

U.S. in the broadband slow lane

GAP WITH OTHER COUNTRIES IS WIDENING

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The United States invented the Internet. But it's falling behind in the global broadband race.

In 2001, it was fourth in the number of broadband subscribers per capita. Now it's 15th.

What's more, high-speed Internet service in countries like Japan, France and South Korea is many times faster than in the United States and noticeably cheaper. In Japan, the average connection speed is 93.7 megabits per second, or more than 10 times faster than the average speed in the United States, according to a recent study. Yet average monthly prices are lower: \$34.21 compared with \$53.06 here. Subscribers in Sweden pay an average of \$34 a month and get speeds that are more than twice as fast.

"We're in the tech capital of the world, supposedly," grumbled Chris Brubaker, a San Jose resident who suffers from bandwidth frustration. "There just doesn't seem to be an option to get the speed which I'm looking for and I'm willing to pay for."

The widening broadband gap could have broad ramifications. Some say it threatens to turn the tide on Internet innovation in the United States, where a Net-savvy population traditionally has favored domestic entrepreneurs, who have come up with breakthrough companies such as Google, eBay and Facebook. Lower penetration also could slow job growth and business development.

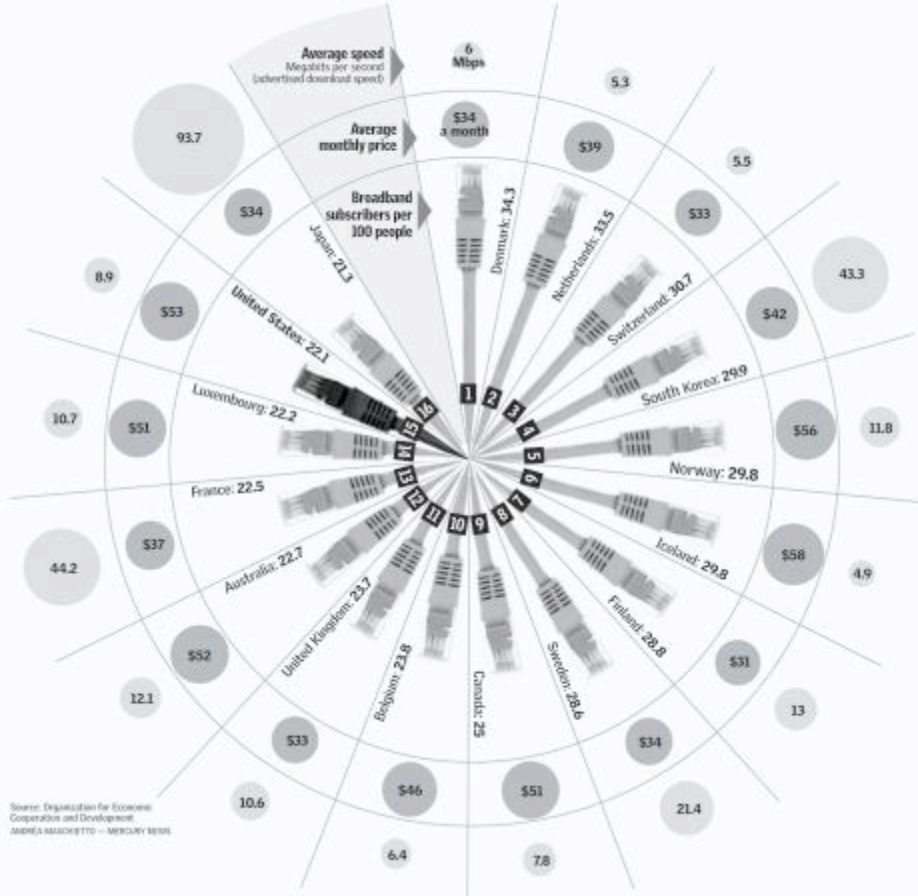
Faster speeds and cheaper prices clearly add to what people can do online. In some Asian and European countries, quicker connections permit video and television programming to flow more freely and are pushing new applications, such as low-cost video conferencing, online classrooms and telemedicine - which allows doctors to make diagnoses from a distance.

In Silicon Valley, Brubaker says he's eager to improve his Sprint service's "uplink" speeds for the large computer files he generates as director of marketing at Mountain View-based Habeas, an e-mail management company.

A more capable DSL connection "would increase my productivity," said Hubert Nguyen of San Francisco, who operates the gadget Web site Übergizmo from his home. "The pages would load faster and you could download big images."

