

Oregon Broadband Advisory Council Minutes

April 25, 2019

Salem, OR

Attendance

Members Present: Commissioner Stephen Bloom, Joseph Franell, Wade Holmes, Lonny Macy, Rick Peterson, Jeremy Pietzold, Dave Sabala, Major Tom Worthy, and Commissioner David Yamamoto.

Staff Present: Christopher Tamarin of Business Oregon

Guests:

Steve Corbato of Link Oregon, Danielle Gonzalez of Marian County, Michael Held of Rural Development Initiatives, Inc., Ethan Nelson of City of Eugene, Carrie Pipinich of MCEDD, Nick Spiegel, Frankie Franell, Stuart Taubman of Zayo, and Paul Zollner of Business Oregon.

The meeting was called to order at 9:15 am.

Welcome, Introductions, Minutes Approval

Chair Joe Franell called the meeting to order and asked for guest introductions.

Joe Franell recognized and welcomed Rick Peterson as the newest appointed member of the Council.

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Jeremy Pietzold moved that the February 28, 2019 minutes be approved as distributed. Tom Worthy seconded the motion. The council approved the motion.

National Broadband Activity Updates

Chris Tamarin provided references on the following national broadband activity regarding infrastructure deployment, technology, market trends, public policy, and illustrations of the value of broadband adoption and utilization since the council's last meeting.

FCC Priorities

Chairman Pai spoke at the Georgia Chamber of Commerce on March 19, 2019, providing an overview of the FCC's priorities and activities. He said the number one priority has been closing the digital divide, noting the FCC has been working hard to modernize its regulations and encourage the private sector to build wired and wireless broadband infrastructure. He said the FCC has given the green light to companies that want to send thousands of satellites into low-earth orbit to provide high-speed broadband and has reformed the USF support program. He claimed this strategy appears to be working, as America's broadband networks have been expanding and improving. He also said promoting technological innovation is priority 1A and highlighted the FCC's work to promote 5G wireless connectivity.

<https://prodnet.www.neca.org/publicationsdocs/wwpdf/31919pai.pdf>

FCC Rural Digital Opportunity Fund

FCC Chairman Ajit Pai today announced his intent to ask his fellow Commissioners to establish the Rural Digital Opportunity Fund to inject \$20.4 billion into broadband networks in rural areas over the next decade to extend broadband services to up to four million homes and small businesses. The Rural Digital Opportunity Fund would use monies repurposed from the Connect America Fund, whose term of support ends next year with a phase-out in 2021. Mr. Pai said he wants the FCC to launch a proceeding later this year to establish the new fund, but he was not more specific on timing. He said he would like the new fund to use a reverse auction, noting the FCC's successful CAF-II auction. He also said he wants funds to be available to rural communities that don't have the FCC's 25 megabits per second downstream and 3 Mbps upstream (25/3) standard. [WaltersKluwer 2019]

Digital Equity Act

On April 11, U.S. Senator Patty Murray (D-W.A.) and a group of democratic senators introduced the Digital Equity Act of 2019, aimed at closing the digital divide in communities across the country. The legislation would create two grant programs to promote digital equity and support digital inclusion programs for students, families, and workers. More specifically, it authorizes \$125 million in funding per year over five years for each of the two programs. The bill recognizes the critical role that libraries and other anchor institutions play in ensuring every individual in every community benefits from the opportunities of the digital age.

https://www.murray.senate.gov/public/index.cfm/newsreleases?ContentRecord_id=016FCF9F-F00F-42D7-BD98-EFDA3D9784EF

Net Neutrality

On March 6, 2019, House and Senate Democratic leaders introduced the "Save the Internet Act," which seeks to reverse the Commission's January 2018 *Restoring Internet Freedom* order that repealed the Commission's net neutrality rules. The Act establishes three principles: no blocking, no throttling and no paid prioritization. It empowers the Commission to prohibit unjust, unreasonable and discriminatory practices and ensures consumers can make informed decisions when shopping for internet plans. The bill would also restore the Commission's authority to fund broadband access and deployment, particularly for rural communities and struggling Americans.

