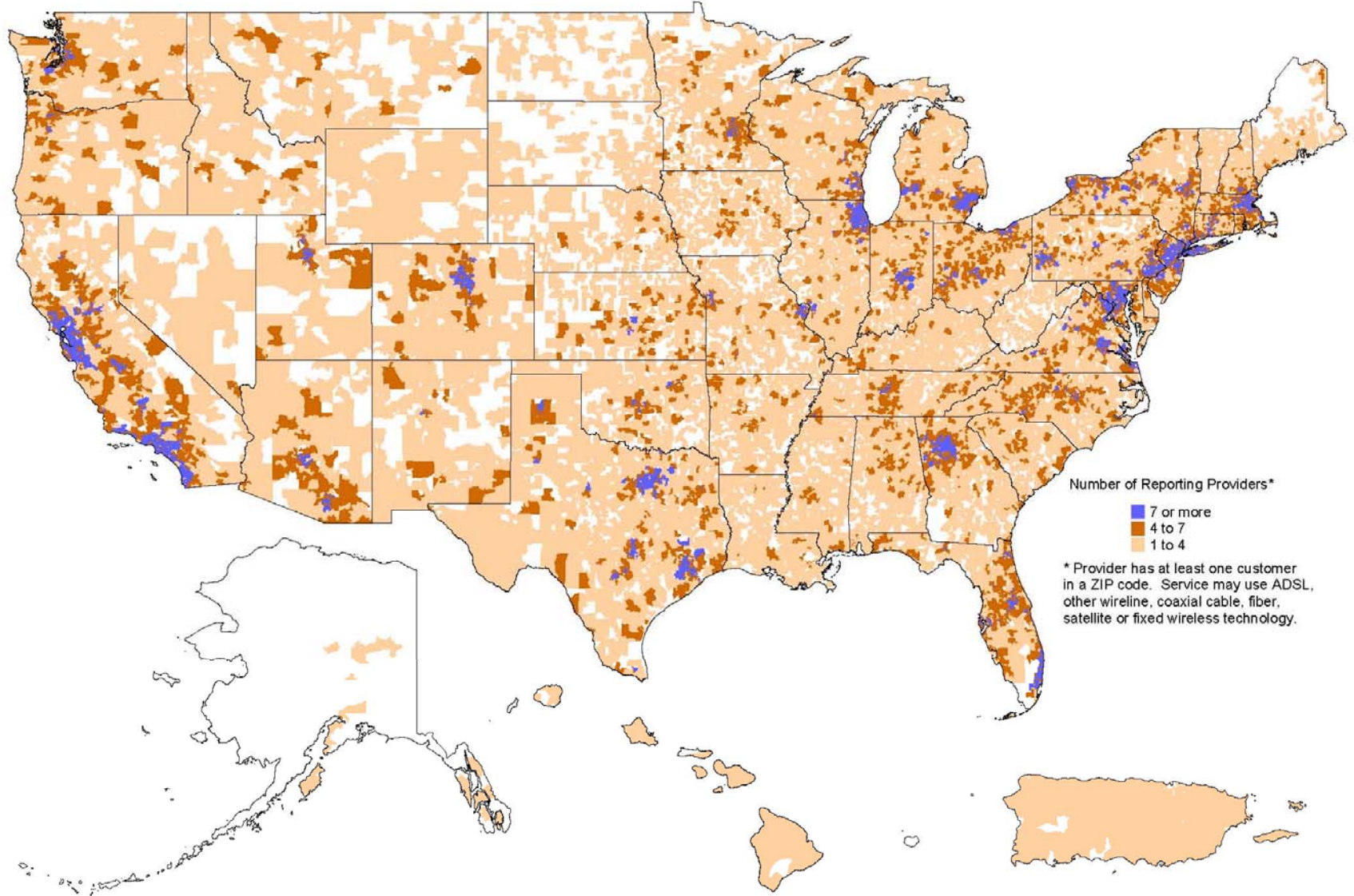
- IT spending has rebounded after the downturn of 2000. From 1Q03-1Q05, major segments of IT investment spending grew between 22% and 48%.
- IT producing industries have contributed to real economic growth: IT contributed 8.0% in 2003 and 12.0% in 2004 to the rise in GDP.
- In 1Q05 businesses invested in information processing equipment and software at an annual rate of \$521.5 billion.
- Private fixed investment reached over \$2 trillion in 1Q05—a 13.1% increase over 1Q04.

