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November 30, 2018

Joint Legislative Committee on Information Management and Technology
Oregon Legislative Assembly
900 Court Street NE
Salem, Oregon 97301

Attention: The Honorable Nancy Nathanson, Co-Chair
The Honorable Chuck Riley, Co-Chair

Representative Nathanson and Senator Riley:

Please accept the attached report, "Local Broadband Champions," respectfully submitted by the Oregon Broadband Advisory Council in accordance with 2018 Oregon Law Chapter 51 SECTION 1 (2). The report presents a survey of strategies and programs to foster and support the development of local broadband champions, the Oregon experience, and makes recommendations for a local broadband champion program. The report will also be available online on the Council website at www.broadband-oregon.org.

The members of the Council look forward to briefing the members of the Committee on the information presented in the report and related issues.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joseph Franell", is written over a light blue horizontal line.

Joseph Franell
Chair
541 289-7010
jfranell@cotnet.us

cc: Jason Lewis-Berry, Governor's Office

Oregon Broadband Advisory Council, c/o Oregon Business Development Department
121 SW Salmon Street, Suite 205
Portland, Oregon 97204



Local Broadband Champions

A Report of the

Oregon Broadband Advisory Council

Presented to the

House Interim Committee on Economic Development and Trade
Senate Interim Committee on Business and Transportation
Joint Interim Committee on Ways and Means –
Sub Committee on Transportation and Economic Development
Joint Legislative Committee on Information Management and Technology

for

The Eightieth Legislative Assembly

November 30, 2018

Local Broadband Champions

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Executive Summary

This report of the Oregon Broadband Advisory Council (OBAC) to the Legislative Assembly on options for a local broadband champion program to foster and support local broadband champions is directed by 2018 Oregon Law Chapter 51 SECTION 1 (2) https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2018orlaw0051.pdf. The report presents a survey of strategies and programs to foster and support the development of local broadband champions, the Oregon local champion experience, and makes recommendations for a local broadband champion program.

According to the directing statute, “local broadband champion” means a local government official, elected official, educator, business, organization, resident, community leader or other person that advocates for local broadband infrastructure improvements in the person’s community. Oregon is fortunate to have a history of contributions by local broadband champions with wide representation from service providers, elected officials, public sector, private sector, education, healthcare, electric power utilities and members of the public that have meaningfully benefited the state’s infrastructure and created an engaged broadband community. This report includes the profiles of some of those champions for illustration and instruction.

The Oregon experience is not unique. Other parts of the country and the world have benefitted from community engagement and activism for solving local problems and addressing unmet needs. This report includes some of these examples for illustration and instruction.

OBAC combined lessons learned from the Oregon experience with findings from other programs to develop recommendations.

Recommendations

Oregon Local Broadband Champion Pilot Program

Create and fund a *Local Broadband Champion Pilot Program* to foster and support broadband champions. Locate the Broadband Champions Pilot Program in the Oregon Business Development Department under the guidance of the Oregon Broadband Advisory Council to perform the following tasks:

Broadband Outreach

Organize and launch a broadband outreach promotional campaign to underserved and unserved communities to raise awareness of the existing digital divide and the value of broadband planning, deployment, adoption and utilization. Increase awareness of broadband issues and their impacts. Focus on Community Anchor Institutions such as schools, libraries, healthcare providers, and local governments to engage local communities in broadband issues.

Oregon Broadband Champions Network

Create an Oregon Broadband Champions Network to connect and promote relationships between the state’s champions and to mentor new champions.

Broadband Community of Interest Directory

Create a Broadband Community of Interest Directory to identify and establish channels of communication with past, current and prospective champions, as well as with state agencies, federal agencies and other organizations with an interest in broadband expansion in Oregon.

Local Community Broadband Planning

Promote and provide training and consulting for local and regional communities to begin formal broadband planning, and to integrate broadband as a component in economic development plans. Promote the organization of Broadband committees and task forces with organizing grants.

Public Private Partnerships

Promote the development of public-private partnerships between governmental, public sector, and private sector organizations as a strategy to improve broadband infrastructure in underserved areas.

Community Engagement

Establish channels of communication and promote collaboration among broadband service providers and local users. Communication, collaboration, demand aggregation, joint action and planning by service providers, businesses, government institutions, economic development organizations, schools, and health care providers will promote and accelerate broadband deployment, adoption and utilization in rural communities. Broadband champions can come from any of these sectors.

Assign Responsibility

Promote inclusion of broadband advocacy in the job descriptions of economic development officials.

Allocation of Funds for the Pilot

\$150,000.

Oregon Broadband Champions

House Bill 4023 (2018) Enrolled defines “local broadband champion” as a local government official, elected official, educator, business, organization, resident, community leader or other person that advocates for local broadband infrastructure improvements in the person’s community. Perhaps the most effective strategy to make broadband progress at the local community level is to foster local champions. Those communities across Oregon and the nation that have competitive broadband services in place today *despite* being rural and not presenting a clear business case for infrastructure investment often owe that welcomed status to a local champion that saw the need and took action.

Champions have been instrumental in organizing local communities of interest in broadband services and applications and in aggregating the demand of the different segments of the community such as business, education, libraries, healthcare, and government to help make a business case for broadband investment by the private sector, public sector, and through public-private partnerships. Oregon has a rich legacy of broadband pioneers, advocates, evangelists, and industry professionals that have had a significant and positive impact on the state’s broadband infrastructure.

Here are some of their stories.

Rich Bader

Rich Bader is a 40-plus-year veteran of the high-tech industry working at Digital Equipment and Intel before becoming one of the founders of Internet service provider. EasyStreet in 1995 which grew to provide cloud technology to host many businesses, government agencies, and non-profits now doing business as Atmosera.

Rich served on the Oregon Broadband Advisory Council, the board and executive committee of the Software Association of Oregon, and on the board of the Open Technology Business Center. Rich was also appointed by the Governor to the Oregon Growth Account Board and the Oregon Innovation Council.

Rich Bader’s rare blend of technological expertise, entrepreneurial spirit and public service have made him a leader in the Oregon high-tech community and a powerful advocate of information and telecommunication technologies.

Ray Baum

Ray Baum of La Grande was a former Oregon State Representative, House Majority Leader, Chair of the Oregon Public Utility Commission and Chair of the Oregon Broadband Advisory Council. He was appointed to the Public Utility Commission of Oregon (OPUC) in August of 2003 by Governor Ted Kulongoski, was reappointed to another four-year term in September of 2007, and was named chair of the commission in March, 2009. Ray went on to become an important telecommunications policy influencer at the national level.

Ray was a key individual in looking out for Oregon's interests at the national level and was a supporter of and contributor to broadband in Oregon public policy. He was a member of

- The National Association of Regulatory Utility Commissioners (NARUC) Board of Directors
- The NARUC Telecommunications Committee and is also Chair of this committee
- The NARUC Task Force on Telecommunications Act Rewrite
- The NARUC Washington Action Committee.

Ray served as the State Chair of the Federal–State Joint Board on Universal Service and was Chair of the NARUC Task Force on Intercarrier Compensation. He became a subject matter expert in important telecommunications issues and his input and advice was sought by NARUC, the U.S. Senate Commerce Committee on inter-carrier compensation reform, U.S. Department of Agriculture, National Telecommunications and Information Administration and the Federal Communications Commission. He worked in the U.S. Congress as the House Energy and Commerce Committee Staff Director.

The Repack Airwaves Yielding Better Access for Users of Modern Services Act, known as “Ray Baum’s Act” in his honor, reauthorized the FCC for the first time since 1990, and includes reforms to ensure the commission continues to improve its efficiency and transparency, while also making improvements to services for rural residents, veterans, Native Americans, and public safety. It includes the critical spectrum auction deposit “fix” which allows the FCC to deposit upfront payments from spectrum bidders directly with the U.S. Treasury, enabling future auctions to take place. It enacts key provisions from the Senate-approved MOBILE NOW Act (S. 19) to boost the development of next-generation 5G wireless broadband by identifying more spectrum – both licensed and unlicensed – for private sector use and reducing the red tape associated with building wireless networks. On September 26, 2018, the FCC released a Notice of Proposed Rulemaking proposing rules to implement Ray Baum’s Act.

<https://energycommerce.house.gov/news/press-release/chairman-walden-house-passage-omnibus-bill/>

In testimony to the United States House of Representatives Subcommittee on Communications, Technology and the Internet of the Committee on Energy and Commerce Hearing on the Universal Service Reform Act of 2009, Ray made the following statement.

“I personally believe the issue of broadband deployment is of utmost importance to the economic productivity and quality of life of the entire country. Communities that do not have access to sufficient levels of high speed broadband within the next few years will be just as economically disadvantaged as those communities in the first half of the 20th century that did not have access to electricity and paved highways.”

In May of 2010, Ray appeared on the C-Span program “The Communicators” (<http://www.c-spanvideo.org/program/293855-1>), C-Span’s national weekly series that examines the people and events that shape telecommunications policy. He spoke of the challenges for Oregon and advocated expansion of broadband services in Oregon using Universal Services Funds (USF).

