

MINUTES
Approved by the Committee
Broadband Access Study Committee
Monday, October 05, 2015
9:00 A.M.
Boise, Idaho

Co-Chair Luke Malek called the meeting to order at 9:00 a.m. A silent roll call was taken. Members present were: Co-Chairs Representative Luke Malek and Senator Dean Mortimer, Senators Shawn Keough, Bart Davis, Bob Nonini, and Dan Schmidt; Representatives Lance Clow, Rick D. Youngblood, Greg Chaney, and John Rusche. Legislative Services Office (LSO) staff members present were: Brooke Brouman, Paul Headlee, and Shelley Sheridan.

Others in attendance: Tom Shaner, State Tax Commission; Aldo Casartelli, Cable One; Celynda Roach, Cable One; John Gosch, Cable One; Al Macaluso, Cable One; Nate Bondelid, Tek-Hut, Inc.; Shawn Swanby, Ednetics; Jeremy Chou, Givens Pursley; Greg Lowe, Syringa Networks; Bob Geddes, Dept. of Administration; Ron Williams, Idaho Cable Telecommunications Association; Rob Feeley, Bureau of Homeland Security; Larry Benton, Benton Associates; Skip Smyser, Lobby Idaho; Marilyn Whitney, Governor's Office; Betsy Russell, The Spokesman-Review; Greg Zickau, Dept. of Administration; John Foster, Kestrel West; Kate Haas, Kestrel West; Meredith Newton, Cisco; Dr. Cynthia Temesi, Cisco; Brad Hassack, Cisco; Renee Willer, Frontier; Jeff Kling, Insite; Jim Blundell, T-Mobile; Russell Westerberg, RNP.

Co-Chair Malek welcomed the members and asked if there was a motion for approval of the July 21, 2015, committee minutes. Co-Chair Mortimer made a motion to approve with minor spelling corrections. The motion was seconded by Senator Keough and passed by unanimous voice vote.

NOTE: Copies of most presentations, handouts, reference materials, and public testimony can be found at: <http://legislature.idaho.gov/sessioninfo/2015/interim/broadband.htm> and are also on file at the Legislative Services Office.

Co-Chair Malek introduced Tom Shaner, CPA, Tax Policy Specialist, Idaho State Tax Commission. Mr. Shaner presented a review of the [Income Tax Credit for Investment in Broadband Equipment – Section 63-3029I, Idaho Code](#). Representative Rusche asked if the \$70 million investment was from business or individual returns. Mr. Shaner responded that the credits represented \$60 million, \$70 million when combined with business returns. Representative Rusche noted there were more investments from individuals. Mr. Shaner stated it was hard to tell because individuals also claim the tax credit. Senator Schmidt asked if E-rate money was eligible for the tax credit. Mr. Shaner stated there was a prohibition on tax credits on federal money. Co-Chair Mortimer asked if there were similar federal tax credits. Mr. Shaner stated he did not know. Co-Chair Malek asked who was working on proposed legislation and if it's meant to change efficacy. Mr. Shaner stated the legislation was technical in nature to fix language, not efficacy, and to meet current standards. He added the legislation was being reviewed by the Governor's Office.

Co-Chair Malek introduced Ron Williams, Executive Director, Idaho Cable Telecommunications Association. Mr. Williams stated that the association is made up of 15 distinct operating systems; 6 are owned by Cable One. He stated that every cable company in the United States, including Idaho, has more broadband than video customers. He added that cable companies reach about 90 percent of Idaho homes, but the association is sensitive to those rural, unserved areas. Mr. Williams referenced the [Cox handout](#). Mr. Williams deferred to Aldo Casartelli, Vice President Internet, Cable One. Mr. Casartelli presented an [Overview of Broadband Services and Related Technologies](#). Representative Rusche asked if the green conduit as indicated in the presentation had anything in it. Mr. Casartelli replied that the green conduit could have coaxial or fiber optics. Representative Rusche asked how cable at its end of life is being replaced. Mr. Casartelli responded that cable

lines are not replaced, but repaired and/or upgraded. Representative Clow asked who owned the national fiber backbone. Mr. Casartelli stated that, nationally, the fiber is leased; statewide, its owned by Cable One. Representative Clow asked if megabytes and gigabytes related to speed or volume of data. Mr. Casartelli clarified that bits (b) related to speed and bytes (B) related to volume. Representative Chaney asked what the economic challenges were in bringing in new services. Mr. Casartelli stated that it's the economics of construction and number of miles from the nearest cable plant. He stated Cable One counts the number of homes, then measures the distance. He added that Internet is more affordable in denser areas. Representative Rusche asked if there was competition from wireless carriers that can give the same type of capacity. Mr. Casartelli stated that wireless carriers invest per home, where cable provides for groups of homes. He stated that the capacity is more significant and robust, where wireless can suffer from exposure and interference. Senator Nonini referenced pages six through eight of the presentation and asked if the green areas currently have Cable One services. Mr. Casartelli confirmed they do.