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



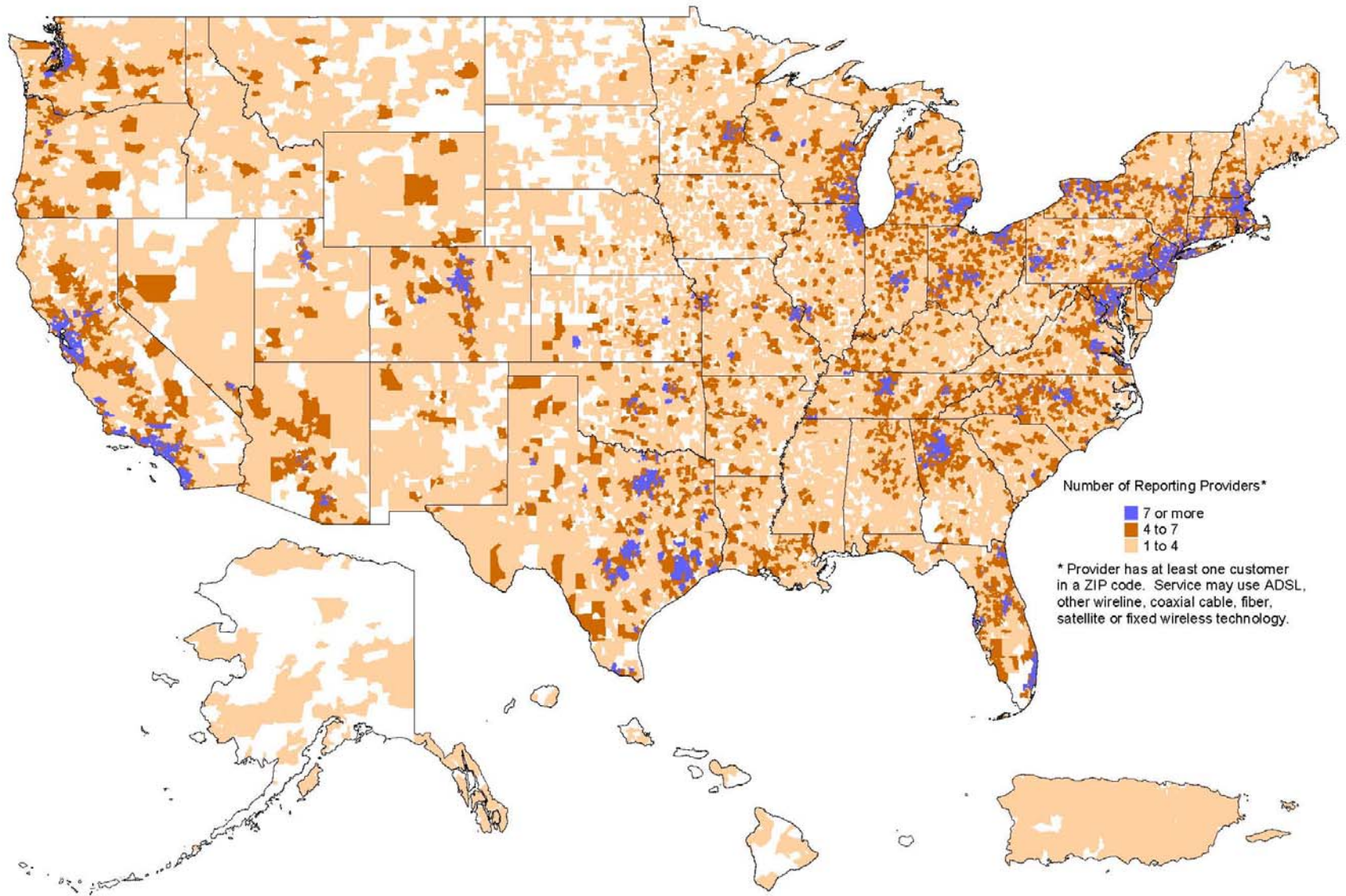
Source: FCC

High-Speed Providers by ZIP Code (As of June 30, 2001)

