

Oregon Broadband Advisory Council Meeting

February 28, 2019

Salem, OR

Attendance

Members Present: Miles Ellenby, Joseph Franell, Jeremy Pietzold, Melody Riley-Ralphs, Dave Sabala, Commissioner David Yamamoto

Staff Present: Christopher Tamarin, Business Oregon

Guests: Kiley Breitling, AT&T; Michael Elliot, Sean McMullen, Carla Wade, Oregon Department of Education; Bob Fletcher, Jay Gratchner, Jonathan Stroud, Verizon Wireless; Keri Fry, Charlie Kawasaki, Oregon Cybersecurity Advisory Council; Ben Gherezgiher, OSCIO; Danielle Gonzalez, Marion County; Dan Morrison, Lynn Quick, Rick Peterson, PEAK Internet; Nick Spiegel, Stuart Taubman, Zayo; Kristi Wilde, First Responder Network Authority

Meeting was called to order at 9:15 am.

Welcome, Introductions, Minutes Approval, Elections

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

Joe Franell noted and recognized the passing of Oregon Secretary of State Dennis Richardson and his service to Oregon.

Minutes

Dave Sabala moved that the January 24, 2019, minutes be approved as distributed. Melody Riley-Ralphs seconded the motion. The council approved the motion.

Chair and Vice-Chair Elections

Chair Franell and Vice Chair Pietzold were re-elected.

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.

Broadband Adoption

U.S. households consumed an average of 268.7 gigabytes (GB) of data in 2018, up from 201.6 GB for 2017, a 33% increase, according to OpenVault, a provider of data consumption and analytics software. Median usage was 145.2 GB per household in 2018, up from 103.6 GB in 2017. The increase in in median consumption was 40%.

Source: <https://www.telecompetitor.com/report-u-s-household-broadband-data-consumption-hit-268-7-gigabytes-in-2018/>

Wireless Broadband

AT&T reports that it will retire its 3G network in 2022 as the company shifts its focus to 5G implementation and compatible 4G networks. Research firm Ovum estimates that the number of devices using 3G exceeds 85 million, while AT&T reports that 3G was still the choice for 11% of the company's postpaid users last year.

Source: <https://www.wsj.com/articles/at-t-gives-3g-service-three-years-to-live-11550765221>

AT&T launched its first twelve 5G markets in December. The company now has announced plans for nine additional markets for 2019, including the two announced today. The company also said some customers have seen speeds as high as 400 Mbps on the company's 5G network. The AT&T 5G network is a mobile one, but because 5G smartphones are not yet available, current customers are using a 5G/ Wi-Fi hotspot to support service.

Source: <https://www.telecompetitor.com/att-5g-markets-will-grow-to-include-minneapolis-and-chicago-initial-markets-are-seeing-400-mbps-speeds/>

AT&T believes 5G will be suitable for replacing fixed broadband service in three to five years, CEO Randall Stephenson told analysts, noting the telecom's continued installation of high-band millimeter-wave frequencies. Separately, AT&T has applied for a six-month test of fixed-wireless-based 3.5 GHz in Ohio and Tennessee as part of its evaluation of the technology.

Source: <https://www.lightreading.com/mobile/5g/atandt-ceo-mmwave-5g-will-be-fixed-broadband-alternative-in-3-to-5-years-/d/d-id/749142>

Charter added 113,000 mobile lines for Spectrum Mobile service in the Fourth Quarter 2018. Through its MVNO deal with Verizon Wireless, Charter launched Spectrum Mobile across its markets in September 2018. It ended 2018 with 134,000 mobile lines in service.

Source: <https://www.lightreading.com/mobile/5g/charter-ceo-spectrum-mobile-is-ramping-up-/d/d-id/749176>

Broadband Mapping

FCC Commissioner Jessica Rosenworcel cited problems she has noted previously about the FCC broadband data and the National Broadband Map, which are used in determining areas eligible for inclusion in Connect America Fund auctions. Noting that the U.S. has "broadband deserts" in which high-speed broadband is not available, she said, "the unfortunate truth is that the FCC doesn't know where these deserts are—our broadband map [is] woefully inadequate." While overstating broadband availability in some areas, the map underestimates broadband availability in others, according to Rosenworcel. This issue, she said, "hovers there in the background" and "we will never [solve] problems we cannot measure."

