

High Speed to the Hinterlands

Getting high-speed Internet to the remaining 6 percent of the population that lacks it takes a concerted effort.

BY GARRY BOULARD

When South Dakota Senator Orville Smidt surveys his state's growing and vast communications infrastructure, he's hopeful about the future. "We have more coverage at this point, particularly in the most remote communities,



**SENATOR
ORVILLE SMIDT
SOUTH DAKOTA**

than we've ever had," he says.

"And the involvement of different institutions here who absolutely have to have high-speed Internet connections for their work has made our situation only better," Smidt says.

Those institutions include the Homestake Deep Underground Science and Engineering Laboratory, a national lab in the state's Black Hills run by the National Science Foundation; the EROS Data Center in Sioux Falls, which produces aerial satellite mapping; and the Geographical Information Science Center of Excellence at South Dakota State University. All of them have a "very significant interest, emphasis and need for the kind of high-speed Internet connections that you can get only with broadband," Smidt says.

LEFT BEHIND

Rural states like South Dakota are limited by geography. Beyond their academic institutions, government and urban/suburban clusters remain huge areas untouched by broad-

band. Technology experts call this a "digital opportunity gap" that could potentially limit future economic opportunities.

"So much of what creates stability and growth—job creation, health care and education access—comes with the availability of broadband," says Bill Gilles, director of the Center to Bridge the Digital Divide at Washington State University. "Any town or remote section of a state without it is at a real disadvantage," he says.

"Unfortunately, parts of our country are still being left behind," agrees Rick Cimerman, vice president for state government affairs at the National Cable & Telecommunications Association in Washington, D.C. "To make matters worse, many of these areas are the same places that have decreasing populations and industries and are already economically challenged."

For years, South Dakota's challenge has stemmed from being bypassed by a national

high-speed network with more than a dozen regional connections across the country. The state's inability to connect with the highest-speed Internet has put millions of dollars in research funding at risk because universities and research centers have been unable to publicize their scholarship or share information.

"Not being connected hurt economic development in some of our more remote areas and limited the potential of our universities to do their work and attract new talent," says Smidt.

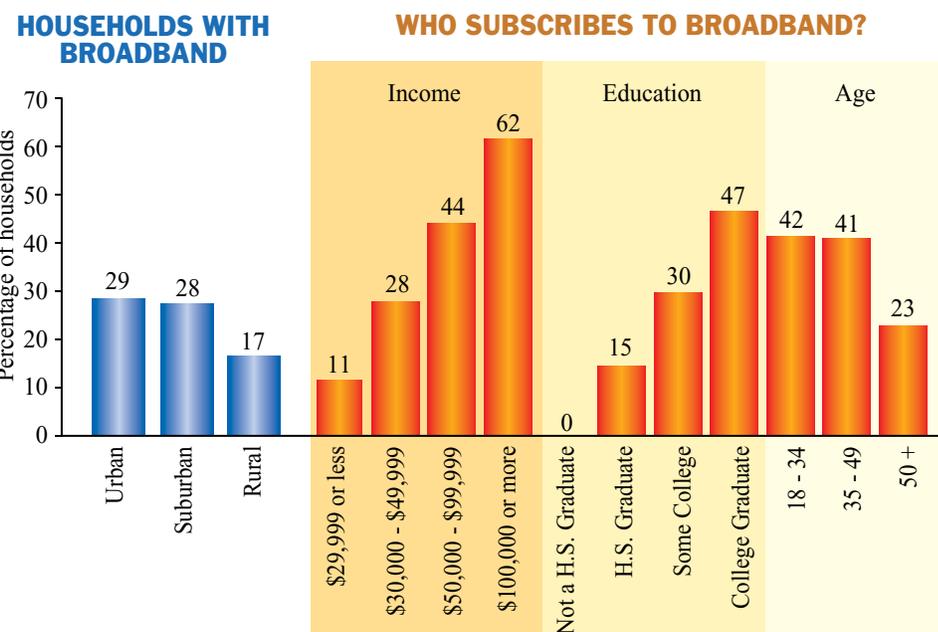
But early in 2007, access to the highest-speed Internet finally came to South Dakota. The Great Plains Education Foundation announced that it was donating more than \$8 million to connect the state's universities and government to the dedicated 10-gigabyte fiber optic network. In return, the state will pay up to \$1.7 million a year for operating costs.

The effort to put South Dakota on the right side of the digital divide represents a struggle that continues to exist in other parts of the country. It has taken nearly 10 years for broadband to become widely available for both public and private use.

Cimerman says it is now available to about 94 percent of the country. "Service started out in our urban and suburban areas and moved into the more rural parts of every state," he says.