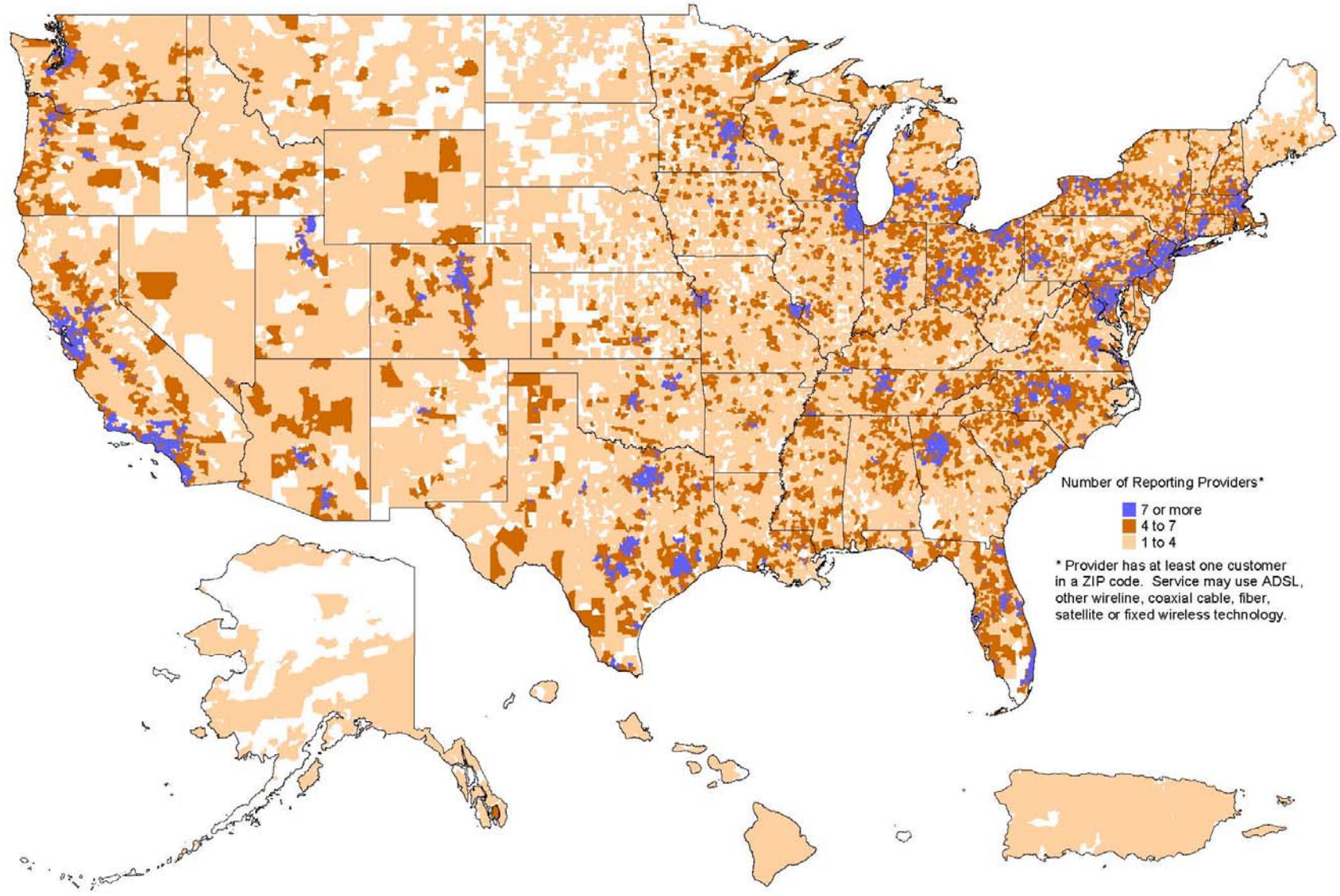


Source: FCC

High-Speed Providers by ZIP Code (As of December 31, 2001)