Source: <https://www.telecompetitor.com/fcc-adopts-legacy-universal-service-fund-phase-out-plan-for-caf-ii-auction-areas/>

Last fall, a Vermont Department of Public Service employee drove 6,000 miles around his state to provide what every Vermonter with a cell phone knows: there are many, many places in the state where you simply can't get a signal, not to mention the 5 megabits per second data download speeds the carriers were claiming. Chase says roughly two-thirds of the tests that the FCC accepted showed service less than the carriers reported. Cell phone provider maps for Vermont showed that basically the entire state is well covered. Vermont is concerned that it is excluded from funding to meet service needs by being considered served by the FCC when it is not.

Source: <https://www.npr.org/2019/02/01/690071045/one-mans-quest-to-prove-vermont-has-terrible-cell-service>

Public Policy

Senator Ron Wyden introduced bipartisan legislation this week that aims to ensure the success of current rural broadband initiatives and to remove barriers to future rural broadband growth in Oregon and nationwide. The bill would create a new Office of Rural Broadband at the FCC to focus efforts on ensuring that every home and business can get online. The Office of Rural Broadband Act would require the Federal Communications Commission to establish the Office of Rural Broadband, which would coordinate with USDA's Rural Utilities Service, the National Telecommunications and Information Administration, and the Universal Service Administrative Company to maintain information on current rural broadband initiatives and programs and to ensure their success. It would also coordinate with agencies to remove barriers to broadband deployment to track internet subscription rates in rural areas so we can better understand the problems rural Americans face to accessing broadband.

Source: <https://www.ktvz.com/news/wyden-bill-would-create-office-of-rural-broadband/1018165737>

Representative Greg Walden along with the ranking members of the House Energy and Commerce Committee, communications and technology subcommittee, and consumer protection and commerce subcommittee have asked the committees to work in a bipartisan fashion to find a statutory resolution to the long-running net neutrality policy debate that has seen the FCC defend its varying approaches to the issue in court four times in the past decade.

The charter of the Broadband Deployment Advisory Committee has been renewed for a period of two years, pursuant to the Federal Advisory Committee Act. The Committee provides recommendations to the Commission on how to accelerate the deployment of high-speed internet access, or "broadband," by reducing and/or removing regulatory barriers to infrastructure investment and strengthening existing broadband networks in communities across the country.

Source: <https://www.govinfo.gov/content/pkg/FR-2019-02-15/pdf/2019-02567.pdf>

On February 13, 2019, the White House announced a new effort to increase broadband access, particularly in rural areas where coverage and speeds are insufficient to accommodate needs for health care, education and commerce. With input from a range of federal agencies, including the U.S. Departments of Agriculture, Commerce, Health and Human Services and Interior as well the Federal Communications Commission, the *American Broadband Initiative Milestones Report* offers recommendations grouped into three categories: streamlining federal permitting processes to speed broadband deployment, leveraging federal assets to lower the cost of broadband build-outs, and maximizing the impact of federal funding.

Source: <https://www.ntia.doc.gov/report/2019/american-broadband-initiative-milestones-report>

Broadband Reports

The Pew Charitable Trusts has launched its new **Broadband Research Initiative** to understand why some 24 million Americans—most of those living in rural communities—still lack what is largely now considered a basic utility. The broadband research initiative will focus on:

- **Promising practices:** Identifying how states have addressed gaps in connectivity.
- **Research:** Conducting research on issues related to broadband access and expansion, including the economic impacts of broadband and the collection, verification, and visualization of connectivity data.
- **Convening:** Bringing together government, research, and industry leaders and other stakeholders for data-driven discussions about improving broadband access.

Source: <https://www.pewtrusts.org/en/projects/broadband-research-initiative>

The U.S. Department of Agriculture Department has released an e-Connectivity Toolkit that includes data on 27 federal programs as part of an ongoing effort to help develop broadband in rural communities. The e-Connectivity Toolkit includes details on 27 different USDA programs that support broadband deployment. The resource is intended as a simple guide that enables users to properly identify their type of e-Connectivity project, then to locate federal government resources for planning, equipment, construction, and research as well as to locate other e-Connectivity projects.