<https://energycommerce.house.gov/newsroom/press-releases/bicameral-democratic-leaders-unveil-save-the-internet-act-to-restore-net>

Cybersecurity

There were a record-high 10.52 billion malware attacks in 2018 and IoT attacks increased by 217% from 2017, and 74,290 never-seen-before attacks in 2019 according to malware attack data from cybersecurity technology company SonicWall. The data was compiled from threat intelligence obtained from the company's more than 1 million sensors from around the world.

<http://finleyusa.com/cybersecurity-alert-malware-attack-data-finds-record-high-10-52-billion-attacks/>

Data Statistics

The amount of data we produce every day is truly mind-boggling. There are 2.5 quintillion bytes of data created each day at our current pace, but that pace is accelerating with the growth of the

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Internet of Things (IoT). Over the last two years alone 90 percent of the data in the world was generated. Current statistics indicate that

- More than 3.7 billion humans use the internet (that's a growth rate of 7.5 percent over 2016).
- We conduct more than half of our web searches from a mobile phone.
- On average, Google now processes more than 40,000 searches every second (3.5 billion searches per day)!
- While 77% of searches are conducted on Google. Other search engines are also contributing to our daily data generation. Worldwide there are 5 billion searches a day.

<https://www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read/#3f72ad6d60ba>

Satellite Broadband

HughesNet began offering satellite broadband service through the New NY Broadband program, HughesNet says the satellite broadband service can deliver 25 Mbps download speed, through its new Gen5 satellite. Through the New NY Broadband program, Hughes will bring satellite broadband to 72,163 locations across New York. The program dictates Hughes can't charge more than \$60 per month for the next five years and no more than \$49 for installation for eligible locations. HughesNet says they won't cap usage, as traditional satellite plans do, but will reduce throughput speed to 1 -3 Mbps for subscribers that exceed bandwidth caps. The New NY Broadband program began in 2015 when the state said it would make \$500 million available for broadband deployments in unserved and underserved communities. Soon after, the FCC committed up to \$170 million in Connect America Fund (CAF) broadband funding to the program, which was allotted from the \$2 billion CAF-II reverse auction funds.

<https://www.telecompetitor.com/hughesnet-begins-offering-satellite-broadband-through-caf-ny-broadband-program/>

5G

AT&T has turned up mobile 5G service in seven more markets, including Austin, Los Angeles, Nashville, Orlando, San Diego, San Francisco and San Jose. In a press release, the carrier notes that there are 19 AT&T 5G markets in which AT&T is the only company offering mobile 5G. AT&T plans to offer at least three mobile 5G devices in 2019. The next device to be offered will be a Samsung S10 5G smartphone, which will be available "this spring," the carrier said. A second Samsung 5G smartphone will follow later this year, according to the company.

T-Mobile, has said that in 2020 it will be first with a nationwide 5G network, a claim based on the company's plans to use low-frequency spectrum for that deployment. AT&T and Verizon 5G deployments to date have used millimeter wave spectrum, which can support higher speeds but over shorter distances.

To date, Verizon has launched two mobile 5G markets – Chicago and Minneapolis, and has launched the first 5G smartphone.

<https://www.telecompetitor.com/att-adds-seven-more-mobile-5g-markets/>

Fixed Wireless

T-Mobile plans to launch fixed wireless broadband, the service will rely on both 4G and 5G technologies. Company CEO John Legere promised to deliver 100+ Mbps speeds for wireless broadband to 90% of the population and in-home service to over half the country's households by

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2024. The company will provide customers with an in-house router that they can self-install with a mobile app.

For most American households today, the options for in-home broadband are scarce according to the most recent FCC data, 28.9% of U.S. households and 61.1% of rural households have no in-home broadband service or only one provider of in-home broadband. For high-speed in-home broadband of 100 Mbps, the picture is even bleaker. Almost half the country's households – 45% – have no high-speed service or only one option to choose from. Of rural households, more than three quarters (76%) have no high-speed service or only one choice available.”