Ray's legacy is that of collaboration, openness to ideas that inform, thoughtfulness, civility, dedication to the service of his state and country, and generally being a real nice guy. Ray lost his battle with cancer earlier this year. Oregon and the nation lost a valued leader.
[John Irwin]

Pam Berrian

Pam Berrian has been a long-standing advocate for expanded broadband. Pam was an active member of the Governor appointed Oregon Telecommunications Coordinating Council where she represented cities. Pam has been instrumental in bringing funding to the table to support many statewide activities, including the Oregon Connections Telecommunications Conference and the Oregon Health Network.

Pam Berrian is Eugene, Oregon's Telecommunications and Cable Licensing Program manager and is involved in licensing users of the public rights of way. She has overseen an internal dedicated-fund grant award process for new City telecommunications technology projects, 100+ of which are listed on the Telecommunications Program website at www.eugene-or.gov/telecom. She has been instrumental in establishing and expanding the City's E-government system, which includes allowing residents to register for and pay for recreational activities, on-line employment applications, and a full range of library uses. Pam has also played an important role in developing and expanding a number of WiFi hot spots all around the City, so that users at the library, at city recreation centers, and some city parks can use have free Internet access. Pam was instrumental in the City of Eugene being one of the founding members of the Fiber South consortium.

Pam has taken a lead role in working on telecommunications legislation at the state and the federal level. She has served as a member of the national Board of Directors for the National Association of Telecommunications Officers and Advisors (NATOA) and is Past-President of the Oregon Chapter of NATOA. She has also served on ad hoc committees such as the League of Oregon Cities' Telecommunications Advisory Committee, the multi-government agency Regional Fiber Consortium awarded an \$8.4 Broadband Technology Opportunities Program grant, is co-project lead of a federally-state funded Community Broadband Planning technical assistance grant. [Milo Meacham]

Agnes Box

Agnes Box served as the Telecommunications Coordinator at the Oregon Institute of Technology (OIT) in Klamath Falls and had a 30+ year history in academic computing environments with many years focused on telecommunications technologies and services. Agnes served the advancement of telecommunications through her work with a regional fiber consortia, as a key member of the Klamath Falls area Telecommunications Task Force, the Oregon Connections Telecommunications Conference, Oregon Health Network working committee and as a member of the Oregon Telecommunications Coordinating Council.

She was an active voice for access to advanced services in rural and underserved communities since 1995 and received recognition and multiple awards for her contributions including an Oregon Connections Lifetime Achievement Award upon her passing in 2008. [John Irwin]

Cathy Britain

Cathy has been advancing the cause of telecommunications in Oregon since the 1990's. A few highlights follow, though this is an incomplete list of her accomplishments.

- In the mid-1993, Cathy established the first mental health telemedicine network in Oregon, RodeoNet (second in the nation serving mental health). RodeoNet was a fully implemented telehealth model serving patients in rural Eastern Oregon.
- She was part of the group that established this statewide conference for telecommunications (1996). Cathy served for a number of years on the planning committee until other duties called to her.
- Cathy served on the Oregon Telecommunications Coordinating Council (ORTCC) making significant contributions to Oregon's broadband public policy.
- Cathy was a key member of Eastern Oregon Telecommunications Consortia. This was prior to Senate Bill 622 (1999) and set the tone and model for many similar telecommunication planning and advocacy groups in Oregon. Their strategic plan became the strategic plan model for many regions of the state.
- Cathy provided many hours of meeting with legislators to craft the SB 622 legislation. SB 622 was a break-through in that it ended up having Qwest (then US WEST and now CenturyLink) deploy 5 large self-healing Synchronous Optical Fiber Network (SONET) rings in the state, multiple Asynchronous Transfer Mode (ATM) switches, and delivery of Digital Subscriber Line (DSL) service to many communities in the state. It was an infrastructure sea change, and significantly improved telecommunications service reliability and availability to rural areas of the state.
- Cathy played a key role in convening the group that successfully lobbied the legislature for the establishment of the Oregon Telecommunications Coordinating Council (ORTCC 2001-2009) and Cathy served on the council over its life.
- Cathy served as the chair of the Telemedicine and Education committee of the ORTCC. With her guidance and legislative lobbying, Oregon established leadership in the field of telehealth/telemedicine with passage of House Joint Resolution 4 (2003), a resolution supporting reimbursement for telemedicine in Oregon—on the heels of this resolution and because of it the next year state Medicaid began reimbursement for telemedicine).
- She co-founded the Telehealth Alliance of Oregon (TAO) and she continues as its manager after serving as chair and other board positions www.ortelehealth.org.
- Under TAO Cathy provided leadership and support for the development and successful establishment of the Oregon Health Network (OHN).
- Working closely with Senator Monnes-Anderson SB 24 (2009) was passed into law to provide for telemedicine reimbursement throughout Oregon. Cathy convened healthcare payers, healthcare professionals, legislators, and provided countless hours to nurture and pass this critical legislation.
- Cathy is the Oregon representative to the Northwest Regional Telehealth Resource Center (NRTRC).

- Cathy also helped to establish telemedicine in southern Oregon at the Asante hospital systems in Grants Pass and Medford.
- She has invested countless hours without reimbursement to assist health care providers and institutions through our state to commence use of telemedicine throughout OR.
- Currently she's working through TAO toward achieving cross-state licensing for the practice of telemedicine.
- Many regard Cathy as the "go to" person for telemedicine/telehealth, and not just in Oregon but throughout the nation.

[John Irwin]

Dan Bubb

Dan Bubb as the President and owner of GorgeNet has worked for 25 years to improve broadband access throughout the Mid-Columbia region of Oregon and Washington. Whether creating wireless access for communities without broadband service options or building fiber to homes and businesses, he has shown a strong commitment to the region that has enhanced the local economy and community livability.

Through engagement with local governments and regional broadband planning efforts, developing strong partnerships, and investing his own time and resources, Dan has continued moving this work expanding into rural areas around the region that have lacked access in the past. These approaches have meant enhanced services in communities from Glenwood, Washington down to Maupin, Oregon and surrounding areas. [Carrie Pipinich]

Steve Corbato

Steve Corbato is the Executive Director of the Oregon Fiber Partnership (OFP), a new consortium of Oregon's state government and four research universities to own and operate a facilities-based, statewide optical fiber network as well as to operate the associated Internet backbone. Steve is bringing expertise from a twenty-five year career in information technology, and networks serving K-20 schools, Internet2, higher education, state government, telehealth and transportation networks to bear on improving Oregon's broadband infrastructure.

[Melody Riley-Ralphs]

Jack Crider

Jack Crider was instrumental in establishing Tillamook Lightwave, through an Oregon 190 Intergovernmental Agreement between Tillamook People's Utility District, the Port of Tillamook Bay and Tillamook County on November 1, 2000. Jack was President of Tillamook Lightwave from its inception, and provided the leadership to build a substantial fiber network in one of the most rural of Oregon counties. Under his management and with approval from his board of directors, the Port of Tillamook Bay has provided easements and ducts along their railroad right of way to provide the majority of the route for the 50 miles of fiber optic cable that Lightwave currently owns. Through his efforts to promote economic development in Tillamook County, he

has helped develop this fiber network into a major player on the Oregon Coast before retiring in 2007. [John Irwin]

Shay Dakan

Shay Dakan's telecommunications career spanned 50+ years. Many in Oregon's higher education community enjoyed the benefits of her industry experience, vast knowledge, and vision of future continued development. Shay was an advocate for the Oregon University System championing system wide needs including the regional universities: Eastern Oregon University, Oregon Institute of Technology, Southern Oregon University, and Western Oregon University.

She forged partnerships and alliances with advocates throughout the State of Oregon and with industry on a national level. Shay served as a catalyst to ignite change within the telecommunications, information technology, and open source industries. Shay lead successful efforts to develop and build the internationally renowned Oregon State University Open Source Lab (OSL), which over the years has hosted an impressive list of the world's largest open source projects. Oregon is highly respected and recognized as the heart of open source technology innovation, as a direct result of the collaborative software development accomplished through the OSL.

Shay supported statewide broadband services in support of OSU's statewide mission that led her to embrace and support unique partnerships with private industry that serve as a model today for public/private investment in broadband. Under her leadership, OSU worked with the Northwest Open Access Network of Oregon—now known as LS Networks) to collaboratively fund and build fiber optic infrastructure to meet not only OSU's needs, but also to serve as an "anchor" tenant in communities where high speed broadband had not yet reached. This concept of an "anchor institution" is now the basis of many federal strategies, and is a concept that Shay promoted early and often to achieve better connections throughout Oregon—from OSU's Seafood Lab in Astoria to the OSU Lake County Extension office in Lakeview, among many others. Shay is a dedicated advocate for consistently continuing to advance new ideas and successes to the benefit of citizens, the University, the Oregon University System, and for the State of Oregon. [Curt Pederson]

Ben Doty

The impact of Ben's vision and leadership are illustrated by his work at the Central Lincoln Public Utility District (PUD) where he was head of the telecommunications department. His major responsibility was directing the installation of fiber optic technology to support PUD operations. Not content to just develop a private "walled garden" network for PUD use, he worked with other local government entities and economic development agencies in the PUD service area to make sure the PUD network could be shared and used for community benefit. When the network was constructed, Ben made sure that spurs and connections were available at appropriate locations for community use. He arranged a number of inter-governmental agreements for local government access to PUD fiber, which helped finance the fiber construction and operating costs as well as bring wide community benefit.