Source: <https://www.telecompetitor.com/usda-e-connectivity-toolkit-offers-rural-broadband-resources/>

Industry and Market Trends

The growth of the Internet of Things will continue through the year and beyond, according to IDC.



Smart City IoT Applications

The firm expects worldwide spending on the technology to reach \$745 billion in 2019, an increase of 15.4% over the \$646 billion spent last year. Spending will maintain double-digit growth—which started in 2017—through 2022. At that point, spending will surpass \$1 trillion.

Source: <http://finleyusa.com/idc-report-iot-spending-to-reach-more-than-1-trillion-by-2022/>

A recent report by Kagan, a media research group within S&P Global Market Intelligence states that broadband-only subscriptions could double as cord-cutting continues, hitting 40.8 million by 2023, up from their current level of about 23.3 million homes. Kagan expects the segment of broadband homes without a traditional multichannel subscription to account for nearly one-third of U.S. households in the next five years. Over-the-top services offered at competitive prices is a major factor in compelling consumers to cut the cord. Broadband-only homes are expected to increase at an 11.9% compound annual growth rate between 2018 and 2023.

Source: <https://www.multichannel.com/news/kagan-broadband-only-households-to-reach-40-8m-by-2023>

Live video calling has reached near-universal adoption for social use among friends and family as it becomes more accessible and easier to use, with one in three people video-chatting at least once a week, according to new video calling research from Nexmo, the Vonage API Platform. Millennials have been the top adopters of video calls, with a 175% jump in their regular live video usage in the last three years. According to the research, 25% of young people video chat on a daily basis. Additionally, almost half of people aged 35-54, and 25 percent of those 55 and older, report they are video chatting more than they were one year ago.

Source: <https://cdgportal.com/blog/index.php/2019/01/24/video-calling-is-now-mainstream-25-of-millennials-do-it-daily/>

Rural electric cooperatives (RECs) continue to be considered as a viable rural broadband solution. These RECs are now joining the important work being done by traditional telephone cooperatives in bringing broadband service to rural territories. It's a welcome solution and in line with the history of the cooperative utility movement, which brought both electricity and telephone service to these same territories many decades ago. RECs also possess important skills and assets that make expansion into broadband very favorable. Those skills and assets include:

- **Network Assets**—a utility network possesses many network assets important to the operation of a broadband network, including fiber backbone, poles, rights-of-way, substations, pedestals, buildings and trucks/vehicles.
- **Skills and Knowhow**—operating an electric network enables skills and know-how that translate well into building and operating a broadband network.
- **Customer Relationships**—established billing relationships with customers provides a captive and engaged audience for broadband services.
- **Government and Community Relationships**—building broadband networks often involves partnering with local governments, and RECs can leverage long-standing government and community relationships for that purpose.
- **Location**—as RECs typically already serve these rural markets, proximity challenges are nonexistent.

Source: <http://www.govtech.com/network/Rural-Electric-Cooperatives-The-Digital-Divides-Salvation->

Cybersecurity

Too few cybersecurity professionals is a gigantic problem for 2019. There are not nearly enough cybersecurity professionals to respond to all the threats. Between September 2017 and August 2018, U.S. employers posted nearly 314,000 jobs for cybersecurity pros. If they could be filled, that would boost the country's current cyber workforce of 714,000 by more than 40 percent, according

to the National Initiative for Cybersecurity Education. Globally, there is now a gap of almost 3 million cybersecurity jobs.

Source: <https://techcrunch.com/2019/01/27/too-few-cybersecurity-professionals-is-a-gigantic-problem-for-2019/>

A global ransomware attack could cost the U.S. economy up to \$89 billion, according to a new report from the Cyber Risk Management project. "A cyberattack is the second-greatest threat to the U.S. economy—in large part due to the increasing impact of attacks as the U.S. and global economies become more dependent on and driven by technology," Hank Watkins, president of Lloyd's America, said. Lloyd's of London is one of the founding members of the CyRiM project, which conducted the study. "While awareness of the threat posed by cyberattack and the global insurance industry's response have been growing in the U.S. ... it's more important than ever for companies, individuals and organizations to anticipate and prepare for breaches," he added.

