

**CLOSING THE DIGITAL DIVIDE:
CONNECTING NATIVE NATIONS AND COMMUNITIES
TO THE 21ST CENTURY**

HEARING

BEFORE THE

**COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE**

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

APRIL 5, 2011

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

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CLOSING THE DIGITAL DIVIDE: CONNECTING NATIVE NATIONS AND COMMUNITIES TO THE 21ST CENTURY

TUESDAY, APRIL 5, 2011

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Committee met, pursuant to notice, at 2:28 p.m. in room SR-253, Russell Senate Office Building, Hon. Daniel K. Inouye, presiding.

OPENING STATEMENT OF HON. DANIEL K. INOUE, U.S. SENATOR FROM HAWAII

Senator INOUE. I have been authorized by Chairman Rockefeller to preside over this very important hearing.

In my 33 years of service on the Indian Affairs Committee, I've been fortunate to learn about the history of our country and its relations with the indigenous Native People who occupy and exercise sovereignty on this continent.

As a nation we have changed courses many times in the policies governing our dealings with Native Americans; and Native People, history shows, have suffered greatly.

Finally, over the last several decades we adopted a policy of recognizing and supporting the rights of this nation's first Americans: Native Americans, Alaskan Natives and Native Hawaiians, and we must continue our resolve to uphold this policy; and telecommunications is an important investment we can make in the future.

In 2004 I chaired a Senate Committee on Indian Affairs hearing on the Native American Connectivity Act. That hearing focused on ways to help tribal Governors develop the necessary telecommunications infrastructure so that native communities can have access to basic telephone service as well as broadband and wireless technology.

While some progress has been made over the years, as clearly outlined in the Federal Communications Commission's National Broadband Plan, there are significant unmet needs and opportunities in Indian and native communities.

Today's hearing will examine the ongoing communication challenges facing native communities, including Indian tribes, Alaska Native Villages and Hawaiian Homelands.

Native Hawaiians have had a special political and legal relationship with the United States for the past 183 years, as evidenced

through treaties with the United States, and are included in more than 188 federal statutes.

Historically, native communities had less access to telecommunication services than any other segment of the United States population. The lack of good, reliable and affordable telecommunications infrastructure impedes economic development, educational opportunities, language retention and preservation, and access to healthcare and emergency services.

According to the most recent data, less than 70 percent of the households on tribal lands have basic telephone service, compared to the national average of approximately 98 percent.

And, let me repeat this again: less than 70 percent of households on tribal lands have basic telephone service, compared to the national average of approximately 98 percent.

Further, it is estimated that broadband reaches less than 10 percent—less than 10 percent—of tribal lands compared to 95 percent of households nationwide.

In Hawaii, native communities face the challenge of being rural, remote and noncontiguous, both an island, as well as between islands. And Alaska shares many of these same challenges, since its rural and remote villages are isolated and not connected to road systems.

So, I'm very pleased that the Federal Communications Commission has taken an active interest in identifying and working to meet the needs of native communities through its adoption of the National Broadband Plan and creating the Office of Native Affairs and Policy with Geoffrey Blackwell as its chief.

The adoption of multiple agenda items of great interest to native communities last month is a testament to these efforts.

I also appreciated the time Chairman Julius Genachowski and Mr. Blackwell spent in Hawaii learning firsthand about the special challenges facing native Hawaiian communities.

Identifying the needs and how best to address them is only part of the equation. Reducing barriers and providing sufficient support to help native communities will be critical to the success.

Of the \$7.2 billion provided in the American Recovery and Reinvestment Act to fund broadband-related projects, only \$46.3 million was awarded to Native American awardees by the Commerce Department's Broadband Technology Opportunities Program.

An additional \$285 million was adopted for projects which claimed some benefit to tribes.

The rural utility service, through its Broadband Improvement Program, provided \$158 million in grants and loans to native communities or providers whose service may have touched native communities.

Given the magnitude of the needs this can only be considered a small downpayment. Unfortunately, given the cost-cutting environment on Capitol Hill, creative funding mechanisms will be necessary to support efforts to fully connect native communities.