<https://www.telecompetitor.com/t-mobile-embraces-fixed-wireless-looks-to-leverage-both-4g-and-5g/>

Wireless vs. Wireline

According to Comcast's CEO, 5G isn't cheaper, faster or better than landline broadband. He contrasted 5G with VoIP which was a truly disruptive technology that dramatically changed the traditional long-distance business. But while one minute of VoIP was “dramatically cheaper” than a traditional long-distance PSTN minute, that won't be the case with 5G. As for speed, wireless carriers are hoping to use 5G to get to landline speeds available today, but by the time they achieve that, landline speeds will be even faster, plus “There's nothing more reliable than a wire.” Another consideration is usage levels. Comcast's heaviest power users consume 100 times more data per month than the average mobile user. Though there will be some level of competition between delivery technologies, it seems that most people want both landline and mobile broadband because each option provides advantages, depending on the situation – unless the cost of having both becomes too steep. Until now, both landline and mobile carriers have been able to increase speeds and performance without increasing a consumer's monthly bill, and as long as that continues we probably won't see a lot of mobile broadband substituting for landline broadband service.

<https://www.telecompetitor.com/comcast-ceo-5g-isnt-cheaper-faster-or-better-than-landline-broadband-charter-sees-5g-opportunity/>

Broadband Forum and Point Topic today predicted that there will be 1.2 billion broadband subscribers worldwide by 2025, with fiber-based broadband playing an increasingly important role. The markets and technologies which will drive continued rapid broadband growth over the next decade are outlined by Broadband Forum and Point Topic in a new report. According to the research, the current trends of booming deep-fiber deployment and accelerating broadband penetration in developing markets will be the engine of broadband growth through 2025. The forecast states that some variant of fiber – Fiber-To-The-Home (FTTH), Fiber-To-The-Premises (FTTP) or Fiber-To-The-Building (FTTB) – will be used by 59% of fixed broadband subscribers globally by 2025. The report also examines the impact of superfast 5G, predicting that fixed-mobile convergence will mean that the next one billion subscribers could blend wireless and fixed subscriptions.

<https://www.telecompetitor.com/report-fiber-based-broadband-will-power-59-of-1-2-billion-connections-by-2025/>

Cost of the Rural Broadband Divide

Millions of rural Americans without broadband internet access today are losing out on billions of dollars in quality-of-life benefits ranging from better employment and education to commerce and health care according to the National Rural Electric Cooperative Association (NRECA) Chief Economist Russell Tucker in his presentation at the USDA's 95th Annual Agricultural Outlook Forum in late February.

“Access to broadband is essential for the economic health of rural communities,” said Chief Economist Russell Tucker, lead author of the recent NRECA report “Unlocking the Value of Broadband for Electric Cooperative Consumer-Members. To the extent that broadband access provides an opportunity to maintain or grow the rural workforce combined with productivity-enhancing applications—such as precision agriculture—then this bodes well for local economic growth.”

<https://www.electric.coop/usda-forum-nreca-chief-economist-details-local-impact-rural-broadband/>

Telehealth Adoption

Nearly a quarter (22%) of physicians have used telehealth to see patients, and a new telehealth forecast suggests that 61% of doctors will use it by 2022. Physicians are looking at telehealth to improve patient access to care, improve patient outcomes and attract and retain patients, according to new research from telehealth platform provider American Well.

This shift in expectations for telehealth, coupled with a more promising reimbursement landscape and health systems’ vision to expand telehealth use, is expected to drive growth, according to American Well.

In a survey of 800 physicians, American Well discovered:

- Physician adoption of telehealth has increased significantly and is up 340 percent from 2015 when only 5 percent of physicians reported having ever used telehealth.
- More physicians are willing to try telehealth. A total of 69 percent of physicians said they would be willing to use telehealth, up 12 percentage points, from 57 percent in 2015.

<https://www.telecompetitor.com/telehealth-forecast-61-of-doctors-expect-to-use-it-by-2022/>

New State Educational Technology Directors Association (SETDA) Report

SETDA, the principal membership association of U.S. state and territorial digital learning leaders, released a new national report, *State K-12 Broadband Leadership: Driving Connectivity, Access and Student Success*. This report highlights the powerful impact of state leadership in driving critical policy decisions at the state level to support broadband networks, bandwidth capacity, Wi-Fi implementation, and off campus access for low-income families.

<https://www.setda.org/priorities/equity-of-access/statek12broadbandleadership2019/>

TV White Space Update

Microsoft continues to advocate for the allocation of TV White Space frequency bands for unlicensed broadband. Microsoft’s initial plans called for 12 rural broadband projects in 12 states, with a strong emphasis on fixed wireless technology. The company later extended the timeframe and raised the goal to 25 states. To date, the company has announced eight partners, primarily wireless internet service providers (WISPs), for 16 states.