Source: <https://www.beckershospitalreview.com/cybersecurity/a-ransomware-attack-could-cost-us-economy-89b-researchers-warn.html>

Senator Ron Wyden recently introduced a bill that would give the Federal Trade Commission the authority to establish privacy and cybersecurity standards. The bill would impose steep fines—even jail time—for companies and executives who misrepresent their compliance. The 38-page bill's provisions would:

- Establish a "do not track" option for people using online services. In lieu of allowing their search history, social media favorites and online activity to be sold to advertisers, people could opt to pay an unspecified fee to preserve their privacy.
- Authorize the FTC to establish privacy and cybersecurity standards and require big companies to report annually on their privacy practices.
- Penalize large companies that submit false information in their annual privacy report. Penalties could amount to 4 percent of annual revenue—a number that could run in the billions of dollars for the biggest social media companies. Executives could face jail time up to 20 years.
- Require companies to assess their algorithms for accuracy, fairness, bias and discrimination.

Source: <https://www.oregonlive.com/silicon-forest/2019/02/wyden-pitches-jail-time-billions-in-fines-for-online-privacy-violators-with-do-not-track-bill.html>

Broadband Funding

The FCC has released offers totaling \$67 million in Universal Service Fund (USF) broadband support for 207 rural rate-of-return carriers. Carriers accepting the offer will be required to deploy broadband service at speeds of 25 Mbps downstream and 3 Mbps upstream to specified locations in their local service territory. The carriers have 30 days to decide whether to accept the offers, according to an FCC official. If all carriers were to accept the offers, the 25/3 Mbps broadband service would be made available to 110,000 additional locations that cannot get service at those speeds today.

Source: <https://www.telecompetitor.com/fcc-offers-rural-carriers-67-million-in-new-usf-broadband-funding-for-25-3-mbps-deployments/>

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.

Viasat ETC Application–UM 1970

On January 16, 2019, the Public Utility Commission of Oregon ruled to suspend the procedural schedule and requested a prehearing conference which was held on February 12, 2019. At the conference, PUC staff, Viasat, and the Oregon Citizens' Utility Board jointly requested that the schedule continue to be suspended and that the parties file a status report on May 7, 2019. The parties indicated that additional time was needed in order to continue with the discovery process and identification of issues requiring resolution. The PUC ruled to continue the suspension and await the May 7 report.

Energy Management

Pacific Power is making a \$117 million investment with the deployment of 590,000 smart meters across Oregon that will track power usage by the hour. The smart meters have a communications module that uploads power usage data via a secure wireless mesh network to Pacific Power's servers. About six weeks after installation, customers will be able to look at their hourly power usage on a secure website. Some customers do not want the smart meters, and provisions to enable them to opt-out are being developed.

Source: <https://www.govtech.com/fs/infrastructure/Oregon-Utility-Makes-117-M-Move-to-Smart-Meters.html>

Presentations

Kerri Fry and Charlie Kawasaki

Kerri Fry, Chair and Charlie Kawasaki, Vice-Chair of the Oregon Cybersecurity advisory Council provided a cybersecurity update.

The cost and number of cyber-crimes in Oregon is increasing. The number of FBI documented cyber related complaints in Oregon rose from 961 in 2014 to 3,455 in 2017, with the cost to Oregonians increased from \$2.9 million in 2006 to \$11.1 million in 2017. Just in the last decade, the total documented cost to Oregonians, was a staggering \$74 million dollars. The FBI data only includes reported losses. Including the loss of time, costs of recovery, and response, estimates place this number closer to \$1.6 billion annually. And it is important to note that not all breaches are reported.

279 Oregon [companies reported breaches](#) since January 1, 2016. To complicate matters, Oregon faces a shortage of cybersecurity professionals, currently with 2,911 unfilled positions against a total employment base of 6,000. Workforce development is one of the most pressing issues.

To respond to this challenge, Oregon's Senate Bill 90 (ORS 276A.326-9), signed into law and effective as of July 1, 2017, required establishing the Oregon Cybersecurity Center of Excellence (CCoE). The Oregon Cybersecurity Advisory Council was also established within the office of the State Chief Information Officer. The council consists of nine voting members. A majority must be representatives of cyber-related industries in Oregon.