The worst thing we can do is to provide for an empty promise. Too much of that has gone on over these many years; we have much to make up for in terms of our nation's commitments to the native people of this land.

So, I look forward to hearing from our distinguished panel of witnesses on these important issues and working with the FCC and native communities to achieve our common goals.

As you know, we have a whole panel here, but I was just notified that the President of the Association of Village Council Presidents, Myron P. Naneng, Sr., has to return immediately because there was a death in his family.

And, so, if I may call upon President Naneng to give his testimony at this time.

Please proceed.

**STATEMENT OF MYRON P. NANENG SR., PRESIDENT,
ASSOCIATION OF VILLAGE COUNCIL PRESIDENTS (AVCP)**

Mr. NANENG. Thank you, Mr. Chairman, Senator Inouye. I'd like to thank you for the opportunity to speak on broadband's potential impact in rural Alaska, and more potentially, the positive impact that broadband will have in rural Alaska as well as for education and other issues that are affecting people that live in rural Alaska.

My name is Myron P. Naneng, Sr., President of the Association of Village Council Presidents, representing 56 villages on the Yukon/Kuskokwim Delta, which is the size of the State of Oregon.

I am a member of the State of Alaska Broadband Task Force, representing Alaska Federation of Natives, which is a statewide native organization.

I have also served as chairman of a telephone company that provided local exchange, cellular and Internet services, United Utilities, from 1980 to 2008 when we sold the company.

I will be providing copies of letters from AFN to Department of Commerce as part of the testimony to the Committee.

If cellular services and usage is of any indication of the need for connectivity in rural Alaska today, it's proven with a large demand of use by people who live in the villages.

The cell phone service provider was not prepared for a high usage by people during the initial stages that it was introduced. Broadband has the same potential of making a bigger impact. It will enable users to obtain information quicker and make information available that was not even available 5 years ago.

Today, our people in the villages want to be connected. I have a 3-year-old granddaughter who can—who is proficient in the use of an iPhone and an iPod. This is the wave of today for young people in our villages; and it's quite amazing considering that there was only one phone in the villages in the 1970s that everybody had to share within their communities.

Communication trends have been changing for the better; and opportunities that come with it have been embraced by all. Improved connectivity provides users with information on educational training and business opportunities as well as keeping up with current worldwide events.

Information on jobs and opportunities that young people can apply for will be at their fingertips. This is going to create an information flow that is not available today and we all know that this is—this is now becoming a preferred method of communication for all our young people.

In rural Alaska the only way to travel to most villages is by small airplane operated by hub based carriers. When a health emergency occurs, the villagers who have health aides who are the first responders and who communicate with health professionals, doctors, nurse and counselors, when they encounter a health situation.

With the expanded broadband will provide better connectivity; thereby better communications between regional hospitals, even major hospitals, in cities to support our village healthcare system, many of which have tele—telemedicine communication systems. Many of the regional health corporations have established sub-regional clinics; and within the Y/K Delta we have five sub-regional clinics extended throughout the region.

These sub-regional clinics have doctors and other healthcare professionals who support the villages in the surrounding areas as well. Even those regional clinics utilizing telemedicine communication systems to talk to a diagnosing of symptoms of those they're administrating healthcare to.

Broadband with the expansion of bandwidth will also allow schools to expand the educational and training opportunities of students in a village school, especially in villages that are not meeting the No Child Left Behind requirements. Educational programs and other training opportunities would not be available to students in rural communities because of remoteness or size; and it can be made available with broadband

Most of the students in villages, even though they graduate from high school and continue on to higher education institutions still have to take remedial courses to prepare for college. We seek the implementation of broadband to help reduce this requirement and give more students an opportunity to succeed in courses they take in universities or training courses.

Adults may not be able to travel to universities due to families and/or other reasons, can take educational courses through the expanded system from an accredited college that offer courses through the Internet.

Nowadays we are seeing more young people getting their education by staying home and taking courses through the Internet. There are other—there are also many employer-sponsored training opportunities that can be delivered electronically if the infrastructure is in place.