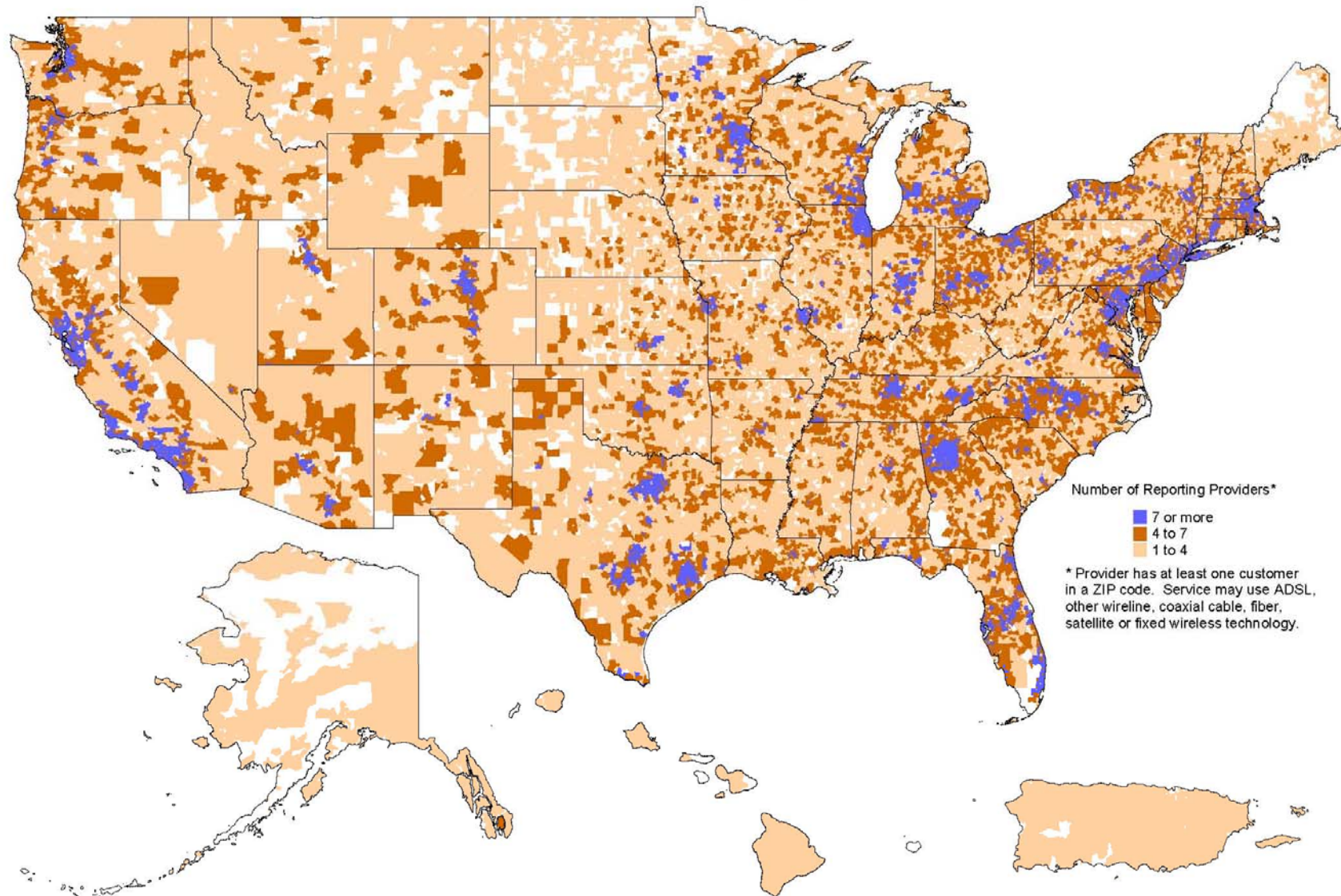


High-Speed Providers by ZIP Code (As of June 30, 2002)



