

BROADBAND ASSISTANCE ADVISORY COUNCIL MEETING (BAAC)

DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS (DCCA) STATE OF HAWAII

MINUTES OF MEETING

Date: Tuesday, October 10, 2017
Time: 10:30 a.m. – 12:00 p.m.
Place: 335 Merchant Street, Honolulu, Hawaii

Present: Chair Catherine Awakuni Colón (Chair), DCCA
BAAC Members Senator Rosalyn Baker, State Senate
Kiman Wong (for Gregg Fujimoto), Oceanic Time Warner
Cable/Charter (OTWC/Charter)
Sharene Urakami-Oyama, AT&T
Jason Fujita (for Scott Barber), Hawaiian Telcom (HT)
Jules Ung, County of Hawaii
Tony Velasco, City & County of Honolulu (City)
Garret Yoshimi, University of Hawaii

Other Participants Todd Nacapuy, Enterprise Technology Services (ETS)
Jade Butay, Department of Transportation (DOT)
Mary Alice Evans, Dept. of Business, Economic Development &
Tourism (DBEDT)
Paul Nakagawa, Hawaiian Electric Company (HECO)
Steve Nagata, HECO
Tracy Nishibun, HECO
Paul Krueger, HT
Daniel Masutomi, HT
Ken Hiraki, HT
Arnold Kishi, ETS
Joyce Masamitsu, Verizon Wireless (by phone)
Kathy Sio, Office of Representative Kyle Yamashita
Kevin Dayton, Star-Advertiser

DCCA - Cable Television Division Ji Sook “Lisa” Kim (Cable Administrator); Cathy Takase; Debby Shin; and Jeremy Aoyagi

I. Call to Order

The Chair called the meeting to order at 10:34 a.m.

II. 2018 Legislative Session - Bill Proposals

The Chair offered two draft bill proposals (distributed at the meeting) related to facilitating and expediting broadband deployment prepared by DCCA for purposes of discussion and consideration by the BAAC. The Chair noted that it

is not DCCA's intent to request that these bills be included in the Governor's Administrative package for the next legislative session.

A. Relating to Telecommunications – Pole Notification System (Pole Notification Bill)

This draft bill incorporates a pole notification system “best practice” used in many other states identified by DCCA to address BAAC member comments, and Permitting Work Group comments in particular, that challenges in gaining access to poles has impeded the deployment of broadband infrastructure. Challenges include difficulties in identifying pole owners and delays in the process between entities where multiple owners are involved. Although the bill does not identify a specific pole notification system, the Chair noted that the BAAC has discussed and reviewed the National Joint Utilities Notification System (NJUNS) as an option since 2015. DCCA is also aware of another system used called “Notify.”

The Pole Notification Bill is intended to provide the BAAC with an opportunity to consider whether adoption of a pole notification system, would be helpful to expedite infrastructure deployment by providing an accountability mechanism that actively tracks requests and communications in the pole attachment process, including make-ready requests. Senator Rosalyn Baker relayed information received from some providers that the use of poles was for old technology and that other methods would be used to deploy new technologies, which would not use poles. She thus suggested that we may need to accommodate and consider other mechanisms to address infrastructure being placed in less conspicuous places. The Chair agreed that legislation should be crafted to cover all types of deployment and noted that the BAAC had discussed deployment on different types of locations for legislation last year. Cable Administrator Lisa Kim added that the notification systems can be tailored to the different needs of users and to include other types of structures. Senator Baker said that it is important to consider those different applications in the drafting of legislation so that it is not, by definition, only applicable to poles.

Mr. Steve Nagata commented that they learned last session through testimony from national vendors that technology is very dynamic and could be attached to poles, state and city buildings, commercial buildings and standalone towers. Mr. Todd Nacapuy added that it should also be taken into account that the Governor has engaged with AT&T to provide statewide coverage for the FirstNet network over its cellular network. He thus questioned the timing of legislation given the quick shifts in technology as FirstNet begins to roll out and AT&T begins to use this

spectrum for resale for public purposes, which will allow coverage to entities not covered by current infrastructure.

