

Building Support For Community Broadband

Following are highlights from the 2016 **BROADBAND COMMUNITIES** conference on broadband and economic development, held in Minneapolis in October. These excerpts are from sessions about gaining support from state legislators and the impacts of local fiber networks.

A BBC Staff Report

Working With State Legislators

In many states, legislatures have been notoriously unsympathetic to rural communities that suffer from poor broadband. “Most legislators don’t know anything about technology,” said Tom Sloan, a Kansas state representative who knows (and cares) a great deal about technology, adding that broadband activists and local officials can compete with industry lobbyists for their state legislators’ attention.

Sloan said, “Data matters to most legislators. Tell me what you need and why your system is



Tom Sloan,
State Representative,
District 45 State of
Kansas

inadequate. Compare your speeds with what the same provider offers in other communities. Survey existing businesses and show the negative impact on them – a cabinetmaker who can’t offer products online or a farmer who can’t buy and sell commodities and livestock in the national

Learn more about the politics and economics of community fiber networks at the **BROADBAND COMMUNITIES SUMMIT**, May 1–4, 2017, in Dallas.

marketplace. Ask the local chamber of commerce to document businesses that left town or didn’t move there – even small entities.”

Health care providers may also provide valuable examples of the costs of inadequate broadband, Sloan said. Medicare financially punishes hospitals for high readmission rates, but the best way of reducing readmissions is to monitor patients via broadband after release. Such monitoring improves patient health care and saves hospitals and health care providers money. Those savings result in lower insurance premiums or taxes for everyone.

Rural residents should be included in the data compilation. If rural residents leave, they

cannot patronize the community's retail businesses, their children will not attend the schools and the tax value of their property will decline.

Sloan concluded, "Convince me that you are suffering because the incumbent is not providing adequate services. Document the requests you've made. Establish the economic costs of poor broadband. Invite key legislators to your municipality, focus on this subject and present information to them. Be really creative in your thinking. Suggest imposing an 'economic justice tax' – a fee on the provider to offset the penalties your community is suffering – and make sure it can't be passed on to the customers. Lobby for statewide broadband franchising because negotiating with individual communities is frustrating for providers."

Sloan advised talking to legislators when they aren't actually in session – it's easier to get their attention when they aren't overwhelmed with work. In addition, it's a good idea to find out what the broadband and economic situation is in a legislator's district. Those from well-served, thriving districts may respond to different arguments than those from struggling districts.

ELECT THE RIGHT PEOPLE

Josh Byrnes, an Iowa state legislator and general manager of Osage Municipal Utilities, said the first step in dealing with legislators is to elect the right legislators. He advised asking all candidates their views about municipal broadband.

The next step, Byrnes said, is to form a coalition. After all, broadband affects a wide range of people and organizations. Farmers' organizations, realtors, economic development officials, bankers, educators, unions,



Josh Byrnes, Representative, State of Iowa; General Manager, Osage Municipal Utility (IA)

"Convince me that you are suffering because the incumbent is not providing adequate services. Document the requests you've made. Establish the economic costs of poor broadband."

and transportation advocates all need better broadband: "It's an odd group, but that's what it takes."

Though it seems counterintuitive, Byrnes advised, "Avoid the legislators that already support broadband. Why waste your time with them?" Educating those who don't understand the issue is a better use of time, he said. And keep the message simple because "a lot of legislators are not very intelligent." Brochures tend to land in the wastebasket, but if the message can be boiled down to fit onto a business card, the legislator is likely to put the card in his or her pocket and keep it. Data about impact on the economy or jobs is most likely to catch legislators' attention.

Byrne also advised, "Make it personal. Connect it to them. Show the legislators the haves and have-nots. And sell the idea that broadband is infrastructure. We have done a really poor job of taking care of infrastructure of all kinds, so connect the broadband issue to the infrastructure piece."

Above all, Byrne said, don't give up. Convincing legislators can take years of patient work.

FIND THE HOOK

"There has to be a hook – a reason for legislators to care," said Matt Schmit, a Minnesota state senator. "It could be the impact to their constituents, the return on investment, the great economic efficiencies, the environmental benefits, the number



Matt Schmit, Senator, State of Minnesota

of jobs created or the nonstate dollars leveraged." Keep the message simple; just show them how broadband makes life better.

One problem, Schmit said, is that legislators often think "the private sector is taking care of it," and they need to be shown that, in some communities, that isn't true. Broadband advocates must be organized and persistent and must talk to legislators who can be persuaded. "Be prepared for a window to open," Schmit said, "and pounce on the opportunity."