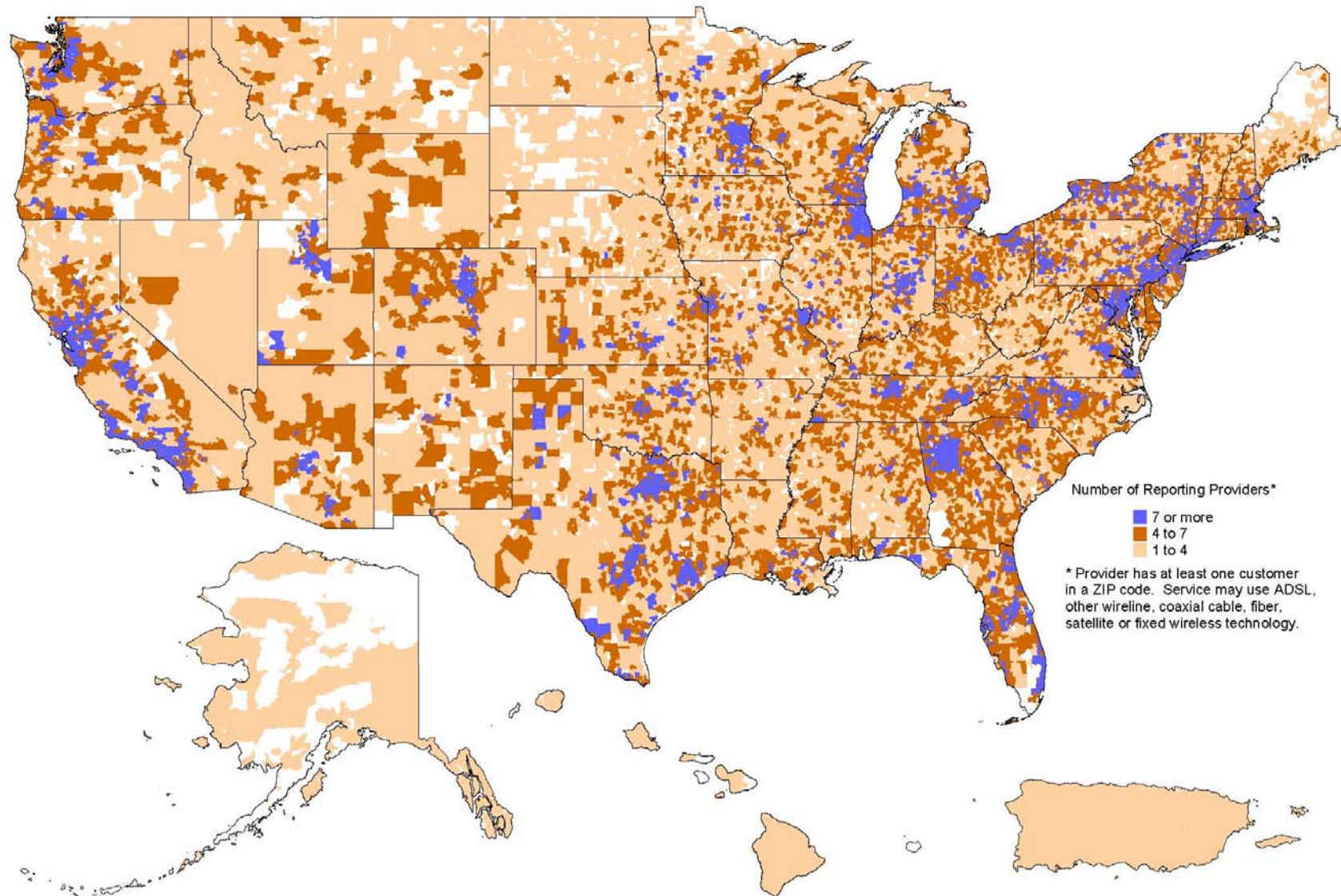
Source: FCC

High-Speed Providers by ZIP Code (As of December 31, 2002)