Ms. Debby Shin clarified that the purpose of the Pole Notification Bill is to facilitate the deployment of backhaul infrastructure, not the end equipment. Although technology is always changing for end equipment, such as the public facing wireless antenna and WiFi hotspot routers, all technology must still connect to fiber, copper, or other infrastructure for the backhaul of data to the providers' hubs. This infrastructure, which will likely be fiber, must be deployed either on poles or underground. The Senator acknowledged that this is different from the purpose of legislation proposed last year, which had initiated conversations at the legislature on how to accommodate small cells on poles and other places and the parameters to be placed on those attachments. She did, however, want to ensure that any legislation drafted is forward-looking so that it does not need to be revised in subsequent years.

The Chair reiterated that the purpose of the Pole Notification Bill is to help address concerns raised to the Permitting Work Group and DCCA regarding access to infrastructure that would be long-lasting, such as the poles for fiber. Mr. Tony Velasco, chair of the Permitting Work Group, commented that it was his understanding that use of the pole notification system related to the joint pole process. The Chair agreed, noting that stakeholders had indicated that infrastructure deployment was hindered not only by government permitting processes but also by delays in the joint pole approval process, which led to this draft bill to create a system of accountability to avert delays in the joint pole application process. The Chair hopes that the draft bill provides a vehicle to further BAAC efforts to address this challenge to the faster deployment of broadband infrastructure, and noted that DCCA is open to further discussion and to adjustments to the bill.

B. Relating to Public Utility Infrastructure – Lease of Unused Fiber, Etc. (Dark Fiber Bill)

The Chair introduced this second draft bill related to the lease of public utilities' (i.e., electric, telephone, gas, etc.) unused fiber, which would require the public utilities commission (PUC) to determine whether the implementation of a cost recovery and revenue generating mechanism by a public utility to lease unused fiber, conduit, and other infrastructure, would be in the public interest. The Chair noted that certain public utilities have fiber that is not being used to its full capacity that could be used from a consumer perspective to provide greater access to fiber for providers while creating a revenue stream for the public utilities that could benefit ratepayers by reducing the increases requested in rate cases.

The Dark Fiber Bill is intended to provide the PUC with a mechanism to look at reasonable ways to utilize public utilities' infrastructure and facilities. DCCA is aware of many utilities across the nation that lease dark fiber and conduit, such as Southern California Edison (SCE) that has numerous leases of unused dark fiber. In approving one such lease, the California Public Utilities Commission noted that the lease was an example of SCE's ongoing effort to pursue opportunities to generate additional revenues from temporarily available capacity. The Chair noted that leases for dark fiber may be structured to allow return of the fiber when the utility needs the capacity for its own use, and that other public utilities commissions have successfully used this type of leasing opportunity.

The Chair suggested that the leasing of unused public utilities' fiber could promote expedited deployment of broadband by making these existing, unused resources available to providers. A discussion followed about available unused dark fiber resources; past public utilities' agreements leasing unutilized fiber in Hawaii; inapplicability of the draft bill to the City's rail fiber because the City is not regulated by the PUC; and the need for discussions with the PUC on this issue. Ms. Kim noted that DCCA has opened a dialogue with the PUC and provided advance copies of both draft bills for vetting.

The Chair reiterated that the Dark Fiber Bill is intended to make unused fiber of public utilities available for broadband deployment where the public utilities had used ratepayer monies to deploy such facilities. The bill is meant to start the conversation and, should the Legislature provide policy direction to the PUC to consider public utilities infrastructure leasing, to provide an impetus for the PUC to look at use of excess capacity and to make assessments for Capital Improvement Projects amounts requested and for review for recovery during rate cases. Senator Baker noted that, if the intent is to incent utilities to make infrastructure available and it is something the State wants to happen, the PUC would need to be specifically directed to do so within defined time frames because it does not approach issues with a business development mindset. Ms. Kim noted that the bill is a first step that seeks to introduce the concept to the PUC.