The voting members of the council must include at least one representative of post-secondary institutions of education and one representative of public law enforcement agencies in Oregon.

- Serve as Statewide Advisory body to State CIO on Cybersecurity
- Coordinate cybersecurity information sharing and promote shared and real-time awareness between public and private sectors
- Provide Statewide Forum for discussing and resolving cybersecurity issues.
- Encourage the development of the cybersecurity workforce
- Provide information and recommend best practices to public and private entities

Council Vision: We believe cybersecurity is a shared responsibility and must be accessible to all.

Council Mission: Build tangible solutions to protect the digital lives of all Oregonians.

OCAC is not just a policy body but will be launching and managing programs to address the cybersecurity needs of the state. Kerri noted that rural areas face similar challenges in cybersecurity, as they face in broadband. They are lagging behind urban areas. Tangible solutions are needed. OCAC is using a “public health” model to develop programs. Most people do not know what to do or who to contact if they suffer a data breach or ransomware attack. Additionally, law enforcement doesn’t know what to do. Everyone needs help.

OCAC has developed several outreach programs to assist Oregonians.

Oregon Cybersecurity Awareness Program

- Create an Oregon’s website/portal for all things Oregon cybersecurity
www.cyberoregon.com
- Build awareness across the state and beyond about Oregon’s cybersecurity business and educational programs, talent and companies
- Promote workforce development and create awareness of career opportunities
- Raise visibility of the Cybersecurity Center of Excellence (CCoE) and support legislative initiatives
- Provide critical information and tools to help Oregon businesses and organizations improve cybersecurity
- Industry and education summits (four in 2018)

Staffing

Portland State University conducted an online survey of 205 respondents resulted in answers to 33 questions regarding the cybersecurity policies, practices, staffing, and concerns of Oregon organizations. Key findings of the survey included were that about 90% of respondents indicating that both their organizations and industries were likely or very likely to experience increased cybersecurity needs, and that cybersecurity staffing is a difficult task.

NW Cyber Camp

The NW Cyber Camp is volunteer run and has been held at 5 locations (Portland, Gresham, Wilsonville, Bend, and Corvallis). It is a camp for high school students, introducing them to cyber security and creating a pipeline for the cyber security industry where there is a significant need for trained cyber security professionals. A proposal would require funding

to expand to additional locations throughout the state, hire a paid program manager, and provide stipends for low-income students to assist them in participating in the camp.

Oregon Cyber Pathways Project

The Oregon Cyber Pathways Project (OCP) will seek out, identify, and guide future security professionals along their development path from youth-focused programs through internships and apprenticeships that establish them in the workforce. The OCP will work with school districts, youth organizations, academia, and businesses throughout Oregon to build and leverage a network of contacts to connect youth and young adults to organizations that provide cyber security education, competitions, mentoring, work experience, and long-term careers in the field.

Managed Security Service Provider

Developed by the Technical Services Working Group of OCAC, this concept addresses the need for cyber security protections in place by large numbers of organizations (such as K-12 districts, small businesses, and non-profits) throughout the state that are unattractive for commercial cyber security companies due to their lack of funding, remote locations, or lack of capacity.

Oregon Veteran Cybersecurity Initiative

Engage veterans to work directly with other veterans to identify where they can apply their interests and service experience with the goal of connecting them with institutions in Oregon that are hiring cybersecurity professionals. Would require funding for programming, staff, and website development.

Cyber Oregon Public Outreach/Awareness

Build awareness across the state and beyond about Oregon's cybersecurity business and education programs, talent, and companies; promote workforce development and create awareness of career opportunities; raise visibility of cybersecurity and support legislative initiatives; and provide critical information and tools to help Oregon businesses and organizations improve cybersecurity. Funding for maintaining a website and supporting staff in managing content, advertising, etc. would be required.