Sometimes an opportunity may involve tweaking or modifying legislation originally proposed by incumbent providers. "Good versus evil may not be a useful approach," Schmit pointed out. "Try to suggest approaches that work well for everyone."

Ellen Satterwhite, director of the public affairs firm Glen Echo Group, said, "The first question I ask a legislator is, 'Are the networks you have today OK for the next 10 years?' Everything that will happen in the state for the next 10 years depends on the network." She emphasized that broadband is not an individual choice but a community choice.

Satterwhite advised, "Use the power of the internet. Fifty emails may not equal 50 lobbyists, but maybe 5,000 emails do."



Ellen Satterwhite, Director, GlenEcho Group

Successful Local Fiber Networks

What counts as success in a local fiber network? Communities that build local fiber networks have many different goals – though most involve some form of economic development – and many ways of evaluating their projects’ success. Five presenters at the Minneapolis conference, all from the Upper Midwest region, illustrated the variety of ways fiber networks contribute to their communities.

Madison, Wisconsin, is moving forward with a “digital divide project,” said Paul Kronberger, the city’s chief information officer. The pilot project will wire four underserved neighborhoods with fiber and



Paul Kronberger, Chief Information Officer, City of Madison Information Technology

provide basic internet service there for \$10 per month. Because addressing the digital divide takes more than internet availability, the city also contracted with a nonprofit agency to deliver computer literacy training and partnered with corporations to refurbish cast-off computers at no charge.

The city has encountered challenges in some areas – for example, landlords who will not or cannot grant the right of entry to their buildings – but is moving ahead quickly in other areas. It expects the pilot project to achieve about 50 percent penetration and to yield valuable insights. “We’ll accumulate the lessons learned,” Kronberger said. The mayor wants to make fiber broadband available throughout Madison, but Wisconsin law requires a municipality to present a cost-benefit analysis before it builds a broadband network. The results of the digital divide project should help inform the cost-benefit analysis and enable fiber to be built out citywide.

Ultimately, the project’s success will depend on its addressing the educational gap – today, schoolchildren

without home internet service sit outside schools in the evening to do their homework – and on its ability to retain high-tech employers and facilitate the formation of startup companies.

When the city of **Stratford, Ontario**, bought six local electric utilities, it was required to divest those utilities’ fiber assets. Rhyzome Networks, the company formed to administer those assets, originally served only the electric utilities, but soon local manufacturers began leasing spare fiber to connect their facilities, providing a new revenue stream for the network.

“Then the province required smart meters,” explained Ysni Semsedini, Rhyzome’s CEO. “Other utilities built proprietary networks for that – which would have been a waste of money for



Ysni Semsedini, CEO, Festival Hydro and Rhyzome Networks

Stratford. We thought, ‘Why don’t we step up the Rhyzome network, create an ISP and backhaul the meter data over Wi-Fi – then we’ll have ubiquitous Wi-Fi across the whole community!’ So we did this in 2010. Today, we offer Wi-Fi to residents and lit fiber for businesses.”

The residential Wi-Fi offering of symmetrical 10 Mbps for \$30 (no contract required) is popular, and Rhyzome is exploring the possibility of building out fiber to the home, though Semsedini thinks this may not be economically feasible in Stratford’s competitive broadband market. Rhyzome offers unique value to the community by acting as a test bed for new products that leverage communitywide connectivity – for example, smart LED streetlights and set-top boxes that act as virtual data centers. “Our latest effort is to become a center for testing autonomous cars,” Semsedini added.

Rhyzome Networks’ goals are to become a sustainable business that returns cash to the municipality, to enable manufacturing facilities to locate in Stratford and to promote the city through efforts such as the autonomous car initiative. In addition, the network contributes to the community by offering free Wi-Fi in the downtown area and by enabling public-safety communications.

Semsedini noted, “The financials have to work. I don’t see slower rollout as a failure – fiber is a long-term rollout. But if I have to take money from the city, that’s too slow.”

OVERCOMING HURDLES

Michigan has an onerous process for municipalities to build and operate broadband networks, and the only community in the state to succeed in building a residential fiber network



Melanie L. McCoy, P.E., Superintendent, Sebewaing Light and Water

is **Sebewaing**, a small village on the coast of Lake Huron. Melanie McCoy, superintendent of Sebewaing Light and Water, explained that the fiber network was originally built to control the municipal electrical grid and later extended to serve businesses. Eventually, “customers were clamoring for broadband because they couldn’t get more than poor speeds, and the village council said, ‘Let’s go for it.’” Other Michigan cities now send delegations to learn how Sebewaing navigated the legal process.