One of those inter-governmental agreements, entered into between the PUD and Lincoln County, led to CoastNet, a public-private partnership that extended the benefits of PUD fiber to the private sector for economic development. Ben Doty served with others on the board of the Economic Development Alliance of Lincoln County and its CoastNet committee to work out the details of using PUD fiber for local economic development.

Ben's vision that a statewide cooperative can bring broadband telecommunications services to all of Oregon resulted in the formation of Northwest Open Access Network—Oregon (NoaNet). NoaNet became a major force in bringing telecommunications services competition to rural Oregon. The potential of NoaNet coming to a community during the shaping of community-based strategies engendered by SB 622, caused collaboration with and between communities and telecommunications service providers that would not have otherwise occurred. [Ed Parker]

Terry Edvalson

When Terry Edvalson was working at Eastern Oregon University (EOU), it was one of the hubs of EDNet, a satellite-based videoconferencing system for Higher Education in Oregon. In order to gain the most benefit for the new system, Terry began to look for other applications that would benefit rural Eastern Oregon and, at the same time, produce support for the fledgling network. Eastern Oregon Human Services Consortium (EOHSC), a mental health network covering 13 counties east of the Cascades was interested in using the new network to deliver psychiatric and mental health services to their patients – services that were not available in rural areas. Terry was instrumental in writing the grant to the Federal Office of Rural Health Policy on behalf of EOHSC to join the EDNet network and establish one of the first telemedicine programs in the United States. The Program was known as RODEONet.

Terry became a tireless advocate for rural people and for the potential telecommunications had to help create a better quality of life for them. In 1995, when the Governor's Telecommunications Council was planning the first state-wide telecommunications conference, and had little rural representation, Terry organized the Eastern Oregon Telecommunications Council to join with the Governor's Council to help plan the conference.

Perhaps Terry's most notable achievement was the effort he led to get Senate Bill 622, Oregon's broadband telecommunications infrastructure bill passed by the Legislature in the 1999 session. The bill established the Connecting Oregon Communities Fund which ultimately led to the funding of 6 interconnecting broadband fiber rings covering Oregon, the School Technology Account and the Public Access Account for building infrastructure particularly in rural Oregon. The result was the beginning of a robust telecommunications infrastructure for Oregon. Terry proved to be a ferocious advocate for this bill and spent over two years building the collaborative partnerships to get it passed.

Terry was also one of the founding members of the Telehealth Alliance of Oregon, and helped that organization grow into a successful 501(c)(3). [Cathy Britain]

Steve Eldrige

Steve Eldrige was Umatilla Electric Cooperative's (UEC) General Manager from 1991 until his retirement in 2016. During his time as General Manager, Steve was instrumental in the formation of UEC's majority owned subsidiary Eastern Oregon Telecom (EOT). He was also one of the founders of Northwest Open Access Network of Oregon (NoaNet Oregon).

Umatilla Electric Cooperative serves large areas of Umatilla, north Morrow and a small part of Union Counties, across a service area which exceeds 2000 square miles in northeastern Oregon. Steve assessed that broadband services were poor with no plans for improvement. Internet access was available over dial-up on voice circuits. UEC, which was created to provide affordable electricity in the region recognized that meeting its member's need for Internet access and broadband, was a furtherance of its original mission. UEC's efforts to improve telephone service in Umatilla and Morrow counties, resulted in the creation of Eastern Oregon Telecom (EOT), offering services which included dial tone, DSL internet access and broadband.

While establishing EOT, UEC joined with five other Oregon electric cooperatives including-Douglas Electric Cooperative (DEC), Central Electric Cooperative (CEC), Hood River Electric Cooperative (HREC), West Oregon Electric Cooperative (WOEC) and Coos Curry Electric Cooperative (CCEC), to create NoaNet Oregon. The start-up of NoaNet Oregon was greatly assisted by the utilization of Bonneville Power Administration's (BPA) public purpose fiber. BPA allowed access to the public purpose fiber (part of BPA's in-service fiber optic network) for entities committed to providing broadband to unserved or underserved areas in the Pacific Northwest.

Eastern Oregon Telecom is currently owned by its management staff, who remain committed to providing modern telecommunications in Umatilla and Morrow counties. Gigabit service is now widely available and DSL is considered the minimum for internet service. Inadequate internet service is no longer a limitation to area development.

During his many years of service, Steve Eldrige has never lost sight of his mission to provide advanced telecommunications and make broadband available to everyone in Oregon - especially those in Rural Oregon.

Lynn Ewing

As the Mayor of the City of Maupin, Lynn Ewing was instrumental in realizing the quest of the city to address the Digital Divide for its residents. He worked to form partnerships and to secure funding to create an open access fiber network and Gigabit broadband connectivity to homes, government, schools and businesses throughout the city with the help of Q-Life Networks and LS Networks. The network is currently being deployed.

Joe Franel

Joe is a pillar in the NW telecommunications community. He has a multiyear track record of success as a spokesperson and advocate for expanding broadband services to the underserved. His years in telecommunications provide him with a deep knowledge of industry history and future trends. His leadership keeps Eastern Oregon Telecom (EOT) moving forward into the future. Eastern Oregon Telecom currently has about 3,500 customers, and covers area from Tower Road, west of Boardman, to Pendleton. They also provide service to some areas in Washington. In early 2018 Joe and his team occupied a new building in Hermiston.

Joe serves or has served in a number of key leadership roles

- Eastern Oregon Telecom, General Manager and Chief Executive Officer (Oct 2008 – Present) of a regional, rural telecommunications company providing commercial and residential high-speed internet and voice services in Northeastern Oregon and Southeastern Washington.
- Chair of the Oregon Broadband Advisory Council, a legislative advisory council appointed by the governor.
- Master of Ceremonies and conference planner, Oregon Connections Telecommunications Conference
- Chair of Columbia Basin Development Group.
- Member of the Eastern Oregon Workforce Board. Co-founder of the Northwest Telecommunications Association.
- Member of the Blue Mountain Community College Computer Science Advisory Board.
- Director of Information Technology for the City of Ashland, Oregon (March 2006 – October 2008), where he was responsible for the Ashland Fiber Network, a municipally-owned and operated broadband telecommunications company. Ashland was selected as one of the Intelligent Communities Forum Smart 21 Communities for 2007 and 2008, because of its innovative and visionary use of broadband technologies.
- Senior Manager of Operations, Knology, Inc. (1998-2006). All operations for a broadband telecommunications company with more than 38,000 customers locally. Facilities (3300 miles of HFC network, two payment centers, two operations centers, and technical headend), fleet (104 vehicles, 50+ generators, and two fiber splicing trailers), and safety management, Public relations and customer service
- Joe has been a featured speaker at numerous state, national, and international conferences and forums.

[John Irwin]

Keith Grunberg and Bradley Kuhnert

Keith Grunberg and Bradley Kuhnert, when at Charter Communications, demonstrated awareness and insight to bring advanced Broadband services to rural Oregon communities. They built partnerships and lobbied for Oregon in building Charter Communications' Oregon fiber backbone network to make these opportunities possible. They performed analyses for the business case for network deployment and for the economic development that it would enable for communities within Morrow, Umatilla, Union, Baker, Curry, and Coos Counties. They were instrumental in linking the Oregon Coast end to end with fiber and ultimately enabling

telecommunication route redundancy to the southern coastal communities of Oregon. They championed this expansion and facilitated input from community members to demonstrate the viability of this investment in rural Oregon.

Brad was instrumental in interconnecting Athena-Weston, Pendleton and La Grande communities bringing increased bandwidth to schools, government and healthcare facilities. Keith was instrumental in driving a Charter Communications fiber build project with the Oregon Health Network and was instrumental in enabling a fiber a “ring” for the Southern Oregon coast.

Mary Beth Henry

Mary Beth Henry is a Digital Equity/Broadband Advocate. She is the former Director of the City of Portland's Office for Community Technology and Mt Hood Cable Regulatory Commission, where she initiated and oversaw development of Portland's Broadband Strategic Plan and the county-wide Digital Equity Action Plan, which brought together business, community, and governmental partners in the recognition that digital equity and affordable, ubiquitous, next generation broadband internet are essential for the region's future. Most recently she served as a Senior Fellow at the National Digital Inclusion Alliance where she co-wrote Informing Strategic Investment in Digital Equity.

She was appointed by Governor Kulongoski to serve on the Oregon Broadband Advisory Committee Oregon Broadband Advisory Council from 2009-2016. In 2012 she received the League of Oregon Cities prestigious Herman Kehrli Award for exceptional lifetime contributions to city government and for producing lasting benefits for her local community. In recognition of this lifetime achievement award the Portland City Council declared October 17 Mary Beth Henry Day in Portland. She served on the League of Oregon Cities Broadband and Telecommunications Committee for 16 years. She also served on the NATOA Board of Directors for 8 years and as its President in 2009. In 2006 she received the Oregon Connections Excellence in Telecommunications Legislation for her advocacy work in Salem and Washington, D.C.