U.S. lags in broadband

While the United States has the most broadband subscribers, it ranks only 15th when counting subscribers per 100 people — well behind other countries that often provide faster Internet access at a lower price.



Troubling trend

The U.S. broadband disadvantage troubles companies such as Google, Cisco Systems and Intel, as well as some policy-makers.

"I think that in the long run it threatens our economy, our innovation, our health care, our education and job creation," said Rep. Edward Markey, D-Mass., who chairs the House subcommittee on telecommunications and the Internet. "Right now, I think most Americans would be shocked we've slipped to No. 15."

But prescriptions for a solution are far from unanimous. Many experts call for incremental reforms, such as encouraging the construction of networks in rural areas and putting more government information on the Web to encourage people to go online. Others advocate dramatic change, including a return to regulations forcing telecommunications companies AT&T and Verizon Communications to rent their wires at favorable prices.

A study released earlier this month found the United States had 66.2 million broadband subscribers as of June, the most in the world. But that amounted to only 22.1 subscribers per 100 residents. The leader, Denmark, had 34.3 subscribers per 100 residents and No. 2 the Netherlands had 33.5, according to the

report by the Organization for Economic Cooperation and Development, an international government-funded research organization. Thirteen countries had faster connections and 20 countries had lower prices.

While the study has critics who complain it doesn't include Internet access from work or school, it is generally respected in the industry, and its publication once again spotlights how the United States is falling behind.

Competition explains many of the broadband disparities around the world. Where competition is high, prices fall and speeds rise. But other factors contribute as well, including government policies that assist and encourage network construction.

In South Korea, for instance, active competition, high population density and high prices for slower dial-up Internet access combine with government investment to create an environment where broadband has flourished. The country has telecom networks that made it easier to achieve high broadband speeds: "loops" between homes and telecom facilities are short.

European competition has been sparked by regulations requiring telecommunications companies to rent lines to competitors.

"What's happening is other countries are adopting faster than we are," said Robert Pepper, senior managing director for global advanced technology policy at Cisco.

Without an attractive choice, many Americans have stayed with inexpensive dial-up connections. Eighteen percent of households still had dial-up in 2006, according to Forrester Research.

The United States also has a more dispersed population than many countries, making broadband more expensive to install, even though about 80 percent of Americans are bunched around urban areas. Federal Communications Commission decisions relaxing requirements that telecommunication companies rent lines to alternate providers of DSL broadband service also deserve blame, some claim. In Europe, "unbundling" opened the flood gates to competitive DSL offerings.

Limited competition

The FCC's decision left the United States with few alternatives to the cable and telecom companies that dominate local markets.

"We have a situation with a lack of competition," said Richard Whitt, Google's Washington telecom and media counsel.

But some experts say competition in the United States is on the rise and the U.S. position as an Internet leader is not threatened. Telecoms long argued that regulations requiring them to rent lines inexpensively kept them from investing in new equipment. Now, with the regulations removed, they are investing. Both Verizon and AT&T are spending billions of dollars putting in high-speed fiber-optic lines.

"Over 50 percent of U.S. homes have broadband," said Link Hoewing, Verizon vice president for Internet. "It's one of the fastest-growing technologies in the history of the United States."

"We see lots of rivalry," added Peter Pitsch, associate general counsel at Intel. "We see lots of price competition between cable and telecom."

New connections

Other technologies also may come to the United States' rescue, such as faster wireless connections and municipal wireless WiFi networks.

Sally Cohen, an analyst for Forrester, projects that about 70 percent of U.S. households will have broadband by 2012.

Still, the United States has to climb out of a big hole - and could pay a price for dawdling. A 2005 study by researchers at the Massachusetts Institute of Technology and Carnegie Mellon University found that broadband deployment is good for business. Communities where broadband became available experienced faster growth in employment and in the number of businesses created, the study discovered.

Venture investing in the United States likewise could suffer if Europe and Asia become the new test beds for emerging Internet applications. More start-ups are turning abroad to test innovative Internet ideas because of the more advanced broadband infrastructure, said Tom Wheeler, managing director at Washington, D.C.-based Core Capital Partners.

"One of the things we lost when we lost world leadership in broadband is the home field advantage," Wheeler said.

San Jose resident Brubaker says higher speed broadband would change the way he uses the Internet, allowing him to take advantage of more online applications, such as a service to back up data, a high-definition movie download service or technology to send television to his laptop when he's on the road.

"I don't think we realize what we're missing," he said.

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