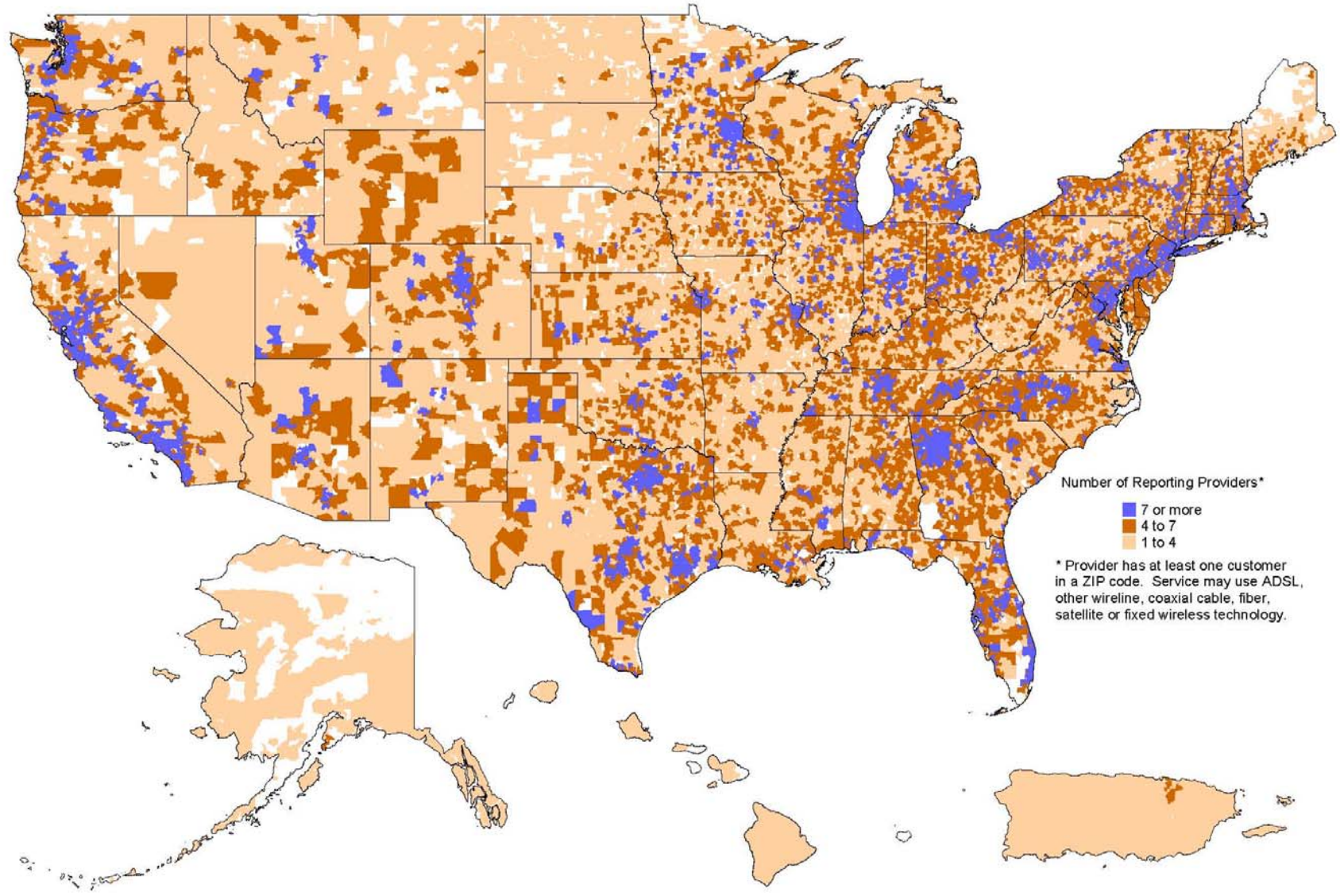


Source: FCC

High-Speed Providers by ZIP Code (As of June 30, 2003)