Mary Beth received NATOA's 2016 Broadband Visionary of the Year and, along with her team, NATOA's Strategic Plan of the Year. She has a passion for collaboration, digital equity, broadband, and Oregon.

Onno Husing

Onno Husing, as Executive Director of the Oregon Coastal Zone Management Association (OCZMA) was a key broadband advocate on the Oregon Coast. His report, "Oregon Coast Telecommunications Economic Development Strategy," created and promoted an economic development strategy for the Oregon coast. The strategy became a significant factor in the applications, and subsequent awarding of two “e-commerce” zones from the Oregon Economic and Community Development Department to coastal communities. Onno also served as a member and Chair of the Oregon Telecommunications Coordinating Council. [Chris Chandler DiTorrice]

Steve Huter

For over twenty-five years Steve Huter has been associated with the University of Oregon-based Network Startup Resource Center (NSRC), providing technical capacity development to thousands of network engineers to strengthen the infrastructure, partnerships and networking expertise around the world. For his contributions to the global internet community he was inducted into the Internet Hall of Fame in 2014 and, more recently, was presented by the Internet Society with the 2018 Jonathan B. Postel Service Award. [CONNECT, Issue 30, 2018]
https://www.geant.org/News_and_Events/CONNECT/Issue_30/Documents/NSRC.pdf

John Irwin

John Irwin is an early leader, advisor, and consultant to Oregon and California communities for over twenty years, and a prominent presence in the Oregon broadband telecommunications community always as an advocate for rural communities. He has donated countless hours as a volunteer. He served as Chair of the Oregon Telecommunications Coordinating Council for nine years and has influenced and promoted proactive broadband public policy and best practices in the state. He served as the Master of Ceremonies and as a key planner for the Oregon Connections Telecommunications Conferences for over ten years.

John developed Community Broadband Plans for Curry, Douglas, Jackson, Josephine, and Klamath Counties as well as for Del Norte and Humboldt Counties in California.

John was instrumental in the organization of the Telehealth Alliance of Oregon and in developing the grant application that resulted in the creation of the Oregon Health Network. He has been a convener and connector helping the state and individual communities to effectively engage in telecommunications issues and challenges in the public interest.
[Chris Tamarin]

Ken Kestner

Commissioner Ken Kester was elected to the Lake County Board of Commissioners in 2006. In listening to the citizens of Lake County as he traveled around the County, it became clear that there was a great divide and inconsistency in internet service. And almost non-existent in the more remote areas of the county in the Warner Valley, Paisley and north through Summer Lake, Silver Lake and Christmas Valley/Fort Rock areas.

Commissioner Kestner set about educating himself about the current status of internet service and exactly how it was deployed from one place to another, studied maps to find out the routes of fiber trails and talked to everyone from US Forest Service/BLM, fiber companies, ISP's and engineers. He quickly learned service was not only sparse, but where there was service it was inconsistent, often interrupted for long periods of time, and slow. Seeking out county residents representing ranchers, farmers, businesses, home business owners and educators Commissioner Kestner began informing those in state government and departments of the need. Needs for

higher speeds for the remote areas in the county to stream livestock market sales, bring service to children at rural schools and at home to complete their school work and be competitive with students from more urban areas to learn. He called on federal and state agencies.

His efforts encouraged and guided local ISP's in developing better relationships with fiber providers and resulted in connecting the E-Rate program with the Lake County Education Service District and the Paisley School district to solve their critical Internet access needs just in as they were at risk of losing their ability to conform to online state testing standards due to inadequate bandwidth. He also worked to address the unmet needs of Summer Lake and Silver Lake. Ken Kestner's consistent advocacy and vision to bring broadband Internet access to every part of Lake County.

Scott Lazenby

Scott Lazenby, as City Manager for the City of Sandy, is an example of a local government official that recognized the importance of broadband services for its citizens over fifteen years ago. Unable to access services for the city's needs, Scott moved proactively and successfully to provide broadband services for the Sandy community through wireless, DSL, and ultimately fiber-to-the-home technologies. SandyNet is owned and operated as a public service by the City of Sandy.

SandyNet has become a key asset for city offices, the city water system (automatic meter reading), the Sandy Fire District, the US Forest Service, Clackamas County ESD, Clackamas County Mental Health office, and is connected to the Clackamas County Express network. The City Operations Center uses a voice-over-IP (VOIP) phone system over SandyNet and the city continues to add e-government applications, most recently live streaming video of Council and Planning Commission meetings, and on-line utility bill services. The web-based archive of city documents (now including large-format building and planning drawings) is one of the most complete of any local government, let alone a city of only 8,000 people. SandyNet also serves the Oregon Trail School District and is providing Gigabit service to the new Sandy High School.

Scott McMullen

Scott McMullen was a commercial trawl fisherman working out of Astoria when he received a mailing regarding an undersea cable that was coming ashore in Oregon with a map showing its location and telling him not to fish within a mile of the cable, an area of about 80 square miles. This was a major concern and created an immediate conflict with Oregon's fishing fleet.

Scott collaborated with two other fisherman to determine how to respond and contacted the undersea cable company and worked for several months to reach an agreement. The agreement outlined the responsibilities of the cable owner and Oregon's fishing industry with a goal of cooperation and minimizing interference with each other's operations. Undersea cable owners would bury their cables, establish a hot-line to report problems, establish a sacrifice gear fund (in the event that a cable was snagged, the fisherman would cut loose his gear and have it replaced

by the fund), and a release of liability for accidental damage to the cable. Fisherman would follow protocols for fishing over cables, keep the fleet updated on the protocols.

Through negotiations with the cable operators and the State of Oregon, the Oregon Fishermen's Cable Committee, Inc. was formed as a nonprofit 501C6 headquartered in Astoria to act as a liaison between all the parties. Scott was one of the founders and has been the chair since OFCC's inception. In 2018, OFCC celebrated 20 years of this unique partnership and working relationship. In twenty years, there have been zero cable snags in Oregon coastal waters.

As a result, Oregon has become a preferred location to come ashore on the West Coast of North America. There are currently fifteen, soon to be sixteen in-service commercial undersea cables coming ashore in Oregon with additional cable projects currently under development. This growing cluster of undersea cables is positioning Oregon as a telecommunications gateway to the Pacific Rim.

Milo Mecham

Milo Mecham has been a long standing advocate for improved broadband telecommunications infrastructure and public policy in Oregon. He has supported the formation and the launch of local community fiber consortia for rural Oregon. He has supported the formation and the launch of the Oregon Telecommunications Coordinating Council providing staff support. He supported the formation and the launch of the Oregon Health Network. He has supported and contributed to the success of multiple telecommunications projects in Lane County.

Milo has been a key leader in the development of a successful proposal for an \$8.3 million federal Broadband Technology Opportunities Program (BTOP) grant to implement a middle mile backbone to expand Oregon's broadband infrastructure with over 124 miles of fiber from Eugene to Klamath Falls, and from Eugene to Roseburg to provide 100 Mbps connections to serve more than 100 community anchor institutions, including medical centers, public safety entities, schools, community colleges, libraries and Klamath Tribal institutions, in unserved and underserved portions of Lane, Douglas, and Klamath Counties.

Milo has worked to develop a downtown Eugene leased fiber network pilot project. Partnering with the city of Eugene, and Eugene Water and Electric Board (EWEB), area CLECS, and downtown building owners, the pilot project has installed fiber to four buildings and made the fiber equally available to interested private service providers. In the second year of the pilot, customers were able to buy gigabit speed service at \$99 a month. The pilot project is developing a business plan to extend the fiber project throughout the entire downtown footprint. And importantly, Milo has proactively shared his knowledge and understanding of broadband technologies, community engagement and funding with others. Milo has truly made significant contributions as an advocate for improved access, reliability and affordability of broadband telecommunications in Oregon. [Chris Tamarin]

Keith Mobley

Keith became involved in telecommunications in 1983 when he was the Assistant to the President and Director of Community and Government Relations at Oregon State University (OSU). He recognized the potential of the technology for fulfilling OSU's mission through distance education, research and agricultural extension services.

Keith convened the Gorge Teleconsortium, a regional group dedicated to improving telecommunications in the Columbia River Gorge region of Oregon and Washington State. Keith, who is an attorney, serves as legal counsel to the QualityLife (Q-Life) Intergovernmental Agency, established by the city of The Dalles and Wasco County. Q-Life was instrumental in attracting Google to locate a data center in The Dalles. Keith was influential in bringing a fiber-to-the-home network to Dufur. He was instrumental in Mid-Columbia Medical Center's ability to use telecommunications to deliver clinical care to patients while improving connectivity to the community. Keith promoted community involvement in the Northwest Open Access Network of Oregon (NoaNet) which went on to significantly improve broadband infrastructure statewide.