Mr. Nacapuy commented that, in light of recent hurricanes in the Caribbean, we need to consider whether we are better prepared to rebuild infrastructure rapidly in the event of natural disasters and take into account whether legislation assists, or does not impede, the ability of commercial entities to rebuild. Mr. Nacapuy said that if legislation is directed at poles to expand broadband, we should also consider including ways to reinforce our infrastructure in the event of emergencies, which may be helpful in garnering support at the Legislature. The Senator

agreed, adding that emergencies may include fire and wind events, such as the fire that impacted the area of Maui in which she lives by burning down poles, causing a loss of connection for cellular phones and landlines.

Senator Baker asked if there is any way to rebuild without poles because they are so susceptible to hurricanes. The Chair noted that conduits are another option but also create challenges because they are more expensive, make finding breaks more difficult, and are subject to flooding. Mr. Daniel Masutomi commented that, for the most part, infrastructure in conduits are more resilient and should survive. The Chair noted that a pole notification system would also work to track requests for access to conduits and timeliness of responses.

The Chair reiterated that DCCA prepared the two draft bills to introduce means to expedite deployment of broadband infrastructure, and that DCCA is open to BAAC discussions on, and adaption of, the draft bills.

III. Updates

A. Hawaii Broadband Initiative (Transpacific Fiber Optic Cable Landing Project) - DBEDT

DBEDT Deputy Director Mary Alice Evans provided an update on the Transpacific Fiber Optic Cable Landing Project. The Request for Proposals (RFP) solicitation was cancelled in May because it was determined in discussions with responsive and responsible offerors that there were flaws in the RFP that needed to be corrected in order to have a viable project. Thus, there is no open solicitation at present, and there is no definite timeline for reissuance. DBEDT is, however, fully committed to continuing this initiative to build a secure, carrier neutral, open access cable landing station that it believes will be an advantage for Hawaii, but it must first correct the identified issues. DBEDT has taken steps outside of the RFP to eliminate risk for an offeror by having the environmental assessment and permitting completed by the time the solicitation is reissued. The Hawaii Community Development Authority Board has approved the retaining of permitting and planning services for a cable landing site in Kakaako (identified in the State's Johns Hopkins' study) and to do an environmental assessment.

B. Hawaii Island Fiber Gap Project

The Chair provided an update on this ongoing project to close the existing gap in Hawaii Island's fiber communications infrastructure ring, which is relying on Hawaii Electric Light Company's (HELCO) line rebuild project to

replace poles that the providers may then use. HELCO is experiencing additional delays because of two issues. First, HELCO was denied its request for a right-of-entry to start construction before getting approval of its application for a federal rights-of-way easement. Second, the Hawaii Volcanoes National Park is requiring a mandatory 30-day wait period after the final Environmental Assessment (EA) Finding of No Significant Impact (FONSI) is published. The most recent version of the final EA FONSI also introduced a number of mitigation requirements from the U.S. Fish and Wildlife Service that HELCO must address, which requires a major redesign to, for example, ensure a minimum 60-inch spacing between all phase conductors to protect large birds from getting electrocuted. The Chair noted that HELCO has been very responsive in providing DCCA with updates and information, which is much appreciated.

C. Hawaiian Telcom - SEA-US Cable

A PowerPoint presentation was made by Mr. Masutomi to update the BAAC on the SEA-US Cable, which was put into service after 3 years of development on August 8, 2017. The SEA-US Cable system, which is about 9,000 miles long, connects Indonesia, the Philippines, Guam, Hawaii, and California, and is the fastest connection between Southeast Asia and the continental United States. It has an initial capacity of 20 Terabits, and sales have been quite strong, reflecting pent-up demand. It connects Hawaii to over 2 billion people in the Southern China, ASEAN (Association of Southeast Asian Nations), and Australasian markets.

