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## WIRED IN



COURTESY PHOTO

Tim Wessels of Rindge says the N.H. FastRoads network has made a “world of difference.” Now, Wessels pays \$70 to one Internet service provider for 20 Mbps of download and upload speed.

### High-speed Internet could soon be more widely available in NH

By KAITLIN MULHERE  
Sentinel Staff

A bill that supporters say could improve access to high-speed Internet in New Hampshire may gain enough support this year to become law.

The bill would make it easier for counties and municipal governments to issue bonds to build broadband infrastructure, something advocates have been trying to do since 2010.

#### A BILL WOULD MAKE IT EASIER FOR COUNTIES AND MUNICIPAL GOVERNMENTS TO ISSUE BONDS TO BUILD BROADBAND INFRASTRUCTURE.

how it can be made more widely accessible.

And in December, N.H. FastRoads completed construction of a nearly 250-mile fiber-optic network to advance broadband offerings in the region, built with the

The legislation is one effort to improve access to broadband in the state. But it's not the only one.

The Southwest Region Planning Commission is developing a broadband plan for the region, part of a statewide attempt to map out where broadband is available and

### BROADBAND BASICS

Broadband, also called high-speed Internet, refers to how fast a user can download and upload data, voice and video information. The Federal Communications Commission defines download speeds of 4 Mbps, or megabits per second, as the threshold for broadband service.

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Twenty-three percent of locations recorded in southwest New Hampshire were considered unserved, meaning their Internet speeds are less than 768 Kbps downstream (downloading) and 200 Kbps upstream (uploading).\*

Thirty-six percent of locations recorded download speeds of 3 Mbps or greater.\*

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35

About 35 percent of Cheshire County has access to more than three options of broadband providers, compared to 87 percent of Hillsborough County, the most densely populated county in the state, according to the NTIA National Broadband Map.

87

\* According to research by the Southwest Region Planning Commission, collected from 414 address locations through an online speed test.

# Broadband access could become more widely available in NH

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help of \$5 million in federal grant money.

Improving New Hampshire's broadband access is always near the top of the list when business owners and community members talk about ways to boost the local economy. Businesses and workers won't come here without it and already-existing companies can't compete in a global market without it.

Other sectors — health care, education and public safety — also consistently rank access to quick, reliable Internet as a top development priority.

But building out broadband to rural areas is expensive, Carole Monroe, executive director of FastRoads, said. There are few users in the rural area to absorb the cost of construction. New Hampshire's geography doesn't help, either, and so it's cost-prohibitive for private companies to expand into more remote areas.

In 2006, the state began allowing county and municipal governments to issue bonds for building broadband infrastructure in "areas not served by an existing broadband carrier or provider," or areas without enough potential customers to attract private service providers.

Yet nearly every town has at least a small pocket of broadband, and so that clause essentially blocked towns from being able to bond for broadband, Monroe said.

House Bill 286 aims to remove that barrier, while still allowing local control, said state Sen. Molly M. Kelly, D-Keene. The bill makes it easier for towns to bond for building out broadband, but the decision is still left to each individual town and its residents.

The bill passed the N.H. House earlier this winter in a 204-78 vote and will be introduced before the Senate in a few weeks, where Kelly, one of its three sponsors, hopes it will find support.

Since it was introduced last year, the bill's language has been tweaked to make its purpose more clear, Kelly said.

Now the bill clearly states that governments are only allowed to build the infrastructure, or equipment and technology, such as cables, needed to deliver high-speed internet. Municipalities cannot actually provide the service.

The bill also removes language that ties a government's ability to bond to whether the area is served or unserved. That's important, Monroe said, since there are varying definitions of served and unserved, depending on users' needs.

People often hear, for example, that 95 percent of the state has access to broadband, she said. But that's only by including all New Hampshire Internet speeds, some of which fall below the speed considered fast enough to be broadband, which is 4 megabits per second (Mbps). Most of the state, more than half, doesn't have access to speeds that meet the 4 Mbps threshold, she said.

If a town does want to bond for broadband infrastructure, the new cable would have to reach those areas with inadequate service, preventing a town from building only in the central area where other providers already are, Monroe said.

"Even if only two or three towns decided they want to do this, it's still one more tool in the toolbox," Monroe said. "And why put up the barriers?"

Public awareness also might explain why this version had strong support in the House but previous attempts did not, Monroe said. People are realizing that dial-up and DSL connections aren't enough anymore.

Monroe said she can't stress enough how important a competitive environment is to improving both the quality and cost of broadband.

Since FastRoads went

live, Monroe said she's already heard of homeowners, businesses and schools that are getting faster speeds for the same amount of money.

The FastRoads project built out what's called "middle mile," super-fast cable that any service provider can now tap into and bring out to clients, creating competition that drives prices down and speeds up.

So far, there are four providers on the network, which passes through 19 towns, including Fitzwilliam, Gilsum, Keene, Marlow, Richmond, Rindge and Swanzey. Now that construction is complete, FastRoads is working to add more providers to the list, as well as looking for ways to expand its network to more residential areas.

FastRoads also included two areas of "last mile" construction, enabling 1,300 residents and businesses in specific areas of Rindge and Enfield to connect directly to the FastRoads fiber, though a service provider has to bring the connection from the cable box on the street into the home.

So far, about 180 residents or businesses are using the network, Monroe said.

For Rindge resident Tim Wessels, the FastRoads network has made a "world of difference."

Before it, he paid \$130 a month for a satellite and two DSL circuits. Combining all three, he had a download speed of just over 3 megabits per second.

Now, Wessels pays \$70 to one Internet service provider for 20 Mbps of download and upload speed.

The FastRoads network has different levels starting at 5 Mbps, meaning businesses and residents can buy the speed they need, but easily upgrade to higher bandwidth, Monroe said.

Wessels and his wife have ditched the satellite dish and Direct TV and bought two Rokus, devices to stream television through the Internet. It's been a bit of an adventure figuring out how to access Major League

Baseball or local news without cable TV, but they've been able to create a completely personalized lineup.

They use the Internet to power their phone through Ooma Telo, a service with lot of extra features, including forwarding voicemail messages to an email address and sending a text to Wessels and his wife's cell phones if someone dials 911 from the house.

They have a personal computer, laptop, Chromebook, Kindle and two smart phones. And Wessels runs a computer business from home.

His work sometimes requires him to remotely take over customers' computers, which was tricky with his old speed. The customers would be looking at one thing, and Wessels would see another because his screen hadn't refreshed yet.

Then there was the waiting game every time he needed to upload a file.

"Before it was like, 'Oh no, I better go have dinner and come back,'" Wessels said.

Even with all their gadgets running at once, he and his wife use barely half their bandwidth power.

Wessels says he knows completion of this network was a long effort for a lot of people, probably 10 years in the making. He's grateful because he's enjoying the benefits of that work, both personally and professionally. But he still thinks there's more to come.

"This is just the beginning," he said "This is the end of the beginning."

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