Again, a reminder that the Yukon/Kuskokwim Delta is the size of the State of Oregon and there are no roads in rural Alaska, so the cost of everything especially is really, really expensive. To get to training we have to travel to a regional hub such as Bethel, St. Mary's Aniak and on to Anchorage; and further if the training is out of state. The cost of a round-trip ticket from any one of our villages to Bethel can range between \$150 to \$900; and that's just to Bethel.

To consider the opportunities that will come with increased broadband, bandwidth and connectivity I think this will help in reducing the cost for people who live in rural Alaska.

Another consideration is the fact that in rural Alaska there is no choice of providers and connectivity—connection; and the connection is weak. We currently do not have cell phone or Internet con-

nections in many remote parts of Alaska; where we do, the signal is not strong, resulting in many lost calls or no connectivity. Because we have no choice in providers we are limited to the provider of the service area, and at the mercy of the provider with regards to options, plan designs and costs.

For many villages and their leaders the ability to identify funding which can be used for village purposes will be a major step for economic sustainability. Jobs can be created with this new technology that otherwise does not exist today.

Grant submissions for granting agencies, especially now with the requirements to submit grants via Internet or paperless are hindering many of our villages to submit grant application and financing reporting today. Some have lost opportunities, so broadband will make it easier for villages and even regional organizations, such as AVCP, to submit grant applications before deadlines occur.

This will create infrastructure expansion for both villages and regional entities that are working with villages, and create more job opportunities that currently do not exist in any of our villages.

We see the benefits to broadband; the expansion of bandwidth; the positive changes it will bring, and opportunities in getting information and expanding local village economies.

The potential use—the potential uses in search and rescue operations: telecommunications for health and—health services, education in schools and even public safety. Broadband expansion will help provide law enforcement with a better means of communications between village public safety officers who lead search and rescue operations and other law enforcement duties with other law enforcement personnel.

A child from one of the European villages can most likely communicate with a Yupik, Cupik or Athabascan child from rural Alaska. Maybe even today it can be expanded through broadband. They might learn from our children that we do not have iced-piped sewer systems or igloos, but that honey buckets are still in the villages that cause health concerns in villages that don't have water and sewer systems that are taken for granted in most of the United States communities.

Maybe even our leaders in Congress or the Oval Office would realize that many Americans still lack the infrastructure that can improve the quality of life. For Americans who live in rural Alaska, broadband will bring the things into real time views, not just from Discovery Channel of Alaska shows but directly from people who live in rural Alaska and real people.

Mr. Chairman, thank you for the opportunity to testify and provide a short summary of what we anticipate will make a difference in rural Alaskan villages. And, we know that big—we know will make a bigger impact on educating not only those who live in rural Alaska, but those who live in urban America as well.

And, I'd like to add a comment from one of the teachers in one of the schools a broadband can do and stated. It's a principal from the village high school of Hooper Bay who made the comments, regarding—and for informational purposes, Hooper Bay's closer to Russia than a lot of people think. It's out in the Bering Sea Coast.

Regarding high speed Internet service for Hooper Bay School students and community, currently our educational programs have be-

come very dependent on reliable high speed Internet connectivity with corresponding bandwidth to meet the demands of our students logging into computer-aided instructional program through the Internet. My Skills Tutor and Carnegie Math are two programs that are Internet dependent along with general instruction programs for Internet access provides the basis for research projects in all content areas. We frequently face a situation where broadband or band width cannot meet the needs of over 100 of our 400 students requiring timely access to the Internet.

When teachers assign a lesson dependent on Internet access and students cannot connect or get bumped off the connection it has serious consequences for the effectiveness of instruction and student engagement.

Additionally, student access in community to complete homework assignments is not available at this time again compromising the potential of our students and expansion of our curriculum beyond the walls of the school.

With that, thank you very much, Mr. Chairman.
[The prepared statement of Mr. Naneng follows:]

PREPARED STATEMENT OF MYRON P. NANENG, SR., PRESIDENT,
ASSOCIATION OF VILLAGE COUNCIL PRESIDENTS (AVCP)

Good afternoon, Mr. Chairman and members of the Senate Commerce Committee. I thank you for this opportunity to share my views on potential impacts, more for the positive what broadband will do in rural Alaska. My name is Myron P. Naneng, Sr., President of Association of Village Council Presidents, representing 56 villages on the Yukon/Kuskokwim Delta, an area the size of the State of Oregon. I am a member of the State of Alaska Broadband Task Force, representing Alaska Federation of Natives, a Statewide Alaska Native Organization. I have also served as Chairman of a telephone company that provided local exchange, cellular and Internet services, United Utilities, Inc., from 1980 to 2008, when we sold the company. I am providing copies of letters from AFN to Department of Commerce as part of the testimony to the Committee.