While helping to develop a Workforce Investment Board for the five-county Mid-Columbia region, Keith led a successful effort involving four other workforce regions (and 14 counties) to create sophisticated websites providing access to workforce services for employers and job-seekers. Another of Keith's workforce projects was the creation of a wireless area network to provide desktop video-conferencing between Columbia Gorge Community College, Mid-Columbia Council of Governments, and the Oregon State Office Building in The Dalles. Keith also helped guide the creation and implementation of a free downtown Wi-Fi system for the convenience of residents and visitors in The Dalles.

Keith has influenced telecommunications and has been an advocate statewide. He has been a member and chair of the Board of Directors of Oregon Public Broadcasting. He has served for ten years on the Planning Committee for the Oregon Connections Telecommunications Conference. [Q-Life Board]

Senator David Nelson

In 1999, Senate Bill 622 triggered a wave telecommunications planning and collaboration across the many regions of Oregon. The result was a \$70 million investment in new broadband infrastructure and a foundation for growth in economic and quality of life development. The impact of this measure's passage rippled across the landscape resulting in other investments in Oregon's broadband infrastructure. Among the significant impacts was the spawning of numerous regional broadband planning efforts.

Senator Nelson's work over many years to support telecommunications legislation and other policy initiatives has had a long reaching impact on the lives of Oregonians. For many years, Senator Nelson was the "go to" person in the state legislature on broadband telecommunications issues. He served on key committees and task forces that developed telecommunications policy. He played a key role in building the foundation on which those that follow can further build Oregon's telecommunications future. [John Irwin]

David Olson

For nearly 30 years, David Olson was the Director of the City of Portland's Office of Cable and Franchise Management, or to most of us, the "Cable Office." The office went through numerous changes over all these years, reflecting the changes in the industry and the needs of the City, David lead the office in negotiation franchise agreements, right of way agreements, and other research to benefit the citizens of Portland.

David has the rare honor of having a court case reach the U.S. Supreme Court. In *AT&T v. City of Portland* (216 F 3rd 871 (9th Cir. 2000)) the court discussed the question of "whether a local cable franchise authority may condition a transfer of a cable franchise upon the cable operator's grant of unrestricted access to its cable broadband transmission facilities for Internet service providers, other than the operator's proprietary service." The notion David argued was that "open access" to the Internet for small ISPs should be available to enable equity and expansion of the Internet. The case won in the lower court, but was later reverse in appeals. It eventually was taken up again in *NCTA v. Brand X Internet Services* (125 S.Ct. 2688 (2005)) at the Supreme Court. The Cable Association lost the case, and in the end so did the ability of non-proprietary ISPs to have access to private networks to distribute their product. (Brand X). While this case eventually lost on appeal, it was the basis for other cases that challenged the Internet paradigm that existed at the time. It is the precursor case to the recent ruling known as Net Neutrality.

David served as the president of the National Association of Telecommunications Officers and Advisors (NATOA) speaking and lobbying on behalf of communities and cable. On behalf of NATOA he went to Mexico to speak at the annual conference of the International Institute of Communication on the regulatory and legal telecom issues facing local communities in the USA.

David has shared his knowledge with others teaching Telecommunications Law at the Lewis and Clark Law School and publishing numerous articles. David Olson has been a major influence in the telecommunications world in Portland, in Oregon, and nationally.

Greg Palser

Greg has left an enduring contribution to Oregon telecommunications. Greg, as president of CoastCom, led many projects on the central coast. Some examples of accomplishments under his leadership:

- Connected Oregon Coast Community College Newport and Lincoln City campuses with fiber.
- Connected Samaritan Health Services Newport and Lincoln City hospitals with fiber.
- Expanded fiber connectivity and CoastNet operations to Reedsport and Florence with fiber builds for schools and hospitals in those communities.
- Expanded fiber connectivity and CoastNet operations northward to Tillamook.
- Expanded fiber connectivity to Siletz to serve the Confederated Tribes of the Siletz.

- Worked to bring undersea fiber optic cable to the Oregon Coast connecting to points around the Pacific Rim.
 - Established a self-healing fiber ring network between Pacific City and Hillsboro providing connectivity for undersea fiber optic cable networks and data centers.
- [Ed Parker]

Ed Parker

Ed Parker is a Stanford Ph.D. who also served on the Stanford University faculty as a Professor of Communication where he specialized in the social and economic effects of information technology. He has co-authored or co-edited five books and more than 75 professional articles. The second edition of his book, *Electronic Byways: State Policies for Rural Development through Telecommunications*, was published by the Aspen Institute in 1995. An earlier book, titled *Rural America in the Information Age: Telecommunications Policy for Rural Development*, was published in 1989 by University Press of America.

Ed also co-founded Equatorial Communications Company in 1979, the first company in the world to use very small satellite earth stations for data communications. It later merged with Contel.

When Ed retired, he brought is considerable expertise and vision to Oregon. He served as chair of the CoastNet committee of the Economic Development Alliance of Lincoln County. He served on the Telecommunications Task Force for Governor Roberts. Governor John Kitzhaber named him “local economic development leader of the year in 1995”. He was named Man of the Year in Lincoln City in 2006 in recognition of his local contributions to telecommunications and economic development. Ed and his wife, Fran Spigai, were given the “Outstanding Contribution to Rural Health in Oregon” award at the Oregon Rural Health Conference in 2007.

He is a visionary. He is a mentor to disciples throughout the state, and is fond of saying, “It is amazing what can be accomplished when you don’t care who gets the credit.”

[John Irwin and Chris Tamarin]

Curt Pederson

Curt Pederson has been a force for the promotion of telecommunications and information technologies in Oregon for many years. Curt served as Oregon’s first state chief information officer, the vice provost for Information Services and CIO at Oregon State University and Director of the Open Source Lab, the CIO for the Oregon University System (OUS), and as the CIO of Information Services for the University of Portland. Curt is a member of the Northwest Academic Computing Consortium (NWACC) Executive Board, represents the Oregon University System (OUS) on the Oregon Portland CIO Alliance, Oregon State CIO Council, and is a member of Dell Platinum Advisory Group and Sprint/Nextel Higher Education Advisory Group. In 2004 Curt was named as one of the Premier 100 IT Leaders in the United States by Computerworld magazine. In 2006 Curt was named as one of the Top 100 Business Innovators by CIO Magazine.

Curt served as a member of the Oregon Telecommunications Coordinating Council for years supporting the development of broadband public policy and the deployment of broadband infrastructure. Curt has supported the open source movement making the OSU Open Source Lab a resource for collaboration and innovation in open source software development. The OSU Lab has grown rapidly and has hosted many of the world's largest open source projects. The OSU Open Source Lab has become an internationally recognized resource for collaboration and innovation in open source software development and has helped to establish Oregon as a center for open source technologies. [Chris Tamarin]

Bill Penhollow

Bill Penhollow was an Assistant Director of the Association of Oregon Counties and was an early advocate and supporter of broadband in the Oregon Legislative Assembly. Bill was instrumental in helping to pass the legislation that helped to create the Oregon Telecommunications Coordinating Council and the public policy recommendations that followed. He has provided limitless hours preparing legislation, working with Legal Counsel and testifying before the Legislature in support of the Council's bills. [John Irwin]

Jeremy Pietzold

Jeremy Pietzold serves as the President of the Sandy City Council and the chairman of the SandyNet Board. Professionally Jeremy serves as a Network Engineer for Clackamas ESD where he has gained outstanding experience in building and operating networks, as well as an understanding of what impacts they can have on communities and our education system.

Jeremy's leadership has been instrumental in establishing and growing SandyNet as a municipal internet service utility. He has been a voice in the Sandy community crying out for cutting edge broadband network. He has lead the charge in the deployment of a city wide WiFi network and ultimately the evolution to SandyNet's FTTH rollout bringing gigabit capability to every property in the City of Sandy.

Jeremy's technical expertise, love for the community, and willingness to stand up for what he believes will benefit the community have made him the perfect advocate for the telecommunications future of the City of Sandy. Jeremy is also a member of the NWAX Board of Directors and has contributed significantly to the success of that organization and its additions to Oregon's telecommunications infrastructure and peering capabilities.

Jeremy received the "award from NATOA?? And has been invited to the White House to share his expertise in developing broadband solutions for rural areas. [Joe Knapp]

Richard Ryan

Rich Ryan is the founder of Hunter Communications, a Rogue Valley based telecommunications company, Competitive Local Exchange Company and Internet service provider (ISP). In 2000,

Rich started building an all-fiber network throughout Medford with the vision of a Metropolitan Area Network (MAN) in rural southern Oregon and has continued to build throughout the Rogue Valley (both Jackson and Josephine Counties) and the Klamath Basin connecting Southern Oregon's Educational Systems, City and County Governments, Healthcare, and Businesses. Rich's efforts have established connectivity for a number of previously underserved rural communities, including over 100 school sites throughout southern Oregon including the Butte Falls School District, Central Point School District, Klamath County School District, Medford School District, Three Rivers School District, the Eagle Point School District and the Lake County School District and ESD. [Sam Ackley]

Dave Sabala

Dave Sabala was Douglas Electric Cooperative's (DEC) General Manager from 1989 until his retirement in 2015. During his tenure, he was instrumental in the formation of DEC's wholly-owned telecommunications subsidiary, Douglas Fast Net (DFN). Dave has been an active force for rural broadband telecommunications.