Microsoft’s decision to focus on fixed wireless for the rural Airband project was driven by an economic analysis that found that fixed wireless would be the most economical way to provide broadband to areas with a population density of 2-200 people per square mile. Fiber-to-the-home would be the best option for more densely populated areas, and satellite would be the best option for extremely sparsely populated areas, researchers said. According to the analysis, the vast majority of unserved rural areas in the U.S. (80%) fall into the 2-200 per square mile category,

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making fixed wireless the best choice. Microsoft also would like to see the federal government play a role in spurring the use of TV white spaces for rural fixed wireless and has asked the FCC to reserve three broadcast channels below the 700 MHz band for unlicensed use.

<https://www.telecompetitor.com/airband-rural-wireless-program-has-eight-service-provider-partners-230-more-on-microsoft-wireless-isp-program/>

Facebook focuses on transport

Facebook is getting into the fiber transport business. The social media giant requires a tremendous amount of network capacity to deliver all those social posts, ads, and videos all across the globe. As a result, Facebook owns and operates a large and growing number of data centers, and those facilities need robust fiber connectivity. The company is being creative by building its own fiber networks and links. Facebook, according to the blog post, has built a 200-mile fiber route connecting a new data center in New Mexico to one in Texas. It claims that it is one of the highest capacity links in the country.

<https://www.telecompetitor.com/facebook-mid-mile-infrastructure-subsi-dary-to-offer-fiber-transport-eyes-underserved-markets/>

Broadband Affordability

Nearly half of the U.S. population (45%) lacks access to a low-price wired broadband offering, according to a new broadband affordability report from BroadbandNow, the organization that maintains a detailed database of broadband offerings throughout the U.S. The research also showed that people in rural areas pay higher prices and that, ironically, people in areas with higher average income pay less for service. Researchers defined broadband as service supporting speeds of at least 25 Mbps downstream and 3 Mbps upstream. Low-priced plans were defined as those with prices less than or equal to the 20th percentile of all qualifying broadband plan prices within a given technology such as fiber-to-the-home (FTTH), DSL or cable broadband.

The BroadbandNow broadband affordability report shows a direct relationship between population density and the mean and median lowest price available for 25/3 Mbps broadband service. Overall, that price was about \$50 in the most densely populated areas, but in the range of \$65 to \$68 for the least densely populated areas. That's as much as 37% more for the least densely populated areas, the researchers noted.

<https://www.telecompetitor.com/broadband-affordability-report-nearly-half-of-u-s-population-lacks-access-to-a-low-price-offering/>

Broadband Utilization

Ten or more connected devices populate the average US broadband home, finds a Parks Associates survey, which defined such devices as consumer electronics, smart home and connected health equipment. Analysts say interoperability with other devices is top of mind for 75% of consumers looking to purchase a smart home device.

<https://www.telecompetitor.com/connected-home-research-parks-finds-more-than-10-connected-devices-in-broadband-homes/>

State Broadband Activity Updates

Chris Tamarin provided references on the following state broadband activity regarding infrastructure deployment, technology, market trends, public policy, and illustrations of the value of broadband adoption and utilization since the council's last meeting.

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ViaSat Eligible Telecommunications Carrier Petition update

Viasat filed a letter on April 3, 2019, to respond to ex parte filings by Conexon and Hughes Network Systems that discuss its pending ETC application and to US Telecom's letter on its petition for reconsideration on CAF performance metrics. Viasat argued none of these letters provides any basis for denying Viasat's federal petition for designation as an ETC or its petition for reconsideration of the Performance Metrics Order, and it asked the Commission to expeditiously grant both petitions. ViaSat's Oregon ETC petition is still pending.

<https://prodnet.www.neca.org/publicationsdocs/wwpdf/021919viasat.pdf>

Presentations

Michael Held

Michael Held provided an overview of Rural Development Initiatives, Inc., a nonprofit 501(C)3 corporation working for the benefit of rural communities in Oregon, Washington, Idaho and Northern California. The goals of the organization are to develop networks of rural leaders, revitalize rural economies, and elevate rural voices and priorities.

Since 1991, RDI has trained 8,000 rural leaders working for community and economic vitality, engaged over 700 rural financial literacy trainings, and helped create and implement local economic development initiatives in hundreds of rural communities.