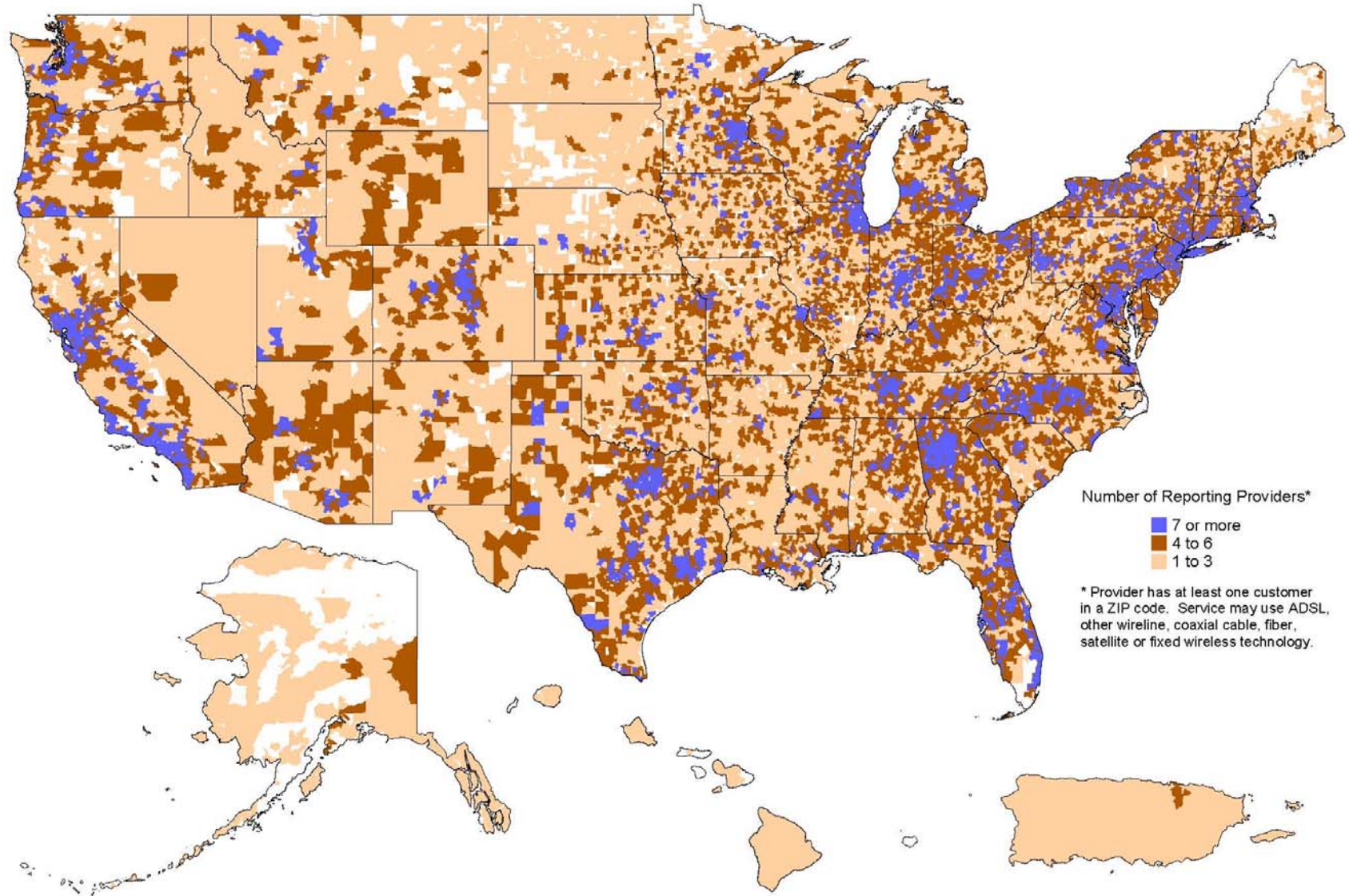


High-Speed Providers by ZIP Code (As of December 31, 2003)