Co-Chair Mortimer noted that Cable One seemed to be more focused on hardwire versus wireless and primarily involved with the rural customer. Co-Chair Mortimer also asked if Cable One has been providing service to schools and how would they in the future. Mr. Casartelli deferred to Albert Macaluso. Mr. Macaluso responded that Cable One is the backbone provider for the cell towers. He added that 35 schools and school districts were provided Internet services during the last E-rate cycle and an additional 45 schools and school districts were provided with wide area connections or transport services. He stated that Cable One works closely with school districts and providers as partners who provide to the school districts. Co-Chair Mortimer asked how many hard lines were CenturyLink, Cable, or other providers. Mr. Macaluso said it was hard to say and that it all centers around E-rate. He encouraged all to apply for E-rate. Mr. Macaluso stated that Cable One and CenturyLink were the two dominate providers in the last E-rate cycle, but it was an overall split among providers. Co-Chair Mortimer asked if Cable One and CenturyLink could have contracts to help each other. Mr. Macaluso confirmed it was possible and added that Cable One is the underlying provider with other providers. He stated that the most difficult part is the last mile.

Representative Rusche asked what other states have done to stimulate outreach of broadband to rural areas and if its necessary in Idaho. Mr. Macaluso stated it must make good business sense to layout the capital. He stated the challenge is reaching outlying areas. He stated that there may be an incentive if the state had a fund to reach rural areas. Senator Nonini asked how many schools were provided Internet during the IEN. Mr. Macaluso deferred to Celynda Roach, General Manager, Cable One. Ms. Roach stated that Cable One services the last mile for three locations; currently serving 80 locations. Senator Schmidt asked if Cable One was eligible for federal grants to provide rural services. Mr. Macaluso responded that Cable One has not applied for federal grants and chooses not to. Co-Chair Malek asked if Cable One has leveraged E-rate for service to some areas and has the tax credit been helpful. Mr. Macaluso confirmed that E-rate has been leveraged for service. Mr. Williams responded that the tax credit has been used, but it is not an incentive. He added that for a company the size of Cable One, the tax credit has a fairly insignificant impact. Co-Chair Malek asked for clarification as it seems a tax credit would be helpful. Mr. Williams stated that the credit is helpful but is not a factor in making an investment.

Senator Davis referenced page five of the presentation and asked if communities not listed were receiving service. Mr. Williams confirmed that the list did not include all communities nor counties and added that Cable One service stops in St. Anthony. Senator Davis requested a map showing the gaps in coverage statewide, not just by Cable One. Mr. Williams stated a map is being worked on but it will take a couple of weeks. Senator Davis asked if the cable industry is required by law to service the last mile. Mr. Williams stated the cable industry used to be required by local franchises to service the last mile with regard to video, but not Internet. Idaho chose a state franchise system, which has no requirements. He stated that Cable One continues to provide service, where competitors do not. Senator Davis asked if there was a legal obligation to service

Internet. Mr. Williams responded no. Senator Davis asked if any provider was required to provide Internet. Mr. Williams stated he was not sure. He added that there are obligations to serve once universal federal funds are accepted. Senator Davis asked if Cable One is more competitive with home versus business services. Mr. Williams stated that Cable One has become more aggressive in business services and in supporting wireless services.

Co-Chair Malek introduced Greg Lowe, President and CEO, Syringa Networks. Mr. Lowe presented an [Overview of Broadband Services and Related Technologies](#). Senator Davis asked if Idaho or any departments or agencies own any fiber connectivity around the state. Mr. Lowe responded that he did not think so. Senator Davis asked if the state owned any dark fiber. Mr. Lowe responded that the state uses dark fiber but is unsure if its owned. Mr. Lowe stated that Syringa leases dark fiber to the Department of Administration. Representative Rusche asked how is usage applicable for other governmental services. Mr. Lowe stated it was very similar. He stated that agencies have specific needs, which is exactly what the schools want unless they are using interdistrict classroom education. Mr. Lowe stated that Internet access moves into a different category as it is not demanding on the network performance. He stated the agencies would be more demanding than schools. Representative Chaney asked how Syringa would address their recommendation to leave purchasing to local districts in rural areas where the school's contract may not be enough. Mr. Lowe responded that if all connectivity was given to one carrier for all schools, there would be a blended cost. He stated that every carrier has business expenses and if a school is expensive, its only expensive once and may have to incur the cost to get the needed infrastructure. Mr. Lowe stated it's supply and demand.