A map was shown of existing cables across the Pacific Ocean and their hubs. The majority of the cables, with over 80% of existing lit capacity, cross over the Northern Pacific Ocean between Japan and the U.S. Before the SEA-US cable came into service, only one cable system, Asia America Gateway (AAG), followed a mid-pacific route. However, the AAG cable has had problems with fiber cuts near the South China Sea area. Because the SEA-US cable bypasses that earthquake prone region, it offers greater resiliency and an option to diversify traffic. It will continue to serve Hawaii for hopefully a few decades.

Mr. Masutomi noted that Hawaii and Guam are starting to become major fiber hubs for transpacific cable systems. Hawaii has the Southern Cross Cable that goes from Australia to Oregon and California; the Japan-US Cable that has a leg into Hawaii; the AAG Cable from Southeast Asia to the U.S.; and now the SEA-US Cable. This ability to hub with other cable systems attracts other cables to land in Hawaii. He said that it will be beneficial to the State to attract more cables to land in Hawaii, such as through the DBEDT Cable Landing Project, noting that the State was at the point of running out of capacity. Additionally, he noted that it will

benefit the State to increase connections to Guam, which is also seeking to make itself a hub. He added that two island nations, Palau and Yap, will be connecting to the SEA-US Cable later this year.

D. Hawaiian Telcom - Connect America Fund (CAF) II Projects

Mr. Masutomi explained that the CAF was the Federal Communications Commission's (FCC) major reform of the Universal Services Fund to direct more monies toward the building of broadband networks. HT started in 2014 on CAF Phase I (CAF 1), Round 1 projects, building out to 519 locations to provide service at 4 megabits per second (Mbps) down and 1 Mbps up (4/1 Mbps). In CAF I, Round 2, in 2016, HT built out to 1,317 locations to provide 4/1 Mbps service. The CAF Phase II (CAF II) program began this year. Under this program, HT will build out to 11,081 locations with minimum speeds at 10 Mbps down and 1 Mbps up (10/1 Mbps). HT is on track to deliver 40% of the 11,081 locations, or approximately 4,400 homes, by the end of 2017. HT has opened over 3,000 of these locations for sales on Hawaii Island, which have been quite strong because of the need in these rural areas. Some residents have even purchased HT's 1 Gigabit service.

Mr. Masutomi shared maps showing the CAF I and CAF II copper and fiber to the home buildout locations on Hawaii Island, Molokai, and Maui, which are identified as either constructed, under construction, or to be constructed. He noted that areas showing copper builds offering 10/1 Mbps speeds often have much higher speeds. Senator Baker asked about the impact of the CAF II fiber builds on broadband penetration on Hawaii Island, Molokai, and Maui. Mr. Masutomi stated that after the addition of the 11,000 locations, they believe that they will still have only a 60% penetration rate on the neighbor islands. They are looking at other technologies that may be able to expand that percentage some, but there will still be areas that are hard and very expensive to reach. The Chair also noted that CAF monies may only be used for areas that are unserved. Mr. Masutomi confirmed that areas must be unserved and said that they are told what census blocks are available to build to with CAF funding.

E. Designated Charter WiFi Access Points

Mr. Kiman Wong provided an update on the deployment of 1,000 new public WiFi Access Points (hotspots) required by the State's Time Warner Cable-Charter Communications merger proceeding. The hotspots must be deployed throughout the State within 4 years of the merger, with 100 locations designated by the State. Since the merger in May 2016, Charter has deployed 870 new hotspots, and the State has designated 26 hotspot

locations: 14 on Kauai, 7 in Hana, Maui, and 5 in Wailuku, Maui. Mr. Wong said that there has been a growth in usage as people become aware of the hotspot locations and how to use them. Data for the last month shows the following usage for the State designated hotspots:

Kauai (14 hotspots): 9,700 users and nearly 54,000 sessions, averaging 1,000-1,500 sessions a day.

Hana, Maui (7 hotspots): 2,800 users (100-220 users per day) and approximately 10,000 sessions.

Wailuku, Maui (5 hotspots): 2,800 users and 6,400 sessions. Daily usage varies widely from 75 users to 300 on First Friday events.