- Dave is one of eight founding members and owners of NoaNet Oregon.
- As General Manager of Douglas Electric Cooperative, headquartered in Roseburg, Dave's guidance and leadership led to the formation and successful operation of Douglas Fast Net, an internet and telecommunication service provider. Douglas Fast Net's mission is to make certain that broadband is available throughout Douglas County.
- Dave is one of six founding members and shareholders of LS Networks, a facilities based provider of Internet and Telecommunication services throughout the Pacific Northwest.
- Dave is a founding member of Eastern Oregon telecom, Inc., headquartered in Hermiston.
- Dave was appointed by Governor Kulongoski as a charter member of Oregon's Broadband Advisory Committee in 2010 and was reappointed by Governor Kitzhaber and Governor Brown to additional terms.

Since DFN was created in 2001 to bring advanced telecommunications to Roseburg and the surrounding areas of Douglas County, the company has become a leader in fiber-optic voice and data services, becoming one of the first providers in Oregon to offer Internet speeds up to 1 gigabit per second (Gbps) to the *rural* residential market. DFN has invested nearly \$25 million in a fiber-optic communications network that offers broadband Internet access to a population of approximately 56,000 in sixteen cities and towns across southwest Oregon and in its 13th year in a row of profitability. At the end of 2017, DFN surpassed DEC in terms of number of circuits compared to active electric meters. In addition, LS Networks, serves as the regional backbone for the local communication networks built by entities such as DFN. Dave recognized early on the risk that economic growth in rural areas would be stymied by lack of high-speed Internet access, digital voice communications and data transfer capacity and took a leadership role in addressing it.

Eric Schmidt

Eric was a long standing advocate of broadband for economic development and public safety in Oregon. In his communications role at Association of Oregon Counties, he has promoted the value and importance of broadband to county governments and local leaders. He was an active supporter of the Oregon Telecommunications Coordinating Council, the Oregon Broadband Advisory Council and the Oregon Connections Telecommunications Conference. He supported and advocated broadband legislation working directly with legislators to promote broadband issues in the Oregon Legislative Assembly. [Chris Tamarin]

Marsha Spellman and Adam Haas

Adam Hass and Marsha Spellman have worked for many years to improve telecommunications infrastructure on tribal lands, specifically the Confederated Tribes of Warm Springs Reservation. Adam and Marsha were instrumental in obtaining federal and state grants to enhance communications on the reservation and establishing Warm Springs Telecom one of only xx tribal owned telecommunications companies in the nation while demonstrating cultural awareness, respect and professionalism regarding the tribal nation. [Dan Martinez]

John Stadter

John Stadter established ComSpanUSA as a facilities-based CLEC headquartered in Roseburg, Oregon with a mission to bring state-of-the-art communications services to the local communities it serves. John was instrumental in the development and deployment of fiber to the premises networks to deliver “triple play” voice, data, and multimedia-enabled next-generation services including IPTV and Video on Demand to its customers in the small town of Bandon on the Oregon Coast. The Bandon project is the first commercial deployment of full-rate Gigabit Passive Optical Network (GPON) technology in the United States. ComSpan went on to make private sector investments to build infrastructure in Coquille, Myrtle Point and Reedsport. [Chris Tamarin]

Jim Teece

Jim is a force for all facets of technology in southern Oregon. He has been instrumental in advancing broadband and wireless development efforts. Jim is the President and CEO of Project A, a global ecommerce digital agency and software developer, founded with his wife in 1990. Jim is also President and CEO of Ashland Home Net, Ashland’s largest Internet Service Provider (ISP), Cable TV and Phone Company with thousands of customers. Additional services include computer repair and high speed wireless internet for thousands of rural residents in Oregon through “Rogue Broadband.” [John Irwin]

Amy Tykeson

As President and CEO of Bend Cable Communications, an Oregon-based company, Amy Tykeson dramatically expanded and exceeded the scope of the typical independent cable company and significantly contributed to the broadband infrastructure of Central Oregon.

Under Amy Tykeson's leadership, BendBroadband has

- Upgraded its cable TV network to a DOCSIS 3.0 fiber-coax network capable of state of the art high-speed two way data communications. BendBroadband was among the first companies in the United States to convert to a 100% digital video signal.
- Deployed a new HSPA+ 3.5G (later upgraded to LTE) wireless broadband data network, one of the fastest in the nation, to expand its broadband service coverage.
- Developed a successful proposal for a \$4.4 million federal Broadband Technology Opportunities Program (BTOP) grant to bring a high-capacity middle mile optical ring network to connect underserved communities and provide affordable network capacity to community anchor institutions and businesses in Central Oregon.
- Extended upon the BTOP grant project build to connect southerly long-haul fiber at Chemult to Bend and Prineville. This addition opened access to remote cities in south Deschutes County and improved reliability for Central Oregon's emerging datacenter market.
- Established the Connect to Compete program to provide eligible families with high speed internet for a deeply reduced rate for 2 years together with a free modem. For those families who do not have a computer at home there will be an option to purchase a refurbished computer at a discounted price.
- Deployed the first 4G LTE wireless network to Central Oregon providing broadband home internet to rural communities.
- Built the BendBroadband Vault, a green data center to provide services including network, server and storage design, business continuity/disaster recovery, product selection, virtualization, and cloud computing infrastructure.

These projects, along with the vision and the substantial investment needed to make them happen contribute to the competitive telecommunications infrastructure needed to support economic growth and development, as well as an improved quality of life in Central Oregon.

[Chris Tamarin]

Todd Way

Todd Way became Douglas Fast Net's manager in 2007. Since then, DFN has become a leader in fiber-optic voice and data services, becoming one of the first providers in Oregon to offer Internet speeds up to 1 gigabit per second (Gbps) to the rural residential market in Douglas County. DFN is Douglas Electric Cooperative's (DEC) wholly-owned subsidiary that started in 2001 to help insure that fiber optic based advanced telecommunications did not bypass Douglas County. At the end of 2017, DFN surpassed DEC in terms of active circuits compared to active electric meters. The subsidiary is now larger than the parent.

Under Todd's leadership, DFN is the only fiber optic based telecommunications company west of the Mississippi River to win both the FCC's Rural Broadband Experiment support award and also, more recently, the FCC's Connect America Fund II Reverse Auction support award.

[Dave Sabala]

Michael Weidman

Under Michael's leadership as CEO, LS Networks developed Oregon's largest fiber optic statewide network dedicated to providing advance telecommunications services to rural Oregon. The network is composed of 63 POPs, 1,610 route miles, and 4,318 strand miles. It includes 21 partnerships including 6 electric utilities, 6 telcos, 4 IGAs, 3 private companies, 1 tribe, 1 cable company, 1 university, and 1 federal power marketing agency. The network provides advanced telecommunications services to education, medical, government, business, telcos, ISPs, cable companies, and others. Michael has worked through collaboration with over 21 different organizations for the benefit of rural Oregon [LS Networks Board of Directors 2008]

Nolan Young

Nolan K. Young, while serving as City Manager of The Dalles, emerged as a champion for broadband. Closure of the aluminum smelters left a large economic hole in the region. He looked for opportunities to bring jobs back, and among the several he found was the promise of broadband.

During the ribbon cutting on one of the opportunities, he confided that the most significant opportunity was presented by the possibility of installing a fiber optic ring around the city. Others were persuaded by his insight, and an intergovernmental agency was created. The QualityLife Intergovernmental Agency was established in 2001, and had four entities as members.

Resistance to the creation of a publicly owned fiber system developed, and by 2003 two of the members had withdrawn, leaving the City of The Dalles and Wasco County. Nolan Young became agency administrator, kept those members working together, brought in the technical help needed on an independent contractor basis, found the needed money, and completed the loop with the help of a five-member board of directors. All this was in addition to continuing as The Dalles City Manager.

Shortly after the fiber system was operational, Project 02 entered under a veil of non-disclosure agreements. When the secrecy had to end, Google began construction of its first data center. Between 2005 and 2018, Google has invested over \$1 billion in The Dalles, on the site of a former aluminum smelter.

Before leaving The Dalles to become Fairview city manager, Nolan Young worked with the Mayor of Maupin to bring broadband to that Wasco County city of about 500. The project is now nearing completion, with administration having shifted from the City of The Dalles to Wasco County. Broadband will soon have significant economic impact on the southern end of Wasco County, and the champion who made it possible was Nolan K. Young.

Fiber in The Dalles and Maupin is owned by the cities and is open access. Private providers make the connections to users, and compete on the basis of service quality and price. The

Agency has no employees, but serves as the “department” that manages and operates the systems, both being debt free. [Keith Mobley]

And others

There are many other local broadband champions that have made a difference in their communities that have not been included in this report. OBAC invites Oregonians to submit and share those stories so that these contributors may be recognized and documented in the future.

The value of local broadband champions is clear.

Broadband Champion Development Programs

The continuing challenges of the Digital Divide and addressing the broadband access needs of unserved areas and populations is not unique to Oregon. Communities in other areas of the United States and in other countries face the same challenges. Considering solutions developed by others may help Oregon as well.