Oregon State University's Oregon Research & Teaching Security

Partner with Oregon State University to build the ORTSOC into a world-class teaching and research Security Operations Center that offers learning opportunities for undergraduate students, offers cybersecurity training and education opportunities for IT staff of small businesses, creates opportunities for researchers at OSU and partners to develop new approaches in cybersecurity protection, help address operational security needs at Oregon institutions of higher education, and provide cybersecurity information sharing and potentially threat assessment and monitoring services as well for the Oregon Cybersecurity Center of Excellence. This proposal would be supported by funding to expand existing services, staff and student positions, as well as a small amount for equipment.

Security and Privacy Education for the General Public through Libraries

A training program for librarians across Oregon to build skills and capacity for general education in computer security and privacy. The training program will consist of 3-6 month weekly distance-learning activities including lectures, readings, and hands-on activities,

along with two days of intensive in-person training. This proposal would support 3 cohorts of 20-30 librarians. Funding would be needed to administer the program, pay for staff time to develop materials, recruit participants, and evaluate the program.

Broadening Security Education in Oregon

This concept would be to expand current cybersecurity education efforts for technical and non-technical audiences. The non-technical trainings would expand existing CyberPDX programs, security awareness, and phishing curriculum. The concept would also increase training for technical audiences, including Saturday Academy ASE internships, Oregon CTF, and among other things, technical training that targets an emerging, underserved area in cloud and block-chain security. Funding would be required for curriculum development, mentorship, and event organization.

Business Education Concept Cyber Internship Model

This concept proposes a unique internship model that focuses on short term, project-based, and high-need experiences that are facilitated by the Business Education Compact (BEC) and classroom instructors. The concept involves placing interns in organizations to work on cybersecurity related projects. Businesses would contribute funding to intern salary. Additional core funding would allow more businesses, students, and instructors to benefit from this experience.

Professional Certification Fund

This proposal outlines the creation of a "certification scholarship fund" that allows students pursuing cyber education programs to apply for access to free or substantially reduced exam vouchers for industry certification exams offered through organizations like CompTIA, CISCO, and others. The program concept incorporates standards for eligibility and processes for allocating funding. This program would increase the Appendix A, p. 3 cybersecurity professionals and reduce barriers for entry into the workforce. This program is expandable based on the number of students and institutions involved in the effort.

BSIDES Portland

BSIDES Portland is a 501(c)(3) organization that hosts the only annual information security-focused conference in Oregon. This concept proposal would allow BSIDES Portland to grow from the established volunteer-run information security/cybersecurity event it has been for the last 8 years into the professional information security/cybersecurity event that Oregon deserves. This proposal would support the Oregon information security community, allowing the community in turn to support the security needs of all citizens of Oregon. Funding for BSIDES would help support presenters' costs, allow for a greater number of highly impactful talks and workshops, support capture the flag competitions to more venues in Oregon, and will enable the documentation and publication of the event for the benefit of all Oregonians.

OCAC was charged with developing the plan for a Cybersecurity Center of Excellence to be delivered in January 2019, may be [viewed online](#).

This CCoE Establishment Plan addresses the required four types of primary activities and tasks specified in ORS 276A.326-29. The CCoE programmatic initiatives are envisioned as the following:

- Workforce development
- Education
- Extensive public outreach and awareness campaigns
- Public-facing incident response and recovery capabilities, in two key areas:
 - Creation of a threat information sharing and analysis (ISA) node to participate in cybersecurity initiatives at the state and national levels– and serve as a liaison with the National Cybersecurity and Communications Integration Center within the United States Department of Homeland Security.
 - Completion and implementation of the Oregon Cybersecurity Strategy and Cyber Disruption Response Plans

Opportunities for networking to connect OCAC programs to stakeholders around the state were discussed. Cybersecurity needs to be a component of broadband development programs.

Carla Wade

Carla Wade, Sean McMullen, and Michael Elliot of the Oregon Department of Education provided an update on broadband developments and initiatives.

The Connecting Oregon Schools Fund was created by HB 4023 (2018) to increase access to federal grants in infrastructure for K-12 schools. Though the account has been created, it has not yet been funded by the state and the Governor's recommended budget did not include monies for this particular fund. When funded, it is anticipated that it will be far exceeded by demand. Priority targets for the fund will be small schools with high poverty and poor connections. Charter schools can also apply for federal funds.

The Oregon Department of Education is working to update its website to conform with regulations of the Office of Civil Rights Web Accessibility. This is also an issue for school districts throughout the state.