Representative Clow asked for clarification on the definition of dark fiber. Mr. Lowe responded that bundles of fibers are strung through a conduit and any unused fibers are dark. Representative Clow asked Mr. Lowe to explain what "building" a network meant. Mr. Lower responded that building fiber means burying conduits populated with fiber, bringing it into schools, installing switches, and providing service. Senator Schmidt asked if security was an issue for commodity versus managed. Mr. Lowe stated security becomes a function of end users, except for schools. He stated that schools were asked if they wanted Child Internet Protection Act (CIPA). If they do not, the schools had their own CIPA filters on site and, therefore, could do their own filtering. Senator Davis asked if purchases of technology should be separated by department and statute. Mr. Lowe stated there needs to be ensured fair purchasing and competition at the state level.

Co-Chair Mortimer asked Mr. Lowe to explain "delivered locally." Mr. Lowe noted that the original IEN was a hub and spoke design. He stated that all schools were brought back to the ENA services in Boise. He stated that Syringa's Internet backbone is in Boise, Idaho Falls, Hailey, Pocatello, Twin Falls, etc., so the Internet backbone is available locally. The school can get the last mile locally and inexpensively. Co-Chair Mortimer asked if local was a continually dedicated service. Mr. Lowe stated that it could be and that carriers with higher quality Internet are more expensive. Mr. Lowe stated that the Department of Administration knows these items in detail and can ask schools what applications are being run. Once a list of applications is known, it can be vetted as to what makes the most sense. He added that anything Internet based is better served by getting onto the major backbone instead of going back to Boise. Senator Schmidt asked if there was a technology less costly than fiber. Mr. Lowe stated that fiber has tremendous bandwidth, and he did not know of anything on the horizon that would be limited by having fiber.

Co-Chair Malek introduced Dr. Cynthia Temesi, Executive Education Advisor, Cisco Systems, Inc. Dr. Temesi presented an [Overview of the Broadband System Developed for the Education System in California](#). Co-Chair Malek asked if Cisco owned cable. Dr. Temesi responded that she did not know, but will find out. Senator Davis asked what other states are doing that might be helpful and beneficial to Idaho with regard to funding. Dr. Temesi responded that an E-rate consortium with purchasing power could be a funding model. Senator Davis stated that there were differences in confidence in asking the federal government for E-rate funding. Senator Davis asked if there were funding models

that would help school districts. Dr. Temesi replied that Imperial Valley has a model that everyone pays one price, which becomes an issue of fairness. Imperial Valley also has on-sight experts. Dr. Temesi stated that resources and sustainability are critical components to funding. Breaking down silos relates to sharing not only funding but, also resources and expertise. Senator Davis asked if those resources are silos in California or are they portable to other states. Dr. Temesi stated she believes they are replicatable, but not sure about portable. Senator Davis asked about California's acquisition laws and if there are dual approaches similar to Utah. Dr. Temesi replied she did not know. Senator Schmidt asked her to describe the pluses and minuses of including a larger group, ie., higher education, libraries, etc. Dr. Temesi responded that smaller groups are more nimble. She stated that there is a more robust community when going beyond K-12. Senator Schmidt asked if state agencies were involved in state plans. Dr. Temesi stated that the state Department of Education is part of the UEN, other state agencies are not, but are being explored. Representative Rusche asked how the governance is pulled together and are there models. Dr. Temesi stated the Imperial Valley model was most cutting edge in getting stakeholders to come together. Representative Rusche asked who the convenors were. Dr. Temesi responded that there was an assembly bill that brought together Scenic as a convenor with a mission to bring stakeholders together.

The committee recessed at 12:05 p.m. and reconvened at 1:18 p.m. for further discussion.