OTWC/Charter is working on additional hotspots in excess of the 1,000 required hotspots, and on additional State designated sites on Molokai and Hawaii Island. These State designated sites offer 1 hour free per day per device for all users.

In response to inquiries made, Mr. Wong provided the following information:

- Each hotspot can support approximately 500 simultaneous connected users, with some variation depending on the type of usage.
- OTWC/Charter has a coverage map that shows all of its 3,400 hotspots, but it does not separately show the State designated locations.
- OTWC/Charter's data can sort Legacy Time Warner customers, Cable WiFi users, which includes other cable company customers such as Comcast and Cox, and the group of users who use the free access either because they are not customers or do not know their login information. Although there are variations, usage distribution is generally equally split between these three groups.
- The hotspots primarily use coaxial cable for backhaul.
- OTWC/Charter and Cable WiFi customers can login to gain unlimited free access. For non-customers, free access is dependent upon the hotspot because each has differing amounts. The State-designated locations offer 1 hour free per day per device. Other sites on private property, such as at the Stan Sheriff Center or the Royal Hawaiian Shopping Center, have, by contract, 2 hours free per day per device.

Senator Baker asked if the airport hotspots operate likewise. Mr. Wong responded that the airport hotspots are being offered by Boingo as a concession. He noted that their usual model is to provide free access after watching a short video, but that he is unaware of the final model selected. The consensus was that the Boingo service, the new concession, is not yet up. Senator Baker noted that certain mainland airports offer 30 minutes for free with paid service offered after that period.

She asked if that is how the Spectrum hotspots worked for non-customers. Mr. Wong responded affirmatively.

The Chair thanked Mr. Wong for the report and noted that DCCA was working with others in identifying additional hotspot locations and encouraged members and participants to reach out to DCCA if they are aware of locations that would benefit from designated hotspots. DCCA is working closely with Mr. Wong to identify the balance of the 100 State designated hotspot locations.

IV. ETS Hawaii Annual Code Challenge (HACC) – DCCA Challenge Submission: HI Speed Map-It

Ms. Shin provided a summary of DCCA's challenge submission for the 2017 HACC, sponsored by Governor Ige and private companies, and coordinated by ETS. The competition was designed to engage local "techies" in modernizing state services to create more effective and efficient government. The "hackers" were given about a month to create a prototype as a proof of concept. DCCA was one of the eight state agencies submitting challenges.

DCCA presented a challenge to create a mobile wireline application called HI Speed Map-It that could be used by anyone in the State to capture and geographically display the measured Internet speeds available in a given location or to identify areas with no Internet service available. This would provide DCCA with more detailed data on Internet availability that could be shared, unlike much of the other speed and accessibility data that DCCA receives that have disclosure restrictions to protect the privacy of individuals and confidential business information. As an example, an FCC map was shared that provides coverage data only at the census block level for privacy reasons. This data may show a census block as served even where only one person within that block is served, and does not provide more detailed data on service availability within the census blocks. DCCA's desired application would be able through crowdsourcing to provide a map with greater detail on served, unserved, and underserved areas. In moving forward to develop an application, DCCA will be able to use ideas learned through the HACC on how to approach the application's design and how to entice people to use the application.

Mr. Nacapuy reiterated that the idea of the hack-a-thon was to expose all of the agencies to what can be done with technology, and to use the information gained to create RFPs rather than hiring a consultant to create their specifications. He noted one HACC produced prototype that identifies Hawaii Revised Statutes' sections through Amazon Alexa inquiries, which will hopefully be pushed into production soon. He said that other agencies, such as UH, may commercialize their applications. The various applications produced through the HACC may be viewed at HACC.hawaii.gov. Mr. Nacapuy encouraged agencies to participate

next year, and commended and thanked DCCA for its participation because of the time and effort involved in preparing a challenge.

V. Announcements

The Chair asked for any announcements or items for future consideration by the BAAC. There were none.

VI. Adjournment

The meeting was adjourned at 11:38 a.m.