Connected Nation

Connected Nation is a non-profit corporation offering programs and initiatives across the United States to help bridge the Digital Divide, from state-based technology planning and mapping programs to national educational technology initiatives, Connected Nation has partners in all sectors including libraries, schools, state and local governments, large technology companies, and small businesses. Connected Nation seeks to raise the awareness of the value of broadband and related technologies by developing coalitions of influencers and enablers for technology deployment and adoption. Connected Nation works with community stakeholders, states and technology providers to develop and implement technology expansion programs with core competencies centered around a mission to improve digital inclusion for people and places previously underserved or overlooked www.connectednation.org.

Connect Michigan is a program which organizes local champions to develop community Technology Action Plans to assess needs in the area and work toward proactive efforts to expand residential and economic development via technology. Connect Michigan works with local, regional, state, and federal partners to facilitate and build Michigan's capacity for leveraging technology for improved quality of life and community and economic development. Through broadband and technology mapping, research, and community planning, it works to bring light to the issues of digital inequality and create more digitally inclusive communities. Connect Michigan now has 10 Connected communities and more than 20 others currently working on plans. Similar programs have been developed in other states with the help of Connected Nation <https://connectednation.org/michigan>.

Blandin Community Broadband Program in rural Minnesota

The Blandin Foundation is a private foundation based in Grand Rapids, Minnesota with a mission is to be a trusted partner and advocate to strengthen rural Minnesota communities. Since 2003, the Blandin Community Broadband Program has engaged at local, state and federal levels to ignite and sustain policies that support rural access to robust broadband. Guiding this work is a strategy board of local public and private leaders to guide the initiative, and a vision.

Broadband activities include

- Border to Border Broadband: Transforming Minnesota, a conference for policymakers, economic and community development professionals, and community broadband champions that showcases different approaches and strategies communities have

implemented to transform their communities into vibrant places and to leverage investments to bridging the digital divide.

- Metrics: measuring the impact of broadband in rural Minnesota communities and of CAF II funding.
- Network Feasibility Fund Grants providing matching grants to communities to support the cost of research of the feasibility of geographically based broadband networks.
- Community Broadband Resources Program: Provides technical assistance and general support to communities exploring gaining access to high-speed internet services.
- Minnesota Broadband Vision: Created by more than 170 broadband champions.

Everyone in Minnesota will be able to use convenient, affordable world-class broadband networks that enable us to survive and thrive in our communities and across the globe.

Recognizing the need and adopting the vision is a first step.

<https://blandinfoundation.org>

Community Champions County Broadband, a program in Great Britain that offers a community centric solution to broadband provision in the rural community working as a partnership with parish councils, the local church, and the community as a whole to deliver superfast broadband to those areas which have been forgotten.

- Are you frustrated with hearing how you cannot get superfast broadband because you live in the 'wrong' area?
- Are you tired of hearing excuses from broadband providers as to why the signal cannot be improved?
- Is your community desperate to get superfast broadband?
- Would you like to do something about it?
- You can do something about it, and we are here to help.

<https://www.countybroadband.co.uk/community-broadband/community-champions/>

Superfast Essex Broadband Champions Program

Superfast Essex is recruited a team of over 150 Broadband Champions across Essex County, Great Britain, to be community ambassadors. The ambassadors share updates and information about what is happening in local communities. In addition to meetings, workshops, exhibitions, email, and flyers, social media including Twitter, Facebook, and LinkedIn are used to provide information on broadband coverage, technologies and possible funding sources.

This month, Superfast Essex and Girlguiding Anglia have launched a challenge badge which aims to inspire young people to help older relatives and friends do more online and be more confident with digital tasks and applications.

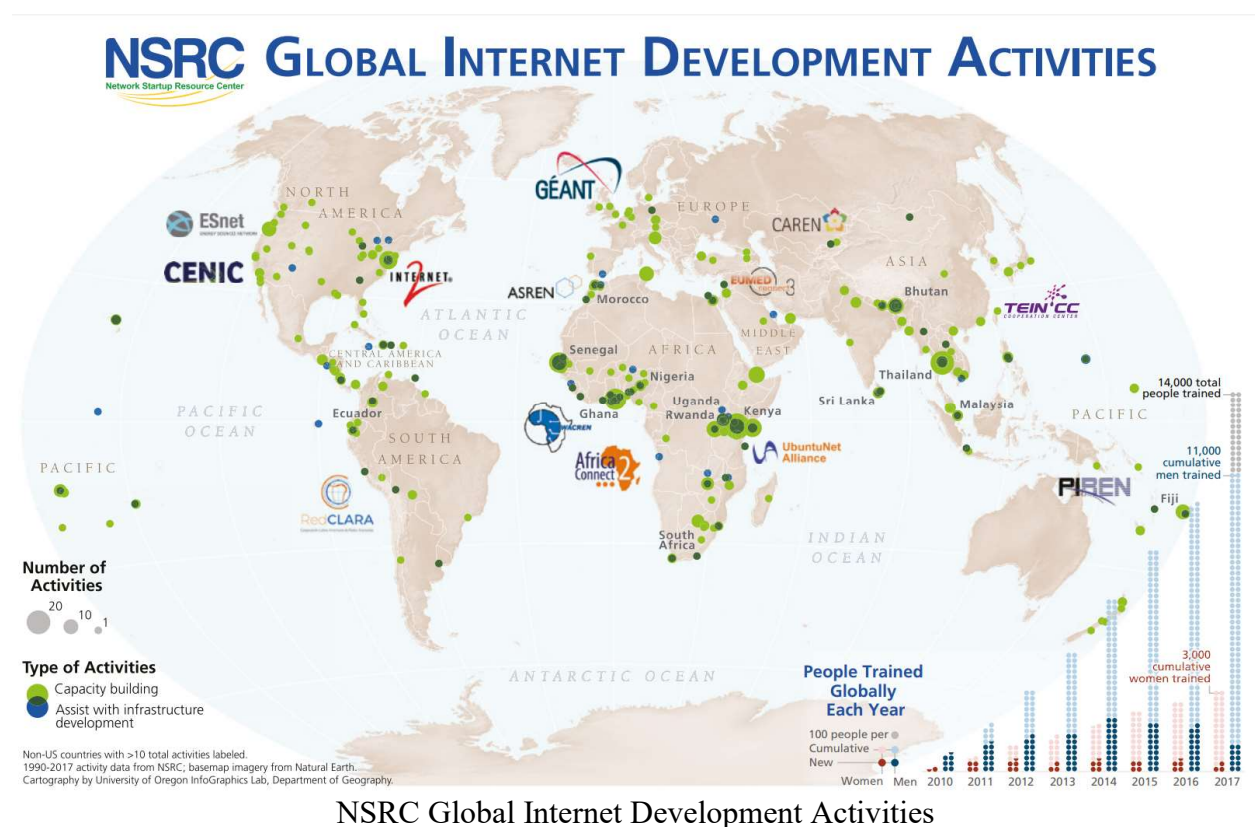
Superfast Essex is part of the national Superfast Britain program, which was established when the Government recognized that economic growth and social wellbeing in Britain were being held back by the lack of universally available broadband. The Department for Culture, Media and Sport is leading the national program through a team called Broadband Delivery UK

www.superfastessex.org.

Network Startup Resource Center (NSRC) at the University of Oregon

The NSRC cultivates collaboration among a community of peers to build and improve a global Internet that benefits all parties. The Center facilitates the growth of sustainable Internet infrastructure via technical training and engineering assistance to enrich the network of networks.

NSRD works directly with the indigenous network engineers and operators who develop and maintain the Internet infrastructure in their respective countries and regions by providing technical information, engineering assistance, training, donations of networking books, equipment and other resources.



NSRC Global Internet Development Activities

NSRC focus areas include

- Helping develop and deploy Internet infrastructure in R&E networks
- Providing technical information and tools to network operators
- Providing direct network engineering and design assistance
- Helping organize regional training workshops and centers
- Coordinating donations and shipments of networking books and equipment
- Helping develop Internet exchange points
- Helping build wireless network infrastructure
- Hosting network engineering interns

- Advising on how to establish help desk/user support services
- Maintaining a historical archive of Internet connectivity

<https://www.nsrc.org/>

Digital Leaders

Digital Leaders is a shared professional online space and face-to-face program, for leaders across all sectors promoting effective, long-term digital transformation in the United Kingdom. Digital Leaders is the premier digital leadership platform with 12 regional programs providing expertise and networking for a growing cross-sector community of over 60,000 leaders.

Its mission is to build the capacity of the UK's leadership creating effective digital leaders, raising awareness of the importance of good leadership in digital transformation, highlighting the digital challenges the UK faces and raising the profile of digital solutions that work across all sectors.

Digital Leaders

- Help leaders digitally transform their organizations
- Run programs and events in 12 UK regions
- Equip individual leaders with the skills they need to work in digital or start a business
- Share data, knowledge, insight and stories on the sector to inspire cultural change
- Connect leaders to the support and services they need
- Build networks across sectors to reduce silos and promote innovation

<https://digileaders.com/about/>

State Broadband Leaders Network (SBLN)

Following the State Broadband Initiative programs funded under the American Recovery and Reinvestment Act of 2009, the National Telecommunications and Information Administration (NTIA) organized the State Broadband Leaders Network (SBLN). The SBLN is a community of practitioners who work on state broadband initiatives. The NTIA's BroadbandUSA program coordinates the group and convenes participants to share priorities and best practices; discuss emerging telecommunications policy issues; link states and local jurisdictions to federal agencies and funding sources; and address barriers to collaboration across states and agencies.