The utility’s electric department lent money to its internet department to build out the network, and, with a 50 percent penetration rate (even though most customers subscribe to the entry-level 30 Mbps/30 Mbps tier), the internet department expects to repay the loan in six or seven years.

Sebewaing’s criteria for success

include not only positive cash flow but also savings for consumers, economic development (young people are already returning to town, but the impact on businesses is not yet noticeable) and customer satisfaction with the service. McCoy gets a special pleasure from seeing senior citizens make the transition from “Oh, I don’t need *that*” to seeing internet access as a must-have when their children visit for the holidays.

Tribal communities in the Upper

Midwest have the most difficulty of any communities in obtaining adequate broadband, said Madonna Peltier Yawakie, president of the Turtle Island Communications consulting firm. A Native American who grew up on the Turtle Mountain reservation, where a telephone call to a family member 14 miles away cost \$300, Yawakie went on to work for a large telephone company. Eventually, she realized that price-cap carriers would never invest in infrastructure on the reservations, and that the lack of infrastructure was crippling tribal development. Today, she works to help tribes create broadband plans, form companies that qualify for eligible telecommunications carrier status, obtain universal service funds under rate-of-return regulation and improve their infrastructures by upgrading to fiber.



Madonna Peltier Yawakie, President, Turtle Island Communications, Inc. (TICOM)

Yawakie said, “America is upgrading from copper to fiber. Tribes will miss the boat if they don’t authorize a provider or do it themselves. The tribes that tried to address their issues with wireless internet service providers have failed – it’s only a short-term solution, and there is not enough licensed spectrum. For fiber to the home, we look for a 65 percent penetration rate, and they’re getting 85 to 94 percent rates.”

For Yawakie, a successful tribal project has more than a high take rate – it also achieves positive cash flow as soon as possible and, most important, puts people to work on the reservations. The economic development boost starts with the construction of the network: “All contractors should hire qualified American Indians. There’s a high rate of veterans that work for the businesses we start. They learned communications skills in the military, and we’re creating job opportunities for them.”

RESPONDING TO BUSINESS NEEDS

Eagan, Minnesota, a suburb of the Twin Cities, began developing a technology plan more than a decade ago. When local business leaders identified a need for more speed, Eagan decided to build a fiber network, Access Eagan, to serve businesses. As a conservative city, it didn’t want to be in the broadband business, so the network is open access, with six providers offering services.

Minnesota’s overreliance on a single major carrier hotel was another problem that affected local businesses, and in 2015, Eagan succeeded in attracting a new carrier hotel and data

center, in part because of its fiber optic network. The new facility is already 45 percent leased and expands the number of potential service providers to 13. “Now there are multiple carriers with diverse routes and no single point of failure,” said Tom Garrison, the city’s communications director.



Tom Garrison, Communications Director, City of Eagan, MN

Access Eagan has become known for its responsiveness to business needs. Businesses tend to want “connected buildings, not fiber in the street,”

according to Garrison, so although the original intention was to build a fiber backbone, the network requested permission from the city council to actually connect buildings. Recently, it extended fiber to a premium outlet mall and to a data center that required a redundant fiber route. Now, a professional sports team is moving its headquarters to Eagan to be sure of having redundant fiber routes. ❖

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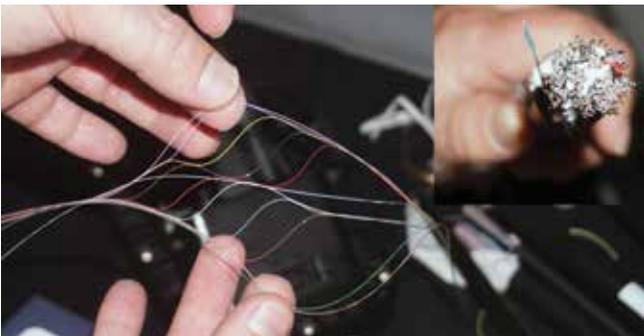
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From the Expo Floor

Exhibitors at the Minneapolis conference showed many new products for networks that support economic development. Here are a few highlights.



AFL's new 1,726-fiber cable is remarkably thin but quite a handful to work with. One innovation to make life easier for technicians: The fiber bundles can be parsed in the field like spiderwebs.



Preformed Line Products high-density boxes have technician-friendly weather sealing and layouts that allow big hands to work comfortably.



Dura-Line offers an almost endless variety of fiber ducting products. This new one is intuitive and rugged.