

high-tech movement would only benefit towns along the I-5 corridor, not the small timber communities she represented.

The fiber itself is the least expensive component in the effort, she says, so the question was what kind of proposal could local communities make that would induce the private company to lay dark fiber for them. Dark fiber is simply fiber-optic cable that has not been lit up — connected to the internet.

Communities from Coburg to Oakridge quickly adopted ordinances to join the fiber consortiums and prepared to trade right-of-way access for fiber. But Weeldreyer says when the time came to negotiate — they were thinking of asking for maybe six strands of fiber — the telecommunications company responded “in true corporate fashion, ‘We don’t need your right-of-way.’” The fiber route would follow the railroad’s right-of-way, which is why there is a major fiber-optic route running through Oakridge and down to Klamath Falls.

Luckily, Weeldreyer says, Pam Berrian, telecommunications program manager for the city of Eugene, found that the city still controlled the right-of-way where the railroad crosses High Street, since the street existed before the railroad.

Cities can charge fees for telecommunications companies to use their rights-of-way, and while Weeldreyer says most towns are reluctant to give up those moneymaking fees, this time they offered to expedite the permit and let the company have the right-of-way in exchange for 12 strands of fiber and access points to members of the consortiums along the way.

The company, then called Pacific Fiber Link, faced with a roadblock to its fiber optic network, agreed and, Weeldreyer says, “For that magic moment in time I witnessed government moving at the speed of the private sector to benefit citizens along the route.”

eventually connect all businesses and households through fiber optics or coaxial cable.

According to a 2013 memo on EWEB dark-fiber leases, “with the decline/collapse of the telecommunications boom in late 2001/early 2002” the board abandoned its plan for this network and a MetroNet and instead starting leasing its fiber capacity to public and commercial entities.

A recent thread on the Eugene page of popular networking site Reddit bemoans the loss of this system, and one user points out that Chattanooga, Tennessee spent \$97 million building a fiber-optic network providing residents of the city and surrounding rural areas with high-speed low-cost internet — gigabit connections for \$69.99 — and it has already paid for itself.

EWEB, however, has not stopped working on fiber optics, according to spokesman Joe Harwood. In 2010, EWEB’s \$1.6 million share of a grant LCOG received from the Broadband Technology Opportunities Program (BTOP) allowed the utility to extend fiber-optic cable to some schools and medical facilities.

The BTOP grant was a \$8.3 million broadband infrastructure grant to enhance the existing fiber-optic backbone and add 124 miles of fiber-optic network to deliver broadband capabilities in Lane, Douglas and Klamath counties. The money came from the stimulus bill (the American Recovery and Reinvestment Act of 2009) and the goal was to bring 100 megabits per second connections to more than 100 “anchor institutions” such as medical centers, public safety entities, schools, community colleges and libraries.

The project, which wrapped up in the fall of 2013, “installed fiber in every city in Lane County with the exception of Westfir and Dunes City,” Mecham of LCOG says. Those last two were left out because “at the initial

The downtown Willamette Internet Exchange, aka WIX, is an internet “peering point,” Mecham says. Rather than a data center that stores information, LCOG’s WIX is where local private and public networks interact. The internet isn’t really a “series of tubes,” Mecham says (though the metaphor of a small pipe versus a large pipe is useful in explaining how broadband speeds work), but rather a series of fibers that can send an email message in a microsecond. Instead of sending that information through the networks to Seattle or Chicago before it gets to a business across the street, a peering point lets local networks interact close by. This infinitesimal increase in speed may not affect an email, but it does affect someone downloading a large file like a two-hour movie, he says.

Fiber in the Shire

The big companies like Sony that made up the Silicon Forest are no longer in Lane County, but the Silicon Shire, made up of smaller, up-and-coming tech businesses, has taken its place, and it needs faster broadband.

Kiki Prottsman, founder of Thinkersmith, which teaches entry-level computer science, and an ambassador for Eugene’s Silicon Shire, says lack of access could stifle growth. Tech companies are up against an airport that lacks enough direct flights to places like Seattle and San Francisco and a network that can’t sustain the transferring of large files or multi-line video calls that can take the place of in-person meetings. “In some businesses, a split second makes the difference,” she says.

Prottsman says the need to expand broadband access to tech companies and rural dwellers alike is up against some tough barriers. Not only do finances constrict local governments, but she says “cable- and phone-internet people are worthy adversaries and want to make sure they have all the cards to play.”

Weeldreyer would agree. She suspects she was a victim of corporate espionage at a National Association of Counties conference in 1999 when she went to give a presentation on how other rural counties could use the fiber-brokering right-of-way strategy to get fiber broadband in their areas, and her handouts disappeared from her hotel room and her computer presentation vanished from her computer.

Prottsman says access to the internet is determined by where you live and how much you can pay. “It’s just crazy and limiting, and those citizens don’t have the same opportunities,” she says of rural dwellers.