Jim Blundell, Senior State Legislative Affairs Manager, T-Mobile USA. Mr. Blundell stated that T-Mobile is headquartered in Bellevue, Washington, and is a national facilities-based provider of wireless services. He stated that T-Mobile has 59 million customers and employs 45,000 people nationwide. He stated T-Mobile is America's uncarter and is redefining the way customers and business buy wireless services. He stated that T-Mobile has built an advanced nationwide 4G LTE network that will cover 300 million people by the end of 2015. T-Mobile recently regained the #1 position in the J.D. Power & Associates for customer care performance. T-Mobile recently surpassed Sprint as the #3 carrier among the national four carriers. T-Mobile also provides service to MetroPCS. They are an employer and active participant in the Idaho community and employ more than 700 employees at the call center in Meridian and offer full benefits. Mr. Blundell stated that T-Mobile is a current E-rate provider and continues to look for more opportunities. He added that T-Mobile has supplied broadband services under E-rate to the Bonneville, Valley View, and Meridian School districts. Mr. Blundell stated that advanced 4G LTE is T-Mobile's most robust deployment of mobile broadband services and features voice over LTE with HD quality voice, carrier aggregation, which steps up the performance of the network, 4x2 mimo (multiple input/multiple output) which T-Mobile is the only carrier deploying 4x2 mimo for speed, overall fastest national data speed, video calling/video over LTE (not fully deployed), and rich communication services, which combines all various media into one channel. Mr. Blundell suggested incentives for continued deployment of these types of networks. Senator Davis asked what the barriers were in Idaho. Mr. Blundell stated that problems have not been identified in Idaho, but there are problem areas for the industry.

Senator Davis asked what the challenges were associated with real estate and what are other states are doing that should be done in Idaho. Mr. Blundell stated that, at the federal level, Congress has made the permitting and site acquisition and deployment of wireless a priority, and protections are not always carried out at the state level. He stated there is an opportunity to apply local permitting and land use in state laws. Senator Davis asked for a list of what other states are doing that could be done in Idaho. Mr. Blundell stated that making fiber available everywhere and knowing where the fiber networks would be helpful. Senator Davis asked Mr. Blundell to clarify his statement that the state could help by compelling those in the market to disclose what he thought was proprietary information. Mr. Blundell replied that was not his intent and clarified that if a seller of fiber backhaul interconnectivity wanted to make its service available to a carrier, the carriers have to know about it. Mr. Blundell stated that the state has an opportunity to create tax incentives and that T-Mobile advocates for a sales tax exemption for network telecommunication equipment. Mr. Blundell concluded that T-Mobile buys spectrum from federal auctions and suggested, if possible,

that the state encourage the federal government to make more spectrum available, specifically low-band spectrum.

Representative Chaney asked what the economic impact of improving wireless was in the state and the challenges faced by carriers. Mr. Blundell responded that opportunities are unimaginable and that the industry changes constantly. Senator Schmidt asked if T-Mobile avails itself to the tax credit. Mr. Blundell replied no because the Tax Commission interpreted that all tower and infrastructure is real property, so their equipment does not qualify. He added that the tax credit is an income tax credit and T-Mobile is income positive. Representative Clow asked if T-Mobile's wireless was still dependent on being connected to a ground wire or cell tower. Mr. Blundell responded yes, the tower has to be interconnected by various means. Representative Clow asked if T-Mobile can provide a solution for Internet broadband for remote schools. Mr. Blundell responded that it has to be ROI positive and spectrum must be available. He stated that spectrum is limited, not owned everywhere, and is a federal issue. Co-Chair Mortimer asked how service was being provided to the three school districts. Mr. Blundell stated the schools are covered by wireless broadband. Representative Rusche asked how does T-Mobile's service fit into what Idaho should be providing. Mr. Blundell responded that features like speed and mobility make up for some deficiencies. Representative Rusche asked if the incremental costs are lower if there is a tower in the area. Mr. Blundell confirmed the incremental costs are significantly lower. Co-Chair Malek asked if any revamps of the income tax credit would be useful. Mr. Blundell stated that T-Mobile is an income positive entity and believes it would be.

Co-Chair Malek introduced Nate Bondelid, Network Engineer, Tek-Hut, Inc. Mr. Bondelid stated he is the executive officer of Tek-Hut based in Idaho. He founded the company in 2001 with two people, and currently employs 20 people with offices in Boise and Twin Falls. Mr. Bondelid continued by presenting an [Overview of Broadband Services and Related Technologies](#). Senator Davis asked if weather conditions impacts microwave technology. Mr. Bondelid responded no. Senator Davis asked if Idaho should own backbone structure and if microwave technology allows that. Mr. Bondelid responded that he does not encourage the state to own anything where they would compete in the private space. He stated that microwave and fiber are two different paths and have different outcomes as to how they are managed. Co-Chair Mortimer asked if microwave gives the ability to segregate bandwidth for a specific use and can the speeds be up-sized. Mr. Bondelid stated that microwave can be segregated but has nothing to do with the inherent technology and added that speeds can be up-sized. Mr. Bondelid clarified that most of today's discussion has been about bandwidth, not data. He likened it to how much (data) can be put in a pipe (bandwidth). Representative Rusche asked what pooling would look like. Mr. Bondelid stated that a fiber and microwave mix is a cost-effective way to deliver access and have the potential to provide a lot of solutions in areas that are hard to reach. Representative Rusche asked if IT support is provided. Mr. Bondelid stated they currently provide IT support to the schools directly. Senator Schmidt asked what the replacement time and upgrade cost was of their unique fiber. Mr. Bondelid stated that the lifespan of fiber is 15 years. He stated Tek-Hut evaluates each school and builds around variables and needs for connectivity. Senator Schmidt asked why Tek-Hut could make a profit in a small town when a larger company might not. Mr. Bondelid stated that larger companies are operating on a licensed spectrum for their last mile, where Tek-Hut operates on full spectrum from point A to point Z and has a much different business model. Co-Chair Malek asked if he had policy recommendations that would help broadband and improve relationships. Mr. Bondelid suggested keeping an open mind and offering more tax incentives. Representative Clow stated that microwave relies on line of sight and asked if Tek-Hut links towers to reach isolated school districts. Mr. Bondelid responded yes. Senator Nonini asked if Tek-Hut had a big capital outlay to go from 5 to 25 schools and are costs less. Mr. Bondelid responded yes.