Since 2016, RDI has directly connected with over 300 rural businesses, developed actionable economic priorities and strategies in over 40 communities, facilitated and convened policy focused discussions for water resources, future of farms and ranch, broadband, and other public policy topics.

RDI is engaged directly in broadband issues. RDI believes that broadband is

- Fundamental to economy building
- Is a top 3 issue for rural business retention, expansion, and attraction efforts
- Multi-sectoral impacts –Education, healthcare, recreation, tourism, ag, forestry
- Capacity building and technical assistance is under-resourced
- Issue of equity

RDI seeks to leverage organizational assets (connections to rural businesses and growing policy service portfolio), engage in policy and legislative advocacy, build issue awareness, build coalitions, build networks, and build rural social capital for scalable projects.

Michael would like to remain engaged with OBAC on common interests and goals going forward.

Matt Sayre

Matt Sayre of the Technology Association of Oregon <https://techoregon.org> provided an update on EUGNET a fiber network initiative in Eugene. Matt noted that since the last time he presented to the Council two years ago, the City of Eugene's population of technology companies has grown by over 12%, and is expected to grow another 23% in the next ten years. There are currently more than 200 tech job openings needing to be filled.

This technology community was not satisfied with the available broadband services available and began working with others back in 2015 to find solutions to make Eugene one of the best

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served cities for broadband access and viability for technology companies. "What you can measure, you can improve." The City of Eugene, Lane Council of Governments, and the Eugene Water and Electric Board (EWEB) with support from Technology Association of Oregon installed additional fiber optic connectivity for businesses in downtown buildings in which the City already had already made sizeable financial investment. The fiber runs in existing EWEB electrical conduit, avoiding the expense of trenching or directional boring, down Willamette Street to LCOG's Willamette Internet Exchange (WIX). As a result, at last count, twenty-three new technology companies moved to downtown Eugene, and the city of Eugene received a Gigabit City designation from Mozilla along with grant funding to utilize the fiber infrastructure. It resulted in EUGNET, the largest open access network in Oregon.

Eugene received a second designation through another national non-profit, US Ignite, who is focused on partnering with communities to develop technologies that provide transformative public benefit. Eugene has been through three grant rounds with US Ignite with significant success. Hundreds of thousands of dollars are going to local innovators to develop new technologies and in several cases, start new companies.

Work is underway to expand robust broadband access to the neighboring city of Springfield. The Ambleside neighborhood in Springfield will be connecting 161 homes to word-class internet services delivered by the first fiber-to-the-home project in Springfield. The Springfield Utility Board and community partners are currently deploying the network.

To view a video on Mozilla Gigabit City - Eugene, Oregon, go to <https://www.youtube.com/watch?v=1v5OlqET4D0>.

Wade Holmes

Wade Holmes provided a report on this year's Mobile World Congress, the largest mobility industry conference in the world, which he attended earlier this year in Barcelona, Spain. Attendees come from all over the globe with many high density population service providers represented. The show is also increasing its attention to public policy issues and is being attended by governmental representatives as well.

Wade likes to note who is attending the conference. This was his sixth. He also likes to note what the hot topics are, and where they fall on the "hype-curve." Not surprisingly, 5G was a major topic of the conference. A key takeaway was that providers will need to push fiber to the edge of the network to do 5G successfully and support network densification. Wade views fixed wireless 5G applications as being parallel and separate from mobile 5G. 5G networks will add significant amounts of automation and artificial intelligence in the network infrastructure compared to previous network technologies, and also pushed to the edge. The key fundamental principles of 5G will be reduced latency, massive scale (more bandwidth and more speed), and specialized networks. It was also clear that 5G will require the availability of more radio spectrum and higher frequency levels will require clear line of site to work. Also, devices will be larger and require greater battery capacity.

A second major topic was the Internet of Things (IoT). Wade noted that there are two flavors of IoT; Narrow Band IoT will operate on mobile provider networks and Long Range (LoRa) IoT which is a long range wireless communication protocol that competes against other low-power

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wide-area networks and uses unlicensed sub-gigahertz radio frequency bands supporting longer transmission distances.

