

**2010 Broadband Conference**  
**Sept. 29, 2010**

**Welcoming remarks – Rollin Richmond**

- Ubiquitous broadband is the goal of most people and students today
- Reliable high-speed access is critical to public education and business
- HSU wants to work together with business community and government to achieve all we can for this region
- We have a variety of presenters today from various perspectives to give updates on state of the deployment and technology

**Special presentation – Bonnie Neely**

- Tina Nerat recognized & honored with resolution from Humboldt County Board of Supervisors

**Update on County, State and Federal Policy, Regulation and Investment**

State Chief Information Officer – Jon Dickinson, Deputy Dir. External Affairs

- State CIO office – mission to get and keep Federal dollars
- The Broadband stimulus project has been “bittersweet” – but they are working with funded entities on implementation
- SB1462 – create California Broadband Council (with state agencies)
- SB1040 – extend CASF and allow it to get \$125 million in additional revenue – some new pots of money, specifically for rural consortia to aggregate demand
- ARRA process was frustrating – Redwood Telephone and other projects did not get funded. Big expensive projects got funded in other places in Ca.
- Broadband capacity building will be another focus (to help aggregate demand)
- Want to help with planning efforts
- Contact info: Jon.Dickinson@state.ca.gov

CPUC – Jack Leutza, Director

- CPUC has been working to relax regulatory framework to allow technology to grow
- CASF was created to expand broadband services to rural areas with \$100 Million fund
- Processing applications since 2009 for providing high speed broadband to rural areas
- Broadband mapping is now taking place to determine broadband availability through the state
- \$51 Million been distributed to 40 projects – 112,000 households
- With ARRA, the CASF worked to match funding to augment grant applications
- Program planned to continue beyond sunset date (2012) and will get new money
- Nearly unanimous support from all political sides for this effort
- \$50 Million still available for funding – now being expanded to \$225 Million
- New features: expanded program includes rural consortia (public comment process will define and comment on public consortia)
- Infrastructure loan fund (\$50 Million) is being created for short-term loans
- OIR for implementation of SB 1040 in November 2010 will result in rule-making by 1<sup>st</sup> Q. 2011

- You can develop a proposal for more than 40% funding if you can demonstrate that 40% isn't sufficient to launch project
- New definitions have expanded beyond wireline providers to include wireless and other service delivery companies.

#### Ca. Emerging Technologies Fund – Susan Walter

- SB1040 signed yesterday – extends and expands CASF (adds \$125 million, provides funding for Regional work, creates a loan fund for smaller projects)
- ARRA got everything thinking about Broadband
- 158 Round 2 applications in Ca. (over 1,600 apps. Nationwide) – Ca. grants were \$555 Million (approx. 13% of ARRA total funds)
- Major unserved and underserved market in Ca. – working on expanding broadband access statewide
- Ca. Telemedicine Network – CTN is incorporated & launched publicly in August
- \$9.1 Million grant

#### Closing remarks – Connie Stewart & panelists

- Communities need to be ready with appropriate policies to support broadband (see Humboldt Co. Telecommunication element as an example of what's happening)
- We feel handicapped – federal political leaders don't understand our region's lack of broadband
- The CIO's office went to Federal delegation and made case for our needs—was disappointed that Redwood Telephone was not funded
- Community anchors, partnerships and business model all are essential for success
- CETF doesn't have sunset date, but there is a date when they stop getting money, but they are fully funded at this time (probably good until 2017)
- AT&T and Verizon are noticeably absent from the table (they weren't here at conference either) – AT&T got telemedicine grant – how do we work with them if they don't partner?
- Bulk of CASF funds went to small agencies. The reality is that incumbent organizations (AT&T, Verizon, etc...) are the primary players but the CPUC doesn't regulate them like they did 10 years ago.
- Advocacy by local groups is essential. Staff is prepared to “push the footprint” when incumbents protest CASF applications.
- Unserved areas, by conventional accounting, are incredibly expensive to serve. The CPUC is working with grassroots approach
- Moving to Federal FCC data for mapping – the maps are greatly improved than before
- Use Digital 395 as example of how to get more funding than 40% match – need to prove that additional intangible benefits result (e.g. tele-health, public safety, tele-education, etc...) and CPUC will consider additional funding than 40% match
- Need to use local mapping data for compilation of broadband maps