If cell phone service and usage is any indication of the need for connectivity in rural villages today, it was proven with the large demand by people in many villages. The cell phone provider was not prepared for the high percentage of users in the initial stages. Broadband has a potential of making a bigger impact. It will enable users to obtain information quicker and make information available that was not available even 5 years ago. Today people want to be connected. I have a 3-year-old granddaughter who can proficiently use the iTouch. This is the wave of today and the future, and is quite amazing considering there was only one phone in each village for the villagers to share in the early 70s. Communication trends have been changing for the better, and the opportunities that come with it are embraced by all. Improved connectivity provides users with information on educational, training and business opportunities as well as current world wide events. Information on jobs and opportunities that young people can apply for will be at their fingertips. This is going to create an information flow that is not available today in many villages and we all know this is the preferred method of communication for all young people.

In rural Alaska, the only way to travel to most villages is by small airplanes operated by hub based carriers. When a health emergency occurs, the villages have health aides who are the first responders and who communicate with health professionals, doctors, nurses or counselors when they encounter a health situation.

An expanded bandwidth of broadband will be provided better connectivity, thereby better communication between the regional hospitals or even major hospitals in cities to support the village health care systems—many of which have telemedicine communication systems. Many of the regional health corporations have established subregional clinics in the Y/K delta, the Yukon Kuskokwim Health Corporation has five subregional clinics that extend throughout the region. These subregional health clinics have doctors and other professional health care providers who support the villages in surrounding areas. Even these regional clinics utilize the telemedicine

communication systems to talk through the diagnosis of symptoms of those they are administering health care to.

Broadband with the expansion of bandwidth will also allow schools to expand the educational and training opportunities of the students in school, especially in villages that are not meeting the No Child Left Behind requirements. Educational programs and other training opportunities that would not be available to students in rural communities because of remoteness or size will be available through broadband. Most of the students in villages, even though they graduate from high school and continue onto higher education institutions still have to take remedial courses to prepare for college. We see the implementation of broadband reduce this requirement and give more students an opportunity to succeed in courses they take in universities or training courses.

Adults who may not be able to travel to universities due to family and or other reasons can take educational courses through the expanded system from accredited colleges that offer courses through the Internet. Nowadays, we are seeing more young people getting their education by staying home and taking courses through the Internet. There are also many employer sponsored training opportunities that can be delivered electronically if the infrastructure is in place. Again, the Yukon-Kuskokwim Delta is the size of Oregon and there are no roads in rural Alaska so the cost of everything is really really expensive. To get training we have to travel first to a regional HUB (Bethel, St Marys, Aniak) then on to Anchorage and further if the training is out of state. The cost of a round trip ticket from any one of our villages to Bethel can range from \$150-\$900—and that is just to Bethel. So consider the opportunities that will come with increased broad band width and connectivity.

Another consideration is the fact that in Rural Alaska there is no choice of provider and the connection is weak. We currently do not have cell phone and Internet connection in many remote parts of Alaska and where we do the signal is not strong, resulting in many lost calls or no connectivity. Because we have no choice in providers we are limited to the provider of the service area and are at the mercy of the provider with regard to options, plan design and cost.

For many villages and their leaders, the ability to identify funding which can be used for village purposes will be a major step for economic sustainability. Jobs can be created with this new technology, that otherwise does not exist today. Grant submissions to granting agencies, especially now with the requirements to submit grants via Internet or paperless is hindering many of our villages to submit grant applications and finance reporting today. Some have lost opportunities, so broadband will make it easier for villages and even regional organizations, such as AVCP to submit grant applications before deadlines occur. This will create infrastructure expansion for both villages and regional entities that are working with villages and create more job opportunities that currently does not exist in many villages.