Applications of Interest

- Japan is aggressively working on 5G for the 2020 Olympic Games to reduce or hopefully eliminate any disruption of normal network traffic.
- Los Angeles is focusing on mobility apps. If you have access to a car, you have twenty-four times the likelihood of getting a job. Mobility is a big factor. Also, parking applications to facilitate the delivery of goods.
- Russia is taking a holistic broad view of applications and potential benefits.

This is a process of digital transformation. Wade believes that there is still a long way to go in spectrum policy, network technological development, device technological development, standards definition and business case definition to realize the vision of 5G.

Work Session

2019 Legislative Session

Chris Tamarin reported on the broadband related bills and resolutions that have been introduced for the 2009 Legislative Session. Key bills that include OBAC and reflect OBAC's recommendations are:

HB 2022

Changes name of Oregon Virtual School District to Oregon Online. Expands purposes of Oregon Online to require provision of professional development related to online learning. Status: Passed by the House 2-13-19, Referred to Senate Education Committee, public hearing held 4-15-19.
<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2022/A-Engrossed>

HB 2173

Creates Oregon Broadband Office within Oregon Business Development Department. Repeals sunset on Oregon Broadband Advisory Council. Adds member to council. Broadens duties of council to include recommending public policy and solutions to address state's broadband needs and goals. Directs council to champion statewide access to broadband services. Pre-session filed at the request of House Interim Committee on Economic Development and Trade. Status: Passed by the Economic Development Committee with a Do pass Recommendation with amendments and referred to Ways and Means 3-1-19.
<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2173/A-Engrossed>

HB 2184

Expands definition of "retail telecommunications service" for purposes of universal service surcharge. Authorizes Public Utility Commission to subject sale of communications and broadband services other than retail telecommunication services to universal service surcharge. Directs commission to transfer moneys deposited in universal service fund that are to be used for encouraging broadband service availability to Broadband Fund. Establishes Broadband Fund. Continuously appropriates moneys in Broadband Fund to Oregon Business Development Department to provide grants and loans under program for assisting qualified entities with projects for development of open access broadband service. Directs department to adopt program for providing grants and loans by rule. Pre-session filed at the request of House Interim Committee

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on Economic Development and Trade. Status: Passed by the Economic Development Committee with a do-pass recommendation as amended and printed A-Engrossed, referred to Revenue, and then referred to Ways and Means by prior reference 3-13-19. Public Hearing scheduled for 3/25 before Revenue Committee. Work Session scheduled for 4-25-19.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2184/A-Engrossed>

HB 2384

Appropriates moneys from General Fund to Oregon Department of Administrative Services for distribution to Curry County for purpose of installing fiber optic telecommunication line to Cape Blanco Airport. Sponsored by Representative SMITH DB. Status: Introduced, referred to Committee on Economic Development. Public hearing held 4-1-19. Did not pass out of committee.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2384/Introduced>

HB 2449

Increases rate of tax for emergency communications. Increases amount of distribution from Emergency Communications Account to counties with population under 40,000. Sponsored by Representatives FINDLEY, LIVELY, MARSH. Status: Public hearing held 3/12 before Veterans and Emergency Preparedness Committee.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2449/A-Engrossed>

HB 2455

Includes developing and expanding broadband Internet access service as form of economic development for which Oregon Business Development Department may fund loans and grants for use in Eastern Oregon Border Economic Development Region. Makes nonsubstantive housekeeping amendments to statutes. Declares emergency, effective on passage. Sponsored by Representative FINDLEY. Status: Public Hearing held 4-22-19 Revenue Committee.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2455/Introduced>

HB 2693

Requires health benefit plan to reimburse cost of covered telemedicine health service provided by health professional licensed or certified in this state if same health service is provided in person. Sponsored by Representative NOSSE, Senator BEYER; Representatives HAYDEN, KENY-GUYER, SALINAS, SCHOUTEN. Status: Not passed out of committee.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2693/Introduced>

HB 3375

Requires Oregon Business Development Department to conduct study on proposals and options for facilitating the deployment of small wireless facilities in this state. Requires department to submit report on study to interim committees of Legislative Assembly related to economic development no later than September 15, 2021. Sponsored by Representative Marsh. Status: Referred to Economic Development Committee 3/11.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB3375/Introduced>