THE REMAINING 6 PERCENT

Many telecommunications companies are



Source: Government Accountability Office, May 2006

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LEGISLATURES WORK ON BROADBAND

The opportunity for states to “receive economic development bonus points” for having statewide broadband access is “quickly passing,” says a report from the Arizona Department of Commerce. Soon the availability of broadband will be expected, and “states that have not found a way to establish it will be penalized as businesses and technology-dependent workers of tomorrow choose to locate elsewhere.”

More than 30 states reacted to that kind of thinking in 2007. Lawmakers introduced legislation to promote broadband and more are expected to do so this session as the benefits of broadband become more widely acknowledged. “Broadband has the power to create jobs, transform education and improve the delivery of government services,” says Tennessee Representative Mark Maddox.

To make sure broadband is available to everyone, lawmakers are creating incentives for providers through grants, loans and tax credits, streamlining regulatory structures and improving access to public rights-of-way. To help create demand for broadband services, legislators are promoting technology literacy among citizens by funding or encouraging distance education programs and telemedicine or health care initiatives. More and more government and public safety services are available through high-speed broadband networks.

Here are just a few of the bills enacted in 2007. Arkansas created Connect Arkansas, based on the ConnectKentucky model, to promote the availability and use of broadband with the goal of universal service

by 2012. A key component is a system to identify unserved and underserved areas. The approach also includes technology literacy and education programs so that citizens can take full advantage of broadband services.

The Hawaii Legislature established a broadband task force to work on wider access to public rights-of-way and identify opportunities for increasing broadband coverage. The task force will look into the use of very high-speed broadband services and new advanced communications technologies.

Indiana legislation provides for broadband development financing through the state’s Economic Development Corporation.

Utah passed legislation establishing a restricted account within the general fund to be used for grants to providers taking broadband service to rural areas.

The Vermont General Assembly created a telecommunications authority to issue bonds to support a statewide broadband and wireless infrastructure by 2010. It also will provide loans, grants and other financial guarantees, and gather data on wireless and broadband infrastructure and services. Vermont will waive the fees required for access to state-owned transportation rights-of-way for providers.

Washington lawmakers funded a survey to identify factors preventing the widespread availability and use of broadband technologies. The survey will collect and interpret reliable geographic, demographic, cultural and telecommunications technology information to identify broadband disparities in the state.

—Pam Greenberg, NCSL

reluctant to meet the needs of the remaining 6 percent because the return from subscribers is so low. But some companies say they are doing all they can.

“We’re not by any means running from the challenge of deployment,” says Walter White, the vice-president for state and local governmental affairs with Verizon Communications. “We are one of the most aggressive investors of broadband in the U.S., and not just in the cities, but in hundreds of rural communities across the country.”

Even so, White adds, “There are limits as to how much any one company can do. We are not a full-pockets type of operation.”

And even with the help of the private sector, increased broadband usage may also be limited by demographics. A significant percentage of Americans over the age of 50 living in areas that have broadband availability continue to prefer dial-up, according to a report by the Pew Internet and American Life Project.

Broadband users tend to be people who



REPRESENTATIVE
TOM SLOAN
KANSAS

logged onto the Internet early on, and are “wealthier, better educated and more likely to be male than dial-up users,” the report says. “The broadband crowd is more suburban and urban than the dial-up population. The dial-up population is proportionally more rural.”

But Kansas Representative Tom J. Sloan says the argument that a significant percentage of rural residents will continue to use dial-up even if broadband is available misses the point. “We know there are people in these communities who not only would use it, but need it and are looking to us to help them.”

Sloan points to proponents of telemedicine and telehealth, distance education and business owners as folks who would greatly benefit by having a high-speed Internet connection. “I know, because many of them have told me so,” he says. “It is our responsibility to figure out at least a way to make broadband available, regardless of whether they all end up using it or not.”

The importance of making broadband available for everyone can’t be overstated, Hawaii Senator Carol Fukunaga says, even though there is not much of a market in



SENATOR
CAROL FUKUNAGA
HAWAII

sparsely populated areas.

“Broadband availability is becoming crucial,” she says, “especially when it comes to finding solutions to problems in health care, education and economic diversification. There is no part of our state that can go for very long without it.”

STAYING COMPETITIVE

Indeed, states lacking high-speed IT connections are at risk of missing out on the opportunities of a new and rapidly chang-

ing economy. Some experts say this new technology is transforming the country more dramatically than the Industrial Revolution did when it caused massive population shifts from rural to urban areas.

“About three-quarters of occupations and job functions in the United States today are information-based jobs,” says Gilles. “They can, for the most part, be performed anywhere. A lot of them, in recent years, have gone to India, Ireland and Australia. We have been losing jobs in our country because our economy is still not fully prepared to be competitive in a global world.”