The committee recessed at 2:35 p.m. and reconvened at 2:45 p.m. or further discussion.

Co-Chair Malek introduced Shawn Swanby, President, Ednetics. Mr. Swanby presented an [Overview of Broadband Services and Related Technologies](#). Mr. Swanby stated that Ednetics has 75 employees in Idaho. Senator Nonini asked if opt-ins were all rural districts and the opt-outs were all urban districts and asked if the costs would go up. Mr. Swanby responded that with the IEN, higher costs were paid in those areas anyway. Representative Clow asked how the sample of 20 schools was pulled. Mr. Swanby stated that schools with the same provider were pulled and the selection was targeted. Mr. Swanby stated that contracts can be structured to maintain competition. Co-Chair Mortimer asked why backhaul was needed and not having 25 locations. Mr. Swanby stated that having 25 locations was not advisable. Senator Davis asked if having a contract with a vendor precludes them from purchasing from another vendor. Mr. Swanby stated contracts ensure competition and keep a check and balance on the contract model. Senator Davis asked if there are challenges to a dual method of delivery. Mr. Swanby responded it was important for the state to be open and, if the contract is flexible, the state can determine which is better. Senator Keough asked if a gap analysis was done. Mr. Swanby stated no and that the information was in many places. Senator Keough stated a gap study would be helpful for policy setting. Representative Chaney asked if there was any value in lumping less-desirable with more-desirable contracts. Mr. Swanby stated that some schools will cost more and can see the benefit of grouping some school districts to the same infrastructure. He added that grouping Silver Valley with Garden City, for example, would not be beneficial as some schools are harder to reach and will cost more.

The committee recessed at 3:45 p.m. and reconvened at 4:20 p.m. for further discussion.

Co-Chair Malek introduced Jeff Kling, Principal, InSite Solutions, LLC. Mr. Kling presented an [Overview of Broadband Services and Related Technologies](#). Senator Davis asked which states have a good model. Mr. Kling responded that Kentucky, Connecticut, and Minnesota have a good middle mile infrastructure.

Co-Chair Malek opened the floor for committee discussion. Representative Rusche stated there are opportunities for the state and it is best for Idaho's economic development. Co-Chair Malek asked what the role of the committee was. Representative Rusche stated that the committee's role was to articulate and develop legislation to develop and organize Internet capability. Senator Davis quoted HCR 26, which outlines the committee's charge. Senator Davis asked the co-chairs if efforts were being made to draft legislation and in concert with the Purchasing Committee. Co-Chair Malek stated that draft legislation is pending the information gathered by the committee. Co-Chair Mortimer suggested the committee gather facts and determine a possible path forward and guiding parameters. He stated that after the following day's meeting, the committee should be in a position to start gathering directions and points for legislation. Co-Chair Malek noted that the committee will rely on Senator Davis' input as he was the only nexus between the Broadband and Purchasing Committees. Senator Davis suggested the committee come prepared the next day with important topics. Co-Chair Malek stated that the November meeting will be devoted to significant discussion. Senator Davis stated he hopes the committee will have a more robust understanding of the rural Internet access legislation from years ago. He added that the map of broadband from the Department of Administration's website would be helpful. Senator Davis noted there was a lot of really dark fiber and asked what happened, why it did not get lit, and what will it take to get lit. Co-Chair Malek noted that the NCSL will present what other states have done about getting fiber and broadband to schools.

Co-Chair Malek adjourned the meeting at 5:05 p.m.