

California Broadband Council (CBC) meeting, Room 2040, State Capitol, 8:30-11:30
Notes

Council Attendees:

Carlos Ramos (Chair) Brent Jamison, Ben De Alba, Jerry Winkler, Sunne McPeak, Mitch Medigovitch (Cal OES), Catherine Sandoval, the Honorable Ben Hueso

Agenda Item 1

Introduction by Ramos, overview of Council's purpose, for the benefit of newcomers

1. Introductions by each member/designee
2. Thank you to soon-to-be-speaker Rendon
3. Acknowledgement of Karen Wong's contributions at CalOES and to the CBC
4. Challenges going forward for California. We've been a leader in the past; it's important to maintain that lead. Average annual private sector wage in US is \$49k, whereas avg. tech worker wage in California is \$139k. You need to have connectivity to participate in this economy.

Agenda Item 2

Panel discussion on broadband funding

- Steve Blum – Tellus Ventures and Central Coast Broadband Consortium
- Eric Batangocol (uncertain of spelling) – AT&T
- Carolyn McIntyre – California Cable & Telecommunications Association (CCTA)
- Bill Moreno – Fire2Wire
- Tressa Bader – Frontier Telecommunications

Steve Blum (Tellus Ventures) - City officials are on the hook to improve their infrastructure. For rural areas, there is a big problem with aging wireline infrastructure. None of the state and federal programs work together. California Advanced Services Fund (CASF), Connect America Fund (CAF), and Community Connect, etc. Each has its own requirements and rules. We need to build to the same standards. Currently, sometimes you have competing grants in the same area. You need to have gigabit class broadband to participate in the digital economy. There are also places that miss out on funding completely, so it would be prudent to have more coordination between federal and state funding programs in subsidizing infrastructure projects. Can CalNET be used to access e-rate funding? We must take the opportunity to work together to solve common problems versus having to fix problems later.

McPeak - in Richmond, California, the school district is looking at how to extend services to connect to public housing.

Eric Batanbacol (AT&T) - CASF took a long time to have rules developed after involving all stakeholders. One principle was to ensure no harm is done [to existing service availability?]. Second is to be facilitators and look at regulatory incentives. Example: the CPUC adopted a decision that said wireless carriers should be allowed non-discriminatory land access. Third: ensure technology neutrality and leverage competitiveness. Fourth: put priority on unserved areas of our state. The focus is on how to improve upon success. We should have a better way to predict how much it would cost to fund broadband. The way to ensure technology neutrality is to define specific standards using a minimum threshold, that is acceptable for public funding and work off of that. Look at FCC cost allocation model, project lessons learned, engineering

parameters and leverage competitive forces. Possibly include operation expenses and have providers be efficient with grant funding.

Ramos - technology diversity is good, but there is a problem in the handoff to the middle mile. Question is how do we deal with diversity but also ensure interoperability.

Batanbacol - one possibility would be for CASF to fund operating expenses, not just CAPEX

McPeak - AT&T had a handful of projects worth \$1.4M in the beginning of CASF; recently, AT&T has accepted CAF Phase II?

Batanbacol - need to look at areas outside of CAF.

Sandoval - will CAF cover operating expenses?

Batanbacol - yes, for 6 years. But we need a way to predict expenses.

Tressa Bader (Frontier) - CAF provides both CAPEX and OPEX

Sandoval - FCC still hasn't initiated the next phase of CAF for Ultra High Cost areas. NARUC passed a resolution urging the FCC to adopt the rules for the next phase.

Carolyn McIntyre (CCTA) - the cable industry has invested \$30 billion since 1996 in California and provides broadband to 96% of the homes they pass. You do have to take the economics of an area into consideration. Not only cost effectiveness, but also if there's a customer base. In some rural areas, cable companies have decided not to make investments. For this reason, they support CASF for unserved and underserved. In most cases, CASF has been used primarily to upgrade underserved areas, and the adoption of broadband in those areas, in total, according to the CASF annual report, is around 4,000 households. There should be more time spent looking at how to improve that as well as focusing on unserved as a priority. There needs to be an evaluation of where the money is spent and why adoption isn't higher where CASF was deployed. There should be more coordination with the more than \$500M in federal dollars through CAF.

Ramos - have cable companies studied why adoption rates are low in CASF areas?

McIntyre - no, the focus for companies has been on the business case for specific areas

Blum - takes issue with the numbers presented. Total number of households passed includes middle mile. The statistics presented don't include the increase in adoption for incumbent providers where middle mile builds have increased speeds (like in Digital 395, where Verizon increased speeds for customers). In Boron, Race Telecom's 1 Gbps for \$60 per month is ready.

McPeak - 2 projects account for 70% of the households in CASF. Digital 395 and CVIN. Are there any members of the panel who believe those projects were inappropriate?

McIntyre - no, just looking at the raw data from the CPUC, there seem to be very low adoption numbers. Cable companies haven't taken advantage of CASF because of program design.