SB 69

Expands purposes of plan of assistance established by Public Utility Commission under Oregon Telephone Assistance Program to include supporting broadband internet access service. By order of the President of the Senate in conformance with presession filing rules, indicating neither

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advocacy nor opposition on the part of the President (at the request of Governor Kate Brown for Public Utility Commission). Status: : Public hearing and work session 1-31-19 Business and General Government Committee, Third Reading 2-7-19 Senate Floor – Passed. Referred to House Committee on Economic Development. Work Session held 4-22-19.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/SB69/Introduced>

SB 126

Requires health benefit plan to reimburse cost of covered telemedicine health service provided by health professional licensed or certified in this state if same health service is provided in person. By order of the President of the Senate in conformance with presession filing rules, indicating neither advocacy nor opposition on the part of the President at the request of Senate Interim Committee on Health Care. Status: Introduced. Referred 1-15-19 to Health Care Committee. Not passed out of committee.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/SB126/Introduced>

SB 505

Directs Oregon Broadband Advisory Council to study issues related to expansion of broadband capacity and access. Requires council, based on findings of its study, to establish statewide broadband plan and submit report to interim committees related to economic development on or before September 15, 2020. Authorizes council to propose legislation for 2021 regular session based on its findings with respect to study of public-private partnerships. Appropriates moneys to Oregon Business Development Department for Rural Broadband Capacity Pilot Program grants for broadband infrastructure projects in rural areas that lack adequate broadband access. Declares emergency, effective on passage. Sponsored by Senator LINTHICUM; Senator HANSELL. Status: Public Hearing held 2-7-19 Business and General Government Committee. Not passed out of committee.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/SB505/Introduced>

SB 904

Appropriates moneys from General Fund to Oregon Department of Administrative Services for distribution to Grant County Digital Network Coalition for purpose of developing broadband infrastructure in Grant County. Declares emergency, effective July 1, 2019. Sponsored by Senator BENTZ (at the request of Grant County Digital Network Coalition). Status: Referred to Business and General Government, then Ways and Means 3-1-19. Not passed out of committee.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/SB904/Introduced>

SCR 4

Declares policy of State of Oregon concerning cybersecurity risks and need for proactive cybersecurity risk management. Sponsored by Senator LINTHICUM. Status: Passed by the Senate 3-4-19 and referred to the House Speaker's desk 3-5-19. Referred to Rules 3/11.

<https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/SCR4/Introduced>

Agriculture Broadband Summit

Chris Tamarin reported that the summit has been scheduled for Thursday, June 27, 9:15 am to 12:15 pm at the Food Innovation Center in Portland. The Oregon Department of Agriculture, Oregon Farm Bureau and Oregon State University Extension Service are assisting in the planning and will participate in the summit.

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The summit will be a roundtable discussion current status of precision agriculture in Oregon, the current level of needed broadband connectivity and the projected future need of connectivity starting off with a presentation by Oregon State University to frame the discussion.

Oregon Broadband Office (OBO)

Chris reported that he provided testimony on the Oregon Broadband Office before the Joint Committee on Ways and Means. He noted that the Oregon Broadband Office establishes an official point of contact in state government for broadband advocacy, policy, strategy, planning, deployment, adoption and utilization. Having a Broadband Office serves to raise the profile of broadband in Oregon state government, and raises Oregon's broadband profile nationally. It helps make broadband a public policy priority and it provides a structure for engaging stakeholders.

The Broadband Office presents new opportunities and a new vehicle

- For state government to be a source of funding for planning, engineering and infrastructure projects
- For state government to be a source of matching funds to help communities leverage federal and private foundation loan and grant programs
- To be a source of Technical Assistance
- To engage in primary data collection
- To promote statewide and nationwide networking
- To promote Education on broadband issues: Infrastructure, digital literacy and digital inclusion for economic and community development.

What the Office will be able to undertake and do, and over what period of time, will be scalable with capacity and resources "as the Legislative Assembly shall commit;" Scalable from an office supported by one FTE with a Special Public Works Fund allocation of \$5 Million, to a an office supported by up to five FTE, with funding provided by the Oregon Universal Service Fund as proposed by HB 2184.