## Deployment Updates

### Yurok Tribe – Paul Romero

- Klamath River RUS grant being implemented for fixed wireless
- Coverage planned for 80% of residents
- All environmental and cultural permits – 1<sup>st</sup> contract being signed now
- Working with Carlson Wireless on whitespace radio (700 Mz. radios)
- Working with Del Norte county to utilize county facilities for antennas
- Working with Redwood Telephone for fiber for Northcoast
- Even with current project the Tribe will be underserved

### Karuk Tribe – Eric Cutright

- CalOre proposal (SiskiyouTel) got ARRA funding
- SiskiyouTel working on running fiber everywhere in their territory by 2015
- In Orleans partnering with Redwood Telephone, Access Humboldt and others to bring service to Orleans (highest priority they have now)
- Orleans has had hundreds of regular phone service interruptions

### Hoopla Tribe – Norma McAdams

- Round 1 proposal wasn't even considered
- Two proposals submitted in Round 2 – for computer center and broadband infrastructure.
- Now working on wireless project with NOAA for Sugarpine Mt.
- Need to diversity options for economic development with broadband technologies

### Del Norte Co. – John Irwin and Dan McCorkle

- Supporting Yurok efforts for broadband
- Frontier has taken over Verizon servicesw
- Working on route redundancy to Crescent City (10 Gig pipe now in place)
- Working on redundancy to 199 corridor
- Grants Pass to Cave Junction will have fiber shortly – 40 mile gap to finish connection
- Del Norte requires public works to

### Trinity Co. – Dero Forslund, CAO

- Hwy 299 project has not been funded
- Weaverville now has multiple DS3 connections
- Fiber being strung between all county buildings
- Cell tower project (\$2.5 million grant) has been marginally successful – 8 sites identified, but only three implemented (Pickett peak is solar site, Mad River and Hyampom) Problems with cell phone providers not having sufficient capacity to provide service.
- None of these projects pencil out financially without CPUC support (80% funding needed)
- Rural Telecom project infrastructure funded project

Mendocino Co. – Shirley Freriks

- Willits Online now serving Covelo
- 101 Netlink to Boonville providing 5 Mb. Wireless service
- Mendocino Economic Development now funding project and hoping to expand consortia to Humboldt

Humboldt Co. – Tina Nerat

- 101 Netlink now serving more remote areas
- Working on project to get broadband to Weott(surrounded by state parks)

## **Industry Presentations**

Suddenlink – Wendy Purnell

- Providing high-speed broadband from Trinidad to Scotia
- Participating in high-speed mapping program
- Providing cable TV, broadband and telephone (triple play service)
- New technologies being implemented – hardened strategic broadband system, monitored 24/7
- DOCSIS 3.0 higher speed cable service – new more advanced broadband offerings to region
- Increasing speeds – currently offers 20Mb. Service
- Suddenlink supports redundant linkage, but needs to make financial sense (they are in discussions with a provider)
- Suddenlink has invested millions of dollars in upgrades in Humboldt Co.

Frontier –

- Provides services in Ferndale (up to 9 Mb. Service now available) and Petrolia
- New properties in Oregon – Reedsport to Crescent City (does not include Klamath)
- No stimulus money received
- May eventually serve Klamath and Orick

ComCast – Scott Adams

- Only serves Mendocino Co.
- Looking to serve greater areas – working with Ukiah and surrounding areas now

Wireless cellular – Tom McMurray

- Cell phone infrastructure relied on existing sites
- 30x more traffic generated by iPhone compared to cell phone
- Digital traffic has expanded exponentially
- Need to come into neighborhoods is creating impacts (visual and development)

## Redwood Telephone – Scott Joachim

- Several fiber applications submitted for ARRA funding
- Initial focus was for tribal access to broadband
- Demand aggregation models were essential for Redwood Telephone project
- RCC study helped understand the regional “dark spots” for broadband
- Essential middle-mile was designed with connection to tribes
- Redwood Telephone was 82% middle mile and 18% last mile, focusing on unserved markets in Hoopa
- Quantified costs for meeting demand – much has been learned
- New funding is possible – working on continuing Redwood Telephone with alternative funding