Oregon schools are continuing to pursue E-Rate Program funding. About 145 entities have posted FCC Form 470s and about 58 have posted FCC Form 471s. 13 special construction projects have been confirmed. There continues to be outreach to under-served schools.

From the Office of Teaching, Learning and Assessment

- HB 2022 changes the name of the Oregon Virtual School District to the Oregon Digital Learning Academy (ODLA) which will offer courses to rural students. This model has produced a 90% completion rate.
- ODLA continues to provide online course access to more than 1,040 rural schools students each year
- SketchUp Pro licenses
- Canvas LMS discount pricing contract for schools
- Oregon Educator Network—online communications system to connect teachers throughout the state
- Google Master Education Suite master contract renewal
- Data literacy programs recognizing essential skills for faculty and staff as well as students
- Every Day Matters
- Digital Learning Advisory to review digital learning standards (ISTE and Computer Science)

State Education Technology Director's Association (SETDA) continues to be the de facto body that establishes broadband service standards for K-12 schools and provides a wide range of tools, reports and resources in addition to being a key advocacy organization.

- <https://www.setda.org/>
- [SETDA Broadband Resources](#)

Kiley Breitling and Ben Gherezgiher

Kiley Breitling of AT&T and Ben Gherezgiher of the Office of the State Chief Information Officer presented an update on Oregon FirstNet. Nationally, FirstNet is now well over 425,000 subscribers with more than 5,250 agencies. Band 14 implementation milestones are being met for the build-out. Cellular based push-to-talk feature applications have been introduced. FirstNet “on-boarding” support is provided to establish service, provide training and ensure positive user experiences.

In Oregon, new tower construction is in process and Band 14 milestones are met with more than 30% of AT&T's Oregon network covered. AT&T was on plan for deployment at the end of 2018. The 2019 build-out will cover both rural and urban areas with dozens of Band 14 sites added. FirstNet subscribers continue to have priority preemption on all frequency bands on the AT&T network. FirstNet user devices look for Band 14 first when establishing connection. All subscribers are approved and credentialed to use FirstNet as a protected private network. As a result of the FirstNet project, mobile wireless capacity is increasing for all Oregon customers.

Ben noted that OSCIO holds quarterly meetings with AT&T and the FirstNet Responder Authority to track progress. There are construction plans for forty-five new towers around the state over a period of five years.

Kristi Wilde added that the five-year build-out in Oregon is a contractual obligation. The FirstNet Responder Authority has a 25-year contract with AT&T. Kristi also reported that there was a recent state of emergency declaration in Oregon due to a severe winter storm. In response, AT&T sent in “deployables” to expedite the restoration of service in affected areas along Highway 58 using Band 14 in addition to commercial frequencies.

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 2-22-19.

<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 2-27-19.

<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 on Economic Development and Trade.

Status: Public hearing held by Economic Development Committee. 2-18-19. -1 -2, and -3 amendments introduced.

<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.

<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: Introduced.

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

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 non-substantive housekeeping amendments to statutes. Declares emergency, effective on passage. Sponsored by Representative FINDLEY.

Status: Public Hearing held 3-4-19 Economic Development 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: Public Hearing held 1-31-19 Health Care 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: Introduced.

<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 pre-session filing rules, indicating neither 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 2-14-19.

<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 pre-session 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

<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.

<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: Introduced.

<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.

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

2019 OBAC Agenda

The council discussed its agenda for the upcoming year. It was decided that Broadband in Agriculture will be a focus. The convening of a Broadband in Agriculture Summit later this year was discussed.

Oregon Broadband Office (OBO)

Chris reported that the Oregon Broadband Office website is now live at broadband.oregon.gov and will serve as a portal to state broadband activities, programs and projects including the Oregon Broadband Office, Broadband Map, Broadband Advisory Council, Rural Broadband Capacity Program, Outreach & Strategic Planning Project, and the Oregon Connections Telecommunications Conference.

Chris also noted that the migration project from the BTOP proprietary platform to an ESRI platform and from hosting by the Department of Administrative Services to hosting on a Business Oregon server has been completed. The OBO is charged with developing and maintaining a broadband map as a platform for data collection to track the availability of broadband services and measure progress as well as other related information and provide public access to the data.