Oregon Connections Telecommunications Conference

The 2019 conference is scheduled for October 24 and 25 at the Ashland Hills Hotel and Suites in Ashland. The theme for 2019 will be *Oregon Connections: Smart Communities*. The conference will be exploring *Smart Communities*. strategies, applications, enabling technologies and Oregon initiatives. Topics will include smart cities, Internet of Things, new developing technologies, and smart solutions for rural cities. This is a "grass roots" community of interest conference hosted this year by Southern Oregon Regional Economic Development, Inc. <https://soredi.org/>.

The conference draws attendees from all regions of the state and beyond to share ideas, experiences and knowledge about broadband telecommunications. The 2019 conference website is now live and you can find more information at www.oregonconnections.info.

The first day keynote speaker will be Jean Rice of the National Telecommunications and Information Administration. She focuses on the development of new broadband initiatives for local, state and tribal governments as well as planning and implementation efforts for Smart Cities projects. Prior to joining BroadbandUSA, she managed tribal, state and rural infrastructure projects for the Broadband Technologies Opportunities Program (BTOP) and lead efforts on key

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issues impacting broadband deployment, open access, deployment in rural and tribal areas and sustainability.

The second day keynote speaker will be Trevor Yarrish, Chief Experience Officer and Founding Partner of ZEAL, a southern Oregon company empowering innovators to deliver the future of Web + Mobile Apps <https://codingzeal.com/>. He is responsible for the creative and marketing aspects of ZEAL, an agile web and mobile application consultancy. ZEAL is a leading expert in Agile development, pair-programming and "lean" methodologies. H develops the brand and is the lead UI/UX developer for the company.

Jeremy Pietzold moved that OBAC be a Mt. Ashland Sponsor of the conference this year. Dave Sabala seconded the motion. The motion was approved.

Public Questions / Comments

Nick Spiegel shared that the FCC Form 477 doesn't require that a provider serve an area, but that the provider could serve an area which build a false image of availability. Nick recommends using other data sources such as Microsoft to improve the quality of broadband data. Nick also commented that he does not view either satellite or 5G as viable rural solutions. Latency is still a major problem with satellite, and that 5G is still a long way off in terms of meaningful deployment. Nick also submitted informational references.

- Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2017–2022 White Paper, February 18, 2019
<https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white-paper-c11-738429.html>
- "By 2022, 5G will be 3.4 percent of connections" [worldwide, approx. 10% in North America.] Neville Ray, T-Mobile CEO, April 22, 2019. <https://www.t-mobile.com/news/the-5g-status-quo-is-clearly-not-good-enough>
- "Verizon's mmWave-only 5G plan is only for the few. And it will never reach rural America. Meanwhile, AT&T has rolled out a "5GE" icon to customers phones to dupe them into thinking their same-old 4G LTE service is something new and different (spoiler alert: it's not)."
"Some of this is physics – millimeter wave (mmWave) spectrum has great potential in terms of speed and capacity, but it doesn't travel far from the cell site and doesn't penetrate materials at all. It will never materially scale beyond small pockets of 5G hotspots in dense urban environments. (This image is really funny:
<https://cdn.tmobile.com/content/dam/t-mobile/corporate/newsroom/articles/2019/04/the-5g-status-quo-is-clearly-not-good-enough/5G-mmWave-door.gif>)"
- One day later, Hans Vestberg Verizon Communications Inc. Chairman & CEO, "Vestberg responded that millimeter-wave spectrum 'has lived up to our expectation on performance' and will get better as Verizon improves the software for managing the spectrum. But he added a significant caveat."
"We will need to remind ourselves, this is not a coverage spectrum," Vestberg said.
Synopsis: <https://arstechnica.com/information-technology/2019/04/millimeter-wave-5g-isnt-for-widespread-coverage-verizon-admits/>
Transcript: <https://www.verizon.com/about/investors/quarterly-reports/lq-2019-quarter-earnings-conference-call-webcast>

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Meeting Schedule

The April 25, 2019 meeting of the Oregon Broadband Advisory Council was held at the Local Government Center, 1201 Court Street NE, Salem, Oregon. The next meeting of the council will be held on May 23, 2019, in Salem. Meeting information will be posted on the [council website](#).

Meeting adjourned at 12:10 pm.

Approved by:

Signature on file
Joseph Franell, Chair
Oregon Broadband Advisory Council

May 23, 2019.
Date

Signature on file
Christopher Tamarin
Business Oregon

May 23, 2019.
Date