Batanbacol - there are no clear guidelines to evaluate a middle mile project. You may need to build middle mile projects through served areas to get to underserved and unserved areas.

Question is, that appropriate? It probably is worth the investment. It would seem too costly if it were over \$6,000 per household. CAF is in the \$2,000 range. The CASF estimate of \$440 per household, but that is underinflated

McIntyre - if there are assurances that overbuilding in a served area in order to serve and unserved area won't compete with private companies in the area, it may be acceptable.

Blum - by definition, a middle mile build has to start in a served area. 9 times out of 10, local telcos aren't interested in working with local government to use federal or state funds to provide coverage to underserved and unserved areas. 10 times out of 10 cable companies won't cooperate. That is not an excuse to not have government involvement; rather it is an argument to have government involvement.

Sandoval - how can you serve communities when the incumbent middle mile provider won't provide access? It's critical for economic development.

Tressa Bader (Frontier) - California households served will move from 100k to 2 million after the Verizon acquisition is completed in April. In Petrolia, they interconnect through CENIC. CAF is huge in terms of what it's going to bring to California. There are many areas that will fall out of CAF, the ultra-high cost, low density areas. Would prefer to not have CASF be awarded to areas where CAF investments will be made.

Sandoval – It's good to hear about Petrolia and that the schools there will be getting service. That will hopefully include Hoopa and Garberville.

Bader - we will be looking at those areas after the Frontier-Verizon transaction has concluded.

McPeak - CAF is just under 90,000 households. The northeast part of the state hasn't received much investment at all (Alturas)

Bill Moreno (Fire2Wire) - sometimes the Fund, the Council, and the government overlook the technologies that allow efficient, low cost means of providing service to unserved and underserved parts of the state. There was a project that cost \$2 million dollars to serve 200 households, but that's not efficient. If he had that kind of money, he would provide service to 2,000 households. Many of his customers just want connectivity for their kids to do homework and maybe watch a movie once in a while. Incumbents don't want to invest in areas that have expanded beyond the city limits. He feels like fixed wireless isn't brought to the table in the policy discussions. The next generation doesn't want to be tethered. They want wireless. The money that is spent needs to focus on the last group of people who have no service, and they live in the Central Valley. The way the CASF is structured, it's prohibitive. Too much cash outlay to apply, and there's no OPEX subsidy.

McPeak - how is building out service initiated?

Moreno - it comes from the farmers, business community, who need Internet. Putting up a tower or a pole depends on the area with regard to logistics and rules. Often use a grain silo. Many locals want to deal with local vendors. Currently offer 12 down and 3 up for residential, and up to 100 Mbps symmetric for businesses. Fire2Wire works with several vendors. They are testing 3.6 Ghz systems that will pass through trees.

Sandoval - you said you haven't applied because of the lack of OPEX

Moreno - yes, there's also the match, which is sometimes too low.

Agenda item 3

Keoni Kali (FirstNet), and Adam Geisler (Tribal Coordinator, FirstNet)

RFP has been released and the goal is to complete the acquisition this year. Once that is complete, a plan will be presented to the state governor. The network is planned to be operational by 2018. Exact phone or device will be proposed in the RFP response. It will use Band 14 in the 700 MHz spectrum.

Ramos - how did the California consultation go, in your opinion?

Keoni - it was very successful, and it was nice to see so much collaboration between state and federal agencies, very pleased with the turnout; collected lots of data from California about coverage objectives.

McPeak - Frontier has expressed interest in helping with FirstNet.

Sandoval - for some tribes where there's no cell phone or internet service, how do we collect data?

Geisler - overall data collection effort - mobile data surveys sent out to people who don't have Internet. Now, OES is working on paper forms and collecting data that way.

Agenda Item 4

Ben De Alba (California State Transportation Agency)

In Long Beach, driver-less vehicles are being introduced. There's the new Otay Mesa East border entry, which will rely on sophisticated traffic management systems. Finally, there are cars like the Tesla which can have wireless updates.

McPeak - Will Kempton followed up with her. It would be nice if a meeting could be scheduled before Will Kempton leaves.

Sandoval / McPeak - we need to leverage state and federal funding to pay for conduit that goes into CalTrans builds

Agenda Item 5

Jerry Winkler (California Department of Education)

Over 22 sites now lit from BIIG 1.0. 85% of the districts and 80% of the schools have connectivity. Priority 1 were schools that were unable to do online testing. Priority 2 were those that had to make major changes to enable online testing. Of the BIIG 1.0, 64 sites had no bidders. Later, 2.0 helped get bids for most of those. Only a few non-bid sites remain. Last year, only 900 students took the test with paper and pencil.