That could change, Gilles says. Many American-based companies that have outsourced jobs in recent years have begun to rethink such strategies. “Many of these companies now believe they could enjoy the same kind of economic advantages by having their work done in rural America instead of India,” says Gilles. “If we don’t have the broadband infrastructure in place, we could very well end up missing out on a great economic opportunity.”

States are trying to show providers that there are customers in the remote areas. They have been putting more government information online, hoping to show that there’s interest for it in rural areas.

“We have one program up and running with links to all of our state agencies,” says Sloan in Kansas. “And another program, just to show that it can be done, provides high speed IT services to our schools, libraries and hospitals.”

Senator Smidt says South Dakota has made a big effort to wire K-12 schools. “We’re trying to create a constituency of parents who can go online and do things like check their kids’ grades.”

PARTNERSHIPS WITH PROVIDERS

States have also seen success in extending broadband services by entering into partnerships with the private sector. “Those kinds of partnerships have really shown the greatest results,” says Cimerman. He points out that providers can more accurately pinpoint areas of a state that are either unserved or underserved and that the more services state and local governments offer online, the more interested citizens are in buying broadband.

Such partnerships can include a wide variety of arrangements, particularly at the local level, that may include a city owning a wireless network outright and contracting

out with a private company to provide the services; or a municipality becoming what is called an “anchor tenant” through the purchase of a certain amount of services on a network owned by a private company.

Berkshire Connect, based in Pittsfield, Mass., has aggregated demand at the county level among such big users as schools, hospitals and nonprofit organizations. Doing so lets it offer wide broadband services at a lower price in a state where more than 30 towns have no broadband accessibility at all. The City of Fort Wayne, Indiana, has established a Wi-Fi network through a

NCSL CONNECTING AMERICA PARTNERS PROJECT

NCSL’s Connecting America: Broadband Policy Issues and Options for State Legislatures project, sponsored by the NCSL Foundation for State Legislatures, has brought broadband issues to the forefront for state legislators. Information from a series of programs during 2006 and 2007 and current legislation and state statutes are available at www.ncsl.org/programs/lis/ConnectAmerica.htm.

The task force is chaired by Hawaii Senator Carol Fukunaga and South Dakota Senator Orville Smidt, and is composed of state legislators, legislative staff and private sector partners.

public-private partnership, while the Utah Telecommunication Open Infrastructure Agency is a network owned by more than a dozen cities crisscrossing the state, with multiple service providers.

One of the most comprehensive programs is offered by the not-for-profit Connect Kentucky, which has evolved into the national not-for-profit Connected Nation. With more than \$7 million in both state and federal money and investments from providers in excess of \$700 million, Connect Kentucky has been able to change the broadband landscape in Kentucky in just three years.

“When we began, 60 percent of the households in Kentucky had the ability to subscribe. Today it’s about 95 percent,” says Brian Mefford, executive director of Connected Nation. “That means about 600,000 new households have been able to subscribe

to broadband who could not before.” The number of people actually using broadband jumped from 22 percent to 44 percent.

Broadband availability and use has enjoyed such growth in Kentucky because high-speed proponents sat down early on with state and local officials as well as leaders in education, health care and business to determine their needs and the extent of their support.

“We tried to engage everyone who might be a part of the process, from the legislature to state agencies, local community leaders and those companies from the private sector who have a vested interest in the growth of technology,” Mefford says.

E-community leadership teams were set up to ask local government, health care, education and business leaders how they would use such technology, what they already had and what did they need. By creating a business plan for broadband use in the state and documenting potential subscriber support, Connect Kentucky was able to lure providers into the market. It resulted in broadband getting into small pockets of the state where it had never existed before.

A similar Connect Nation effort is underway in Tennessee. The blueprint for Connect Kentucky’s success can be used in any state, Mefford says. “The key is to get as many people involved as possible.”

The approach has won the praise of lawmakers across the country, particularly Fukunaga in Hawaii. “State lawmakers can do so much in this area simply by bringing all of the interested stakeholders together and establishing working groups to examine how best to get from point A to point B,” she says.

“Our challenges in Hawaii are particularly great, not just because we are a small remote state, but also because we have multiple islands,” Fukunaga says. “Even so, a lot of us have woken up to the idea that we don’t have to wait around for the feds to get this started for us. We can greatly increase broadband availability and use, and in the process enhance education, health care and educational opportunities for our people. And we can do it nearly entirely at the state level.”

 **CHECK OUT** our online Q & A with Brian Mefford, president and CEO of Connected Nation, who has emerged as a prominent advocate of public and private partnerships. You’ll also find a list of state task forces established to deal with broadband issues and links to their sites. Find the link at www.ncsl.org/magazine.