Public Questions/Comments

Nick Spiegel expressed his concern about the accuracy of the data used for the Federal Communication Commission's National Broadband Map and the Oregon Broadband Map. He noted that he lives in a broadband dead zone that begins within one block of Wilsonville city limits and that he says is invisible as it is shown as served on the broadband maps. His Census Block is shown as having gigabit service, when the median person gets less than 1% of that.

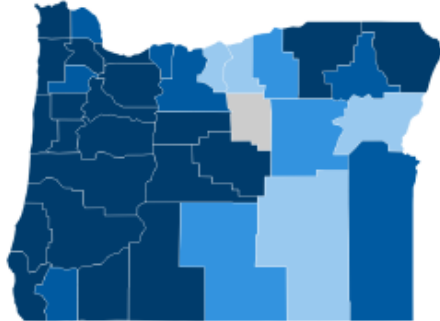
He noted that Microsoft released a study that compared the maps to the speeds people used to access Microsoft services like Windows Update. The maps said that 91% of the state had broadband "available," while only 60% of Oregonians accessed the internet at broadband speeds according to Microsoft, a difference of 1.23 million Oregonians. Rural counties are particularly misrepresented. As an example, Nick said that Wallowa County appears on maps as having 92% coverage when the actual usage number is 6%.

The information on Form 477 that is collected by the FCC does not accurately reflect the reality on the ground. Nick said that this problem needs to be fixed.

Microsoft Broadband Usage Data Contradicts FCC Maps

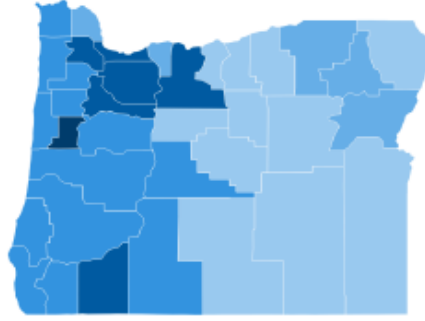
FCC maps, based on Form 477 filings
(Oregon maps are also based on 477s)

FCC indicates broadband is not available
to 370K people



Actual Broadband Usage,
according to the Microsoft study

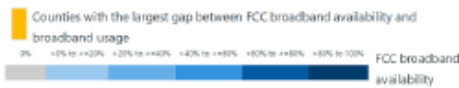
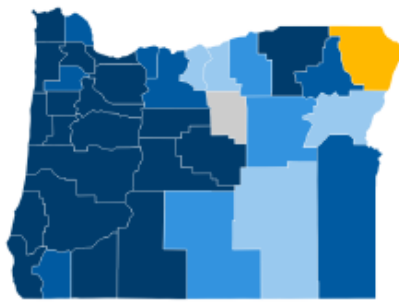
Microsoft data indicates 1.6M people do
not use the internet at broadband speeds



FCC maps

All counties

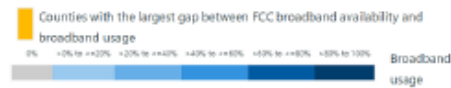
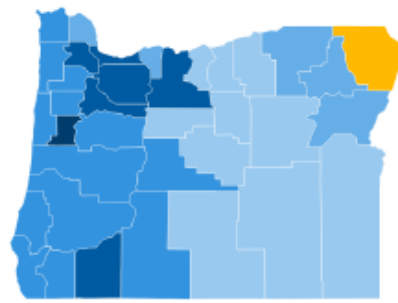
91.0%



Actual Broadband Usage

All counties

60.0%



Data sources: FCC 2018 Broadband Report based on Form 477 data from December 2016 and Microsoft Data from September 2018

Microsoft Data: <http://alturl.com/d2hrj>
This Document: <http://alturl.com/mcs95>

Meeting Schedule

The February 28, 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 April 25, 2019, in Salem. Meeting information will be posted on the [council website](#).

Meeting adjourned at 12:15 pm.

Approved by:

Signature on file
Joseph Franell, Chair
Oregon Broadband Advisory Council

April 25, 2019
Date

Signature on file
Christopher Tamarin
Business Oregon

April 25, 2019
Date