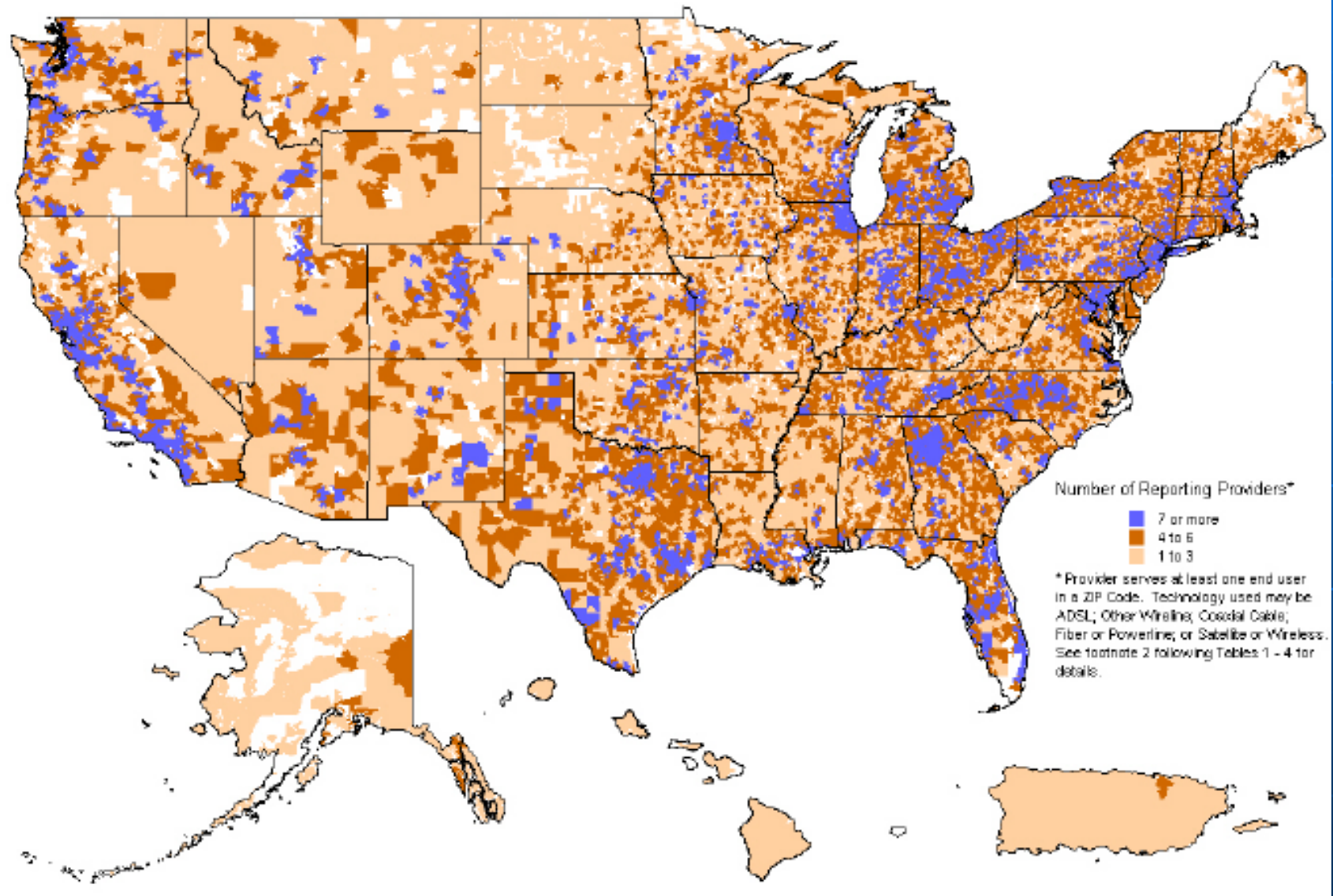
Source: FCC

High-Speed Providers by ZIP Code
(As of June 30, 2004)



Source: FCC

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



Source: FCC

ENUM: Driving Broadband Adoption Through Convergence

- Electronic numbering (ENUM) protocol promises true convergence by facilitating communications through email, fax, instant messaging, or voice calls by using a single telephone number for all transmissions.
- “Public,” or end user, ENUM can be a powerful directory assistance or communications management tool.
 - Caller who knows only a friend’s landline phone number can use ENUM to access a file that provides the called party’s mobile phone, Blackberry, fax number, or e-mail address.
 - ENUM users can also create and modify records that control when they can be contacted and through which device or medium.
- Supporters believe that “private,” or carrier, ENUM can increase the efficiency of network routing, reduce communications costs, and facilitate interchange of traffic among IP-based networks.

View of ENUM from Washington – Take 1

- The government should not pick winners and losers

"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.

The View from Washington – Take 2

- U.S. Government is committed to ensuring that you have a full opportunity to succeed.
- NTIA has been actively involved in industry's efforts to deploy ENUM in the U.S.
 - Government/industry roundtable on ENUM in August 2002 to discuss the benefits and challenges of the new protocol.
 - Letter to the State Department in February 2003 urging the implementation of ENUM in the U.S.
- NTIA, in partnership with the FCC, the FTC, and the State Department, worked successfully to obtain a delegation from the ITU in order to conduct an ENUM trial in the U.S. and other nations in Country Code 1.

The View From Washington – Take 3

- Industry should have considerable flexibility in implementing ENUM in the U.S.
- Minimize Regulation – Coordinated, global implementation of ENUM should not give rise to a new regulatory apparatus to govern international and domestic deployments.
- Preserve National Sovereignty – U.S. must retain the right to determine whether and in what manner ENUM is implemented domestically.

Final Thoughts

- Broadband access is strong
 - 98% of U.S. Zip Codes (comprising 99% of U.S. population) are served by at least one broadband provider.
- Broadband adoption is growing
 - High speed lines increased 32% to 42.9 million lines from June '04 to June '05.
- Huge untapped market
 - Although 98% of Zip Codes have broadband access, only about 17% of households subscribe.
- Increased convergence and new ENUM-enabled applications will be the driver to this enormous untapped market of potential broadband subscribers.

THANK YOU