We see benefits to broadband and expansion of bandwidth, the positive changes it will bring and provide opportunities in getting information and expanding local economies in villages. The potential uses in search and rescue operations, the telecommunication for health services and education in schools.

Broadband expansion will also help in providing law enforcement with a better means of communication between Village Public Safety Officers, who lead search and rescue operations and other law enforcement duties with other law enforcement personnel.

A child from one of the European countries can most likely communicate with a Yupik', Cupik' or Athabascan child from a rural Alaska village. They might learn from our children that we don't have iced piped sewer systems, or igloos, and that honey buckets are still in use in villages that cause health concerns in villages that don't have water and sewer systems that are taken for granted in most of the United States communities.

Maybe, our leaders in Congress and Oval office will realize that many Americans still lack the infrastructure that can improve the quality of life for Americans who live in rural Alaska, broadband will bring things into real time views, and not just from Discovery Channel of Alaska shows but by direct communications with real people.

Thank you for the opportunity to testify and providing a short summary of what we anticipate will make a difference in rural Alaska and villages, that we know will make a bigger impact on educating not only those who live in rural Alaska, but those who live in urban America as well.

Quyana, Thank you.

ADDENDUM

Comments by Hooper Bay HS Principal Scott Ballard

Regarding high speed Internet service for Hooper Bay School students and community: Currently our educational programs have become very dependent on reliable high speed Internet connectivity with corresponding bandwidth to meet the demands of our students logging in to computer-aided instructional programs through the Internet.

My Skills Tutor and *Carnegie Math* are two programs that are Internet dependent, along with general instructional programs where Internet access provides the basis for research projects in all content areas. We frequently face a situation where our bandwidth cannot meet the needs of over 100 out of our 400 students requiring timely access to the Internet. When teachers assign a lesson dependent on Internet access and students cannot connect or get bumped off the connection, it has serious consequences for the effectiveness of instruction and student engagement.

Additionally, student access in the community to complete homework assignments is not available at this time, again compromising the potential of our students and the expansion of our curriculum beyond the walls of the school.

Quyana, Thank you.

Senator INOUE. Mr. President, I thank you very much for your testimony, and I realize because of death in your family you will have to rush off, so I have submitted questions for your consideration.

But without objection, I'd like to recognize your Senator, Senator Begich for comments he may have.

Senator BEGICH. Myron, thank you very much for being here, and I express my condolences for your loss. And, I know you have to leave. So, if I could again, first thank the Chairman for having this hearing, but ask if I could, just one question. We'll have more for the record, but I know you need to go.

So, the Universal Service Fund, which myself and Senator Thune have put a letter out asking other Senators to support us on this effort, impacts the 56 rural communities that you represent. How would you rate the importance of the Universal Service Fund for connectivity and accessibility for the villages? How important was it to really utilize?

Mr. NANENG. Yes, it's a very important part of being able to connect even the telephone systems within the village. Like I state in my testimony, there's one phone for each village back in the 1970s. Universal Service Fund has given the telephone companies the opportunity to expand to each home.

And, you know, if I could give an example for myself: I lived up at Fairbanks at the University of Alaska while going to school. My wife-to-be lived at Scammon Bay. Long distance dating by one telephone was not a very good situation, but I think—I believe that the Universal Service Fund has really made a big difference in making phones available to each and every home that was—is within the current system; and I think that Universal Service Fund can also be expanded to provide opportunities and expansion of the Internet and cellular phone systems.

Senator BEGICH. Very good. Thank you, Myron. And I think the only comment I'll make is, I appreciate your testimony, because I think many times it's hard for people to understand the value of communication within rural Alaska. You know, without it we can't deliver medical services, educational services, as you just described, and basic commerce.

But the one piece of the whole, as I travel throughout rural Alaska is the whole issue with medical clinics, and the utilization and what it's doing now to transform the villages to have the same kind of healthcare that any urban area could have through the Internet. And, that to me is most amazing. But, it takes bandwidth.

Mr. NANENG. Yes.

Senator BEGICH. We may be connected, but we're the slowest in the nation when it comes to bandwidth. Without that bandwidth, some of the clinics that are run through your villages will not have access that many of the rural communities or urban communities have; is that a fair statement?