BroadbandUSA also works with SBLN to support technical assistance offerings for communities, businesses and organizations at the local level.

Strategic Networks Group

The Strategic Networks Group is a consultancy that helps communities identify, obtain, and sustain the digital infrastructure they need to thrive in a digital economy.

SNG believes that a less costly and more far reaching alternative to federal or state directed programs is to focus on assistance to help communities to take their digital future into their own hands at the local level. This starts with understanding whether a digital infrastructure approach

can be self-financed by assessing economic feasibility to see whether cost reductions justify a ‘build your own’ network approach. If the answer is yes, communities can seek further assistance to fund support to assess market demand and potential growth to enable communities to invest in sustainable digital infrastructure.

Such State investments in communities are a fraction of the potential capital investment in last mile and offers a much bigger return to the State than spending millions in funding for infrastructure to cover the same area. By providing technical assistance and funding for planning to uncover where digital infrastructure can be self-financed, the State can get digital infrastructure to many more unserved and underserved areas per State dollar. Furthermore, helping communities own the process of digital infrastructure and transformation enables them to own their digital future as compared to simply funding last mile connectivity. SNG Strategic [Michael Curri <http://sngroup.com/options-for-states-to-address-broadband-gaps/>]

Recommendations for an Oregon Broadband Champion Development Pilot Program

OBAC seeks to combine lessons learned from the Oregon experience with findings from other programs to develop recommendations for an Oregon Local Broadband Champion Pilot Program to foster and support broadband champions.

The value of local broadband champions is clear and the difference that they can make is compelling. It can be observed that Oregon's local champions come from diverse backgrounds and associations, but demonstrate the common traits of

- Vision
- Collaboration
- Communication
- Openness to the ideas of others
- Acting in the public interest
- Advocacy
- Engaging and motivating others
- Focusing on needs and results, and not on receiving credit
- Willing to share information and their expertise with others

Recommendations

Oregon Local Broadband Champion Pilot Program

Create and fund a *Local Broadband Champion Pilot Program* to foster and support broadband champions. Locate the Broadband Champions Pilot Program in the Oregon Business Development Department under the guidance of the Oregon Broadband Advisory Council to perform the following tasks.

Broadband Outreach

The first step in developing a champion is generating awareness of a problem with a call to action. Fund and launch a Broadband Outreach promotional campaign to underserved and unserved communities to raise awareness of the existing digital divide and the value of broadband planning, deployment, adoption and utilization. Increase awareness of available resources to address the problem, stimulate interest in local broadband efforts by sharing success stories, and support local community engagement by provide planning grants and technical support to get organized. Increase awareness of broadband issues and their impacts going forward. Focus on Community Anchor Institutions (CAIs) such as schools, libraries, healthcare providers, and local governments as channels to engage local communities.

- Provide speakers to local service club and civic organizations
- Provide speakers to venues that attract local government officials, e.g., Association of Oregon Counties and the League of Oregon Cities
- Provide speakers to education organizations
- Provide speakers to rural health care providers

- Engage electric cooperatives in assessing the broadband needs of their members, and consider the cooperative's capacity to provide solutions

Oregon Broadband Champions Network

Create and fund an Oregon Broadband Champions Network to connect the state's champions and to mentor new champions. The Network would be organized by champions with a charter and would hold a summit to share information on projects, activities, and resources.

- Quarterly conference calls
- Webinars on broadband topics and issues
- Promote peer support and mentoring
- Promote activities and share information through social media

Broadband Community of Interest Directory

Create and maintain a Broadband Community of Interest Directory to identify and establish channels of communication with past, current and prospective champions, as well as state agencies, federal agencies and other organizations engaged in broadband expansion.

Local Community Broadband Planning

Promote and provide training and support for local and regional communities to begin formal broadband planning, and to integrate broadband as a component in economic development plans. Promote the organization of broadband committees and task forces with organizing grants.

Public Private Partnerships

Promote the development of Public Private Partnerships between governmental, public sector, and private sector organizations as a strategy to improve broadband infrastructure in underserved areas. Prospective partners include telecommunications service providers, the state, counties, municipalities, and associations including the Association of Oregon Counties, League of Oregon Cities, and the Oregon Economic Development Association.

Community Engagement

Establish channels of communication and promote collaboration among broadband service providers and local users. Communication, collaboration, demand aggregation, joint action and planning by service providers, businesses, government institutions, economic development organizations, schools, and health care providers will promote and accelerate broadband deployment, adoption and utilization in rural communities. Broadband champions can come from any of these sectors.

Assign Responsibility

Promote inclusion of broadband advocacy in the job descriptions of economic development officials.

Allocation of Funds for the Pilot

\$150,000.

Appendix A
House Bill 4023 (2018) Enrolled [SECTIONS 1 and 2]

79th OREGON LEGISLATIVE ASSEMBLY--2018 Regular Session

Enrolled
House Bill 4023

Introduced and printed pursuant to House Rule 12.00. Pre-session filed (at the request of House Interim Committee on Economic Development and Trade)

CHAPTER

AN ACT

Relating to broadband technology; creating new provisions; amending ORS 276A.406 and 276A.412; and declaring an emergency.

Whereas access to high-speed, affordable broadband services is vital to the delivery of education, health care, public safety, economic development and other public services; and

Whereas the Legislative Assembly continuously seeks to encourage collaboration between communities and the tribal governments and public bodies that serve them; and

Whereas it is not the state's intent to provide broadband services in direct competition with telecommunications providers that offer comparable broadband services; now, therefore,

Be It Enacted by the People of the State of Oregon:

LOCAL BROADBAND CHAMPIONS

SECTION 1. (1) As used in this section, "local broadband champion" means a local government official, elected official, educator, business, organization, resident, community leader or other person that advocates for local broadband infrastructure improvements in the person's community.

(2) The Oregon Broadband Advisory Council, established under section 1, chapter 782, Oregon Laws 2009, shall conduct a study to identify options for a local broadband champion program to foster and support local broadband champions. No later than December 1, 2018, the council shall report to the interim legislative committees on economic development with a proposed local broadband champion program structure that identifies potential public or private partnerships and anticipated funding needs and sources.

SECTION 2. Section 1 of this 2018 Act is repealed on January 2, 2019.

See the entire enrolled Bill at:

<https://olis.leg.state.or.us/liz/2018R1/Downloads/MeasureDocument/HB4023/Enrolled>

Appendix B

Oregon Broadband Advisory Council Members – 2018

The mission of the council is to encourage coordination and collaboration between organizations and economic sectors to leverage the development and utilization of broadband for education, workforce development, government and healthcare, and to promote broadband adoption by residents and communities. The council members represent Oregon's cities, counties, telecommunications service providers, tribes, educators, economic development organizations, public safety agencies, healthcare providers, E-Government, the Public Utility Commission, the State House of Representatives and the State Senate. Members of the Council were appointed by the Governor, the Speaker of the House and the President of the Senate.

Council Members

Stephen Bloom
Commissioner
Public Utility Commission of Oregon

Anne Carlross
Director of Special Education
Hood River County School District

Miles Ellenby
Associate Professor of Pediatric Critical Care Medicine
Medical Director, Telemedicine Program
Doernbecher Children's Hospital / Oregon Health and Science University

Joseph Franell (**Council Chair**)
General Manager and CEO
Eastern Oregon Telecom

Wade Holmes
Vice President of Technology
BendBroadband

Lonny Macy
Community and Economic Development Planner
Confederated Tribes of Warm Springs

Pam Marsh
Representative
Oregon House of Representatives

Jeremy Pietzold (**Council Vice-Chair**)
City Council President

City of Sandy

Dave Sabala
Economic Development

Vacant
Senator
Oregon State Senate

Melody Riley-Ralphs
Chief Technology Officer
Office of the State Chief Information Officer (OSCIO)

Michael Weidman (Resigned 2018, seat now vacant)
Former President and CEO
LS Networks, Inc.

Tom Worthy
Major
Oregon State Police

David Yamamoto
Commissioner
Tillamook County

Staff:

Christopher Tamarin
Telecommunications Strategist
Oregon Business Development Department
121 SW Salmon Street, Suite 205
Portland, Oregon 97204
503 508-0178 Phone / Cell
503 581-5115 Fax
christopher.tamarin@oregon.gov

Council Website URL: www.broadband-oregon.org

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Oregon Broadband Outreach and Strategic Planning Project, Oregon Business Development Department and the Oregon Broadband Advisory Council. www.oregonbroadbandplanning.org

Planning a Community Broadband Roadmap: A Toolkit for Local and Tribal Governments, National Telecommunications and Information Administration, April 2016.

<http://www2.ntia.doc.gov/files/planning-community-broadband-roadmap-apr2016.pdf>

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