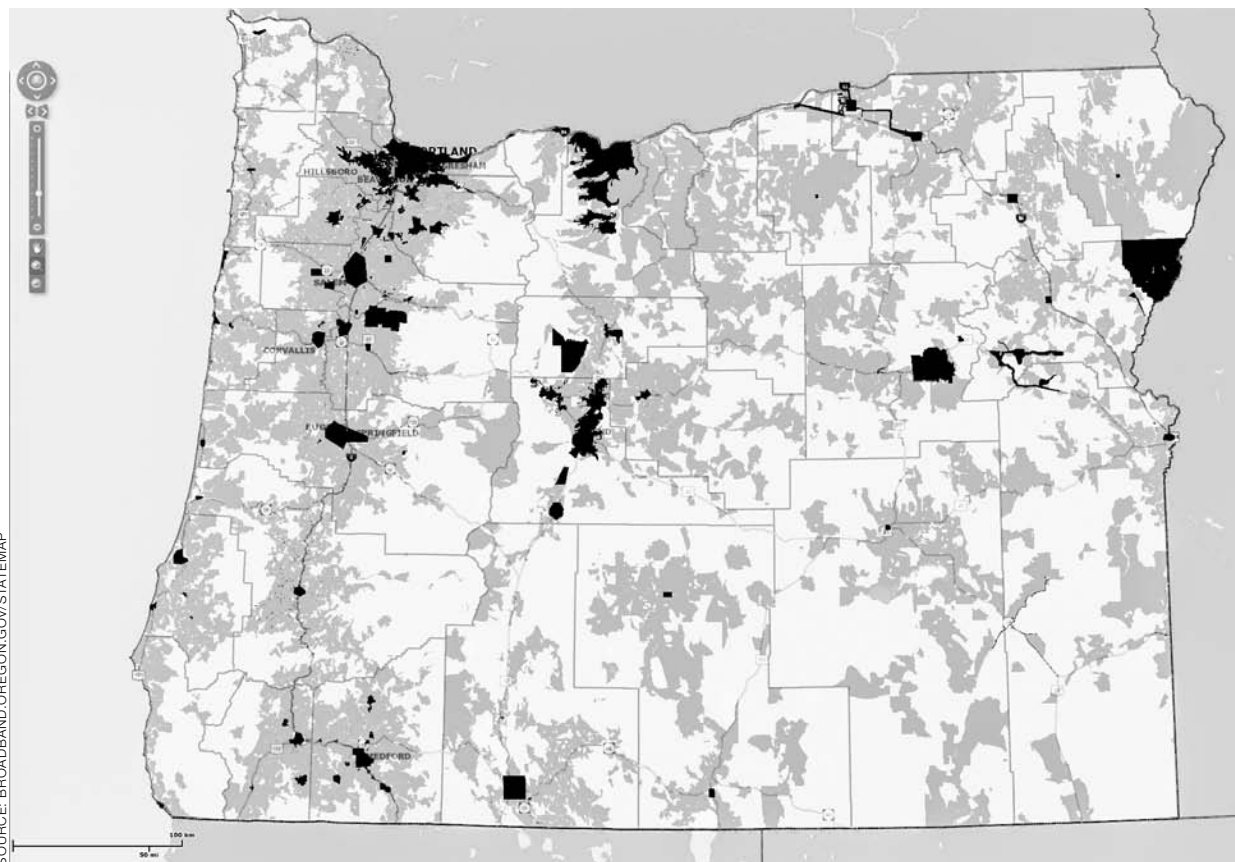
Bringing broadband access to the rural areas is “the equivalent in our times of what rural electrification was in the last century,” Kevin Matthews says.

It’s a question of money, Mecham points out. The system the BTOP grant put into place means that once the finances are available, somewhere like Oakridge can add users. He gives the example of Veneta, where in order to bring a call center to town, the city got the funding to run a connection from the fiber cable the LCOG grant installed to the building for the call center. He’s hoping the Eugene pilot project will give an idea of how much it will cost to install and light up more fiber in Eugene and look into whether building owners are willing to “chip in for the next round of fiber” or if public funding, such as urban renewal money, could be used.

The internet is not the whole answer to balancing rural and county budgets, Matthews says, but “it is absolutely one of the keys to making that possible.”

How much do people care about making open access to the internet possible? The FCC’s first public comment period on net neutrality ended July 15 with 677,000 comments on its proposed rules for an “open internet” that critics says will allow content companies to cut deals with broadband providers for preferential treatment. A second, 60-day round of public comments on the issue started July 16. ■

For more information on the FCC and net neutrality go to fcc.gov/openinternet and for more on the Regional Fiber Consortium’s work go to connectingoregon.org.



SERVICE DELIVERED THROUGH FIBER OPTIC CABLE

POPULATION DENSITY

Fast-Forward

Also back in 1999, EWEB (Eugene Water and Electric Board) was working to install a fiber-optic network as well. The utility laid 70 miles of “backbone” cable, interconnecting 25 EWEB metro-area substations and three BPA bulk power stations. It was designed to have future connections with schools like the University of Oregon, local governments and long-haul telecommunications providers.

The EWEB board had a “telecommunications vision” that it would develop a locally owned and managed high-speed broadband network throughout Eugene that would

time of the grant there were no anchor institutions that would qualify.” He says, “It still burns me we didn’t get Westfir and Dunes City.”

Mecham says the agency is also working with city of Eugene and EWEB on “what we are calling a pilot project to run fiber optics to a couple buildings downtown, running fiber through the existing electrical system from the Willamette Internet Exchange to the Broadway Commerce Building and Woolworth Building.” Those buildings were chosen, Mecham says, because of a high concentration of software developers and other companies that need fiber.