Mr. NANENG. Yes, it is.

Senator BEGICH. Very good. Again, Myron, I don't want to take much more of your time, but I really appreciate you traveling this distance, but I know you have to get back; and I really appreciate you being here today.

Mr. NANENG. Yes. Thank you, Senator.

Senator INOUE. Thank you very much.

And now may I call upon the Chief of the Office of Native Affairs and Policy, Consumer and Government Affairs Bureau of the Federal Communications Commission, Mr. Geoffrey Blackwell.

STATEMENT OF GEOFFREY BLACKWELL, CHIEF, OFFICE OF NATIVE AFFAIRS AND POLICY, FEDERAL COMMUNICATIONS COMMISSION

Mr. BLACKWELL. Thank you, Chairman and Senator Inouye. Mr. Chairman, Senator Inouye and members of the Committee, hushchay and thank you for this opportunity to testify today.

The lack of communication services in Native America is alarming. Only 67 percent of residents in native nations have basic telephone service; less than 10 percent have access to broadband, which is fast becoming the lifeblood of our 21st century economy, education, healthcare and public safety.

Broadband can do much to level the negative historical impacts on native communities, but it must be available, accessible and affordable to meet its promise.

Diverse and comprehensive needs makes it clear that one size fits none. The enormity of our mission is vast. The purpose of the Office of Native Affairs and Policy is to change the way we approach the communications problems of native nations and communities. We are charged with developing and driving a native agenda across the Commission, but changing our rules alone is not enough. We cannot, and will not only sit in Washington, make minor tweaks to our rules to do what we think will work and wait to see if they do. Complex problems dictate the need for new policies and procedures and well thought out solutions.

Under Chairman Genachowski's leadership, with the entire Commission and all of its bureaus and offices, and in particular with the long-standing support of Commissioner Copps, there is a new way of doing native business at the Commission.

Native Nations are front and center in that new paradigm. Our work with them is a strategic partnership in which we exercise the Commission's trust relationship with Native Nations. To fulfill our mission we are fostering the Commission's ongoing government-to-

government dialogue by working directly with Native Nations to understand their needs and empower them to provide solutions.

Our approach is to work together to identify and remove barriers and build models that engage their anchor institutions. We seek to place Native Nations themselves in the center of those solutions; whether is through self provisioning of services or through new tribal centric methods of deployment with industry, public or private partners.

This active involvement of Native Nations is critically important to finding lasting solutions. To fulfill our mission and transform the landscape our office cannot be just another outside from Washington. Instead, it must be a knowledgeable and respected Native Nations insider.

Immediately after the unanimous vote that established our office we hit the ground running, actually, rolling out the office in Native America, while at the same time working across the Commission to surface actions and proposals. We logged thousands of miles on a listening tour from here west to the Hawaiian Home Lands. We went deep into Native Nations, seeking the input of American Indian, Alaskan Native and Native Hawaiian leaders.

In distance diagnosis sessions and classes from the native end of the signals we saw the human element of the lack of services, and the limitations of connectivity, speed, and reliability. Several times, we had to reset our phones, log off and log back in.

After we kicked the dirt with the Native Nations we returned to Washington with knowledge in hand; and then, under the chairman's leadership the commission launched a series of groundbreaking proceedings at its March 3rd open meeting, named Native Nations Day.

From rules expanding prioritized broadcasting opportunities, to proposed rules for new mobile wireless licensing, to an omnibus inquiry on a range of issues related to broadband adoption and deployment, the proceedings of Native Nations Day will serve as a foundation for consultation as a critical component of the Commission's rulemaking process.

These include an inquiry on a Native Nations priority, to remove barriers to entry, the creation of a Native Nations broadband fund for myriad deployment purposes, and a commission-wide, uniform definition of tribal lands.

Critical to the work of our office is also our close coordination with others across the commission, and we will continue to provide guidance on a variety of rulemakings and actions.

One of our other top priorities is to overhaul, update and increase the collaborative value of the commission's Indian Telecom Initiatives outreach program. In addition, our work with the FCC Native Nations Broadband Task Force will ensure that concerns are considered in all relevant proceedings and that new recommendations are developed.