## On the Horizon – New Opportunities

### Telehealth – Frank Anderson

- Delivering health services via telecommunications
- 10 Mb circuit is being installed today for connecting health centers

### White Space – Jim Carlson

- Freeing the airwaves – TV white space & rural broadband
- Started working with WISPs back in 2008
- Began work with FCC attorney who was lobbying for opening white space
- WISPA lobbied for two years to open airwaves
- FCC just announced that they’re going to open up airwaves for general use
- “WiFi on steroids” is coming with white space – penetrates foliage and walls and carries high bandwidth
- Incredible potential for broadband
- “White space” is unused spaces between TV channels
- WiFi uses microwave frequencies in 2 – 5 GHz range, white space is 700 Mz. range
- Sparse population – lower frequencies covers wider areas
- White space frequencies will be unlicensed
- End user devices will probably be available through typical retail sources

### Zoomer Tech – Aging in place – Susan Estrada

- Aldea brings “Happy@home” for independent living
- Allows seniors stay in their homes
- Four aging in place technology (see aging in place technology watch): Learning and collaborating, safety & security, health, information
- Awareness and potential use of home technology devices among 65+
- Safety and security – home automation, security systems
- MainstreetMD Caretracker 100 GPS locator
- Sylvania LED automatic Wireless Lighting
- Insteon Home automation (cell phone or computer home monitoring)

- Communications and engagement systems:
- Skype videophone – wireless, easy-to-use
- Wellcore automatic fall detector (no buttons to push) automatically reports falls (escalates to different contacts)
- GrandCare – daily activity log, motion data
- MedApps Health Management – uses cell phone to transmit data on health status (O2 meter, scale, podometer, blood pressure, etc...)
- Automatic pillbox – Internet linked with reports if pills not taken
- Learning and Contribution:
- Kindle
- Technology for Seniors book
- Social networks: Twitter, Facebook, Blogging

#### IP Networks – MaryLou Smulders

- Working on connectivity with large clients – wholesale only
- Agreement with PG&E that enables them to utilize PG&E assets to attach fiber
- 127 miles from Cottonwood to Eureka
- Very cost-effective and fast time to market to bring fiber connectivity
- PG&E maintains fiber along with power system (great SLAs)
- Eureka – Cottonwood connectivity project overview
- Hwy 36 route essentially follows Hwy 36 but heads north to Eureka sooner
- Hwy 299 is much more expensive – infrastructure is much older and 50% more expensive than Hwy 36 route
- Project is halfway complete – National Forest permitting is pending
- 3 Anchor tenants (no margin for errors)
- Interested in other rural projects
- Single biggest risk for fiber optic line is shooting! Also ice on the line is a problem (custom made sheathing is being implemented)
- 101 Netlink is providing service to Mad River, Ruth and Bridgeville
- 4 fiber lines available (wholesale) + 12 reserved for maintenance + 12 for IP Networks

#### Greenway Partners – David Narum

- Sustainability – Innovation and Web 2.0
- Challenges – opportunities for crowd-sourcing consulting
- Earth Challenge (\$25 million global warming challenge)
- Great platform for ideas that lead to innovation

#### Humboldt Film Commission – Mary Cruise

- Distance Learning – CR, HSU and local schools are all utilizing distance learning
- Online video – biggest shift on Internet
- Social Networking – major innovation and worldwide phenomena
- YouTube – videos for everything (literally!)

## **Looking to the Future – What’s the next big push?**

- Working on further broadband projects without Federal funding
- Access Humboldt into outlying areas (beyond the franchise territory)
- Fill in the “holes” in the “swiss cheese”
- Demand aggregation
- County policies need to be adopted similar to Humboldt Co. (propagate General Plan concepts)
- Community access centers
- Continue building community coalitions
- Connect Granges in rural communities
- Participate in OIR (rulemaking) process at the California Public Utilities Commission for the new CASF rules.
- Hwy. 299 plan?

For further discussion, please go to:

<http://groups.google.com/group/northcoast-broadband-forum>

Corrections & comments: write to [larry@northcoast.com](mailto:larry@northcoast.com)