McPeak - there's still a problem with students who don't know how to use a keyboard

Agenda Item 6

Gerry Maginnity (CA State Library) and Anne Neville (California Research Bureau)

Maginnity - Broadband deployment for libraries. Working with Califa Group, which gets discounted prices on equipment, and CENIC, which runs the E-Rate Consortium. 184 library jurisdictions in California. Often, the public library is the only means of access in communities. They are in the second year of funding. Last year, they set aside \$2 million, and this year, \$4M

in improvement grants. 42 libraries received grants last year. 65 libraries went to the enrollment process. 55-60 will go to the contract phase. 120 library jurisdictions will be upgraded or have been.

Neville - California is one of 5 states chosen by the American Library Association to work with the FCC and USAC to pilot how to better leverage E-rate funds. 46% of Americans visited a library in the last 6 months. 75% of Americans feel that libraries should teach computer skills. Greg Lucas isn't here because he's attending the graduation of the first library online high school completion program.

McPeak - AB 1758 allocates a set aside for adoption

Sandoval - how does E-rate fund not just lighting buildings, but serving communities?

Neville - the FCC still pays to light a building, but they're interested in supporting backhaul; they're also open to leveraging state funds. Also talking to anchor institutions that aren't receiving E-rate.

Agenda Item 7

The Honorable Jim Wood

Overview of purpose of Assembly Select Committee on Closing the Rural Digital Divide. Example of using broadband for drought- grape growers can monitor water content on leaves and have saved lots of money and increased crop production with these sensors. AB 1262 allocated more money to CASF consortia. AB 1549 will map conduits to help prevent fiber cuts and promote redundancy. He wants to create a statewide broadband vision that includes models for funding and partnering strategies. This process will take time. He is working with Assemblymembers Stone and Maguire.

McPeak - your hearings are providing a lot of momentum in the Capitol to keep the discussion going. It would be great to involve you in the upcoming meeting with the California Transportation Commission.

Wood - Highway 299 construction recently happened, and he was concerned that there was no coordination with federal Dig Once conduit policy.

Sandoval - out of 180 HH in the Yurok community, 130 don't have electricity. Because they are not customers of an energy company, they don't qualify for energy subsidies.

Agenda Item 8

Catherine Sandoval (Commissioner, California Public Utilities Commission)

Conference held in October last year at the California Office of Emergency Services (CalOES). First presentations were from energy companies. They talked about how they use communications to control and monitor their power plants and energy network. There's a challenge when they have outages in rural and mountainous areas where there's no mobile coverage. This problem even exists in Monterey. CalOES - there's a delay when you order a cell on wheels (COW), and when it arrives, you have to connect it to backhaul, so they don't work everywhere. We've reached the limit of these solutions. Sometimes, it comes down to using a cell phone brigade. It also can mean going door to door and reverse 9-1-1 calls. Next workshop will focus on the safety aspect and involve first responders. How do we leverage future broadband funding to create infrastructure that will meet the combined needs of public safety, water, energy, and telecom. Separately, the next Low Income Oversight Board meeting will be

in February. Now working to coordinate broadband for public housing with low income energy programs. Mobile lifeline now has over 1 million subscribers.

Public Comment

Eli Cortez, former state CIO - \$15 a month plan offered by providers for low income should be considered as a valuable offer as a condition for merging. Collaboration is a key - providers, schools, and energy companies should work together.

Michael Ort, Praxis - Digital 395, in less than 2 years since completion has added 14 service providers connected. With this project, they brought a local Bishop provider up to speed. Suddenlink is upgrading their plans from 1 Mbps to 1 Gbps. There's virtually no cost difference in offering 25 Mbps vs. 100 Mbps. The only cost is backhaul.

Rhonda Johnson - represents the small telco providers - encourages Council to use Calcom. Includes Kerman and Forest Hills. They've deployed broadband to 98% of their customers with take rates of 60-70%.

Jose Perez - California Journal - a lot of concern that there's insufficient access to broadband. Encourages the Council to work with them to get their message out. Consider setting a goal for 100% access to all Californians, and have a standard.

Corey - ColfaxNet - there has been a lot of discussion about served and underserved areas. ColfaxNet provides served levels. They've proven it to staff, and yet a project was funded regardless. The 6/1.5 has no bearing on project funding, and yet it affects people who've invested their personal money into a network. It's not right to have the government come in and fund a project where an incumbent provider.

Jim Stevenson - SmarterBroadband - they have two separate interconnection points, they are the backup for CalFire and other local government agencies. They received a federal grant through NTIA. Their customers are buried in forested areas, but they get creative.

John Paul, Bright Fiber - partnering with local utilities and organizing the community; they have 300 community organizers to help connect rural Nevada County. Most people don't understand the Internet, and these organizers serve as a de-facto adoption agency. Kansas City got a big boost with the Google Fiber investment.

Cathy Emerson - 3 fixed wireless providers haven't been able to use existing backhaul in Northern California because of either price or insufficient volume.

Raul Alcaraz - wants to commend everyone in the room for working on this issue. Broadband is like water. CASF - For the last 6 years, Race has worked with CASF. Several projects have been awarded, several completed, and some were denied. One application denied was a win for a community. During the time that the application was being reviewed, the local provider upgraded the network.