In conclusion, we have heard several recurring themes from native leaders: continue to meet with us; listen to us, and use what we tell you to bring connectivity to our communities. The overarching message is that if consultations are to be successful, if education and training sessions are to be productive, and if efforts to place Native Nations at the center of the process are to succeed,

we must do our work within—we must do our work with Native Nations largely within their communities.

Native Nations are aware of our office's abilities. Many have told us that in order to best help them, we must see the problems firsthand; work with them where the problems exist and endeavor to find the solutions in concert with them.

We welcome all of these opportunities.

Thank you again for the opportunity to testify this afternoon. Mado. I look forward to any questions you may have.

[The prepared statement of Mr. Blackwell follows:]

PREPARED STATEMENT OF GEOFFREY BLACKWELL, CHIEF, OFFICE OF NATIVE AFFAIRS AND POLICY, FEDERAL COMMUNICATIONS COMMISSION

Chairman Rockefeller, Ranking Member Hutchison, and members of the Committee, thank you for the opportunity to testify today about the critical communications issues facing Native Nations and the Commission's efforts to find solutions.

The lack of telecommunications services in Indian Country is alarming. After over 70 years of development and expansion of the telecommunications industry, only 68.9 percent of residents in Native Nations have basic telephone service. The statistics for broadband penetration are even more troubling—less than 10 percent of residents of Native Nations have access to what is fast becoming the lifeblood of our 21st century economy, educational opportunities, health care, and public safety.

However, the oft-cited statistics paint only part of the picture—behind them lurks a stark reality. The negative impacts of history fell particularly hard on Tribal and Native Communities, and aspects of this history resulted in an alarming lack of critical infrastructures. Broadband opportunities can do much to level this history in bringing health care, education, and jobs to Native Nations, but it must be available, accessible, and affordable to meet its promise. The purpose of the Office of Native Affairs and Policy is to change the way we approach the communications problems of Native Nations and Communities. There are numerous and comprehensive communications needs throughout Indian Country, and there is great diversity within those critical needs. That is, the need for telemedicine is greatest for some Native Nations, while the needs for educational technology or public safety are paramount for other Native Nations. In many places, connectivity occurs only in border towns and along major transportation routes inside Native Nations. It is clear that one size fits none, and the enormity of our mission is vast. Changing our rules alone is not enough. We cannot—and will not—be able to only sit here in Washington, make minor tweaks to our rules to do what we think will work, and wait to see if they do. Complex problems dictate the need for new policies and procedures, and well thought-out solutions.

That is the mission of the Office of Native Affairs and Policy, created by a unanimous vote of the Commission on August 12, 2010, implementing a recommendation of the National Broadband Plan. The Office is charged with developing and driving a Tribal agenda at the Commission and serves as the Commission's primary point of contact on Native issues. Under Chairman Genachowski's leadership, and with the involvement of the entire Commission and all of its Bureaus and Offices, there is a new way of doing Native business at the Commission, and Native Nations are front and center in that new paradigm. Our work with Native Nations is a strategic partnership, one in which we effectuate and exercise the trust relationship that the Commission shares with Native Nations.

The Office is charged with bringing the benefits of a modern communications infrastructure to all Native communities by, among other things, ensuring robust government-to-government consultation with Federally-recognized Tribal governments and other Native organizations; working with Commissioners, Bureaus, and Offices, as well as with other government agencies and private organizations, to develop and implement policies for assisting Native communities; and ensuring that Native concerns and voices are considered in all relevant Commission proceedings and initiatives.

The Efforts of the Office of Native Affairs and Policy

To fulfill its mission, the Office is fostering the Commission's ongoing government-to-government dialogue with Native Nations by working directly with them to understand their needs and empower them to provide their own solutions. New opportunities must be created for Native Nations and those who work with them to find

sustainable solutions. Our approach is to work together to identify and remove barriers to solutions and build models with Native Nations that engage their core community or anchor institutions. We seek to place Native Nations themselves in the center of those solutions, whether it is through actual self-provisioning of communications services or through new “Tribal” or “Native-centric” methods of deployment with industry, public, or private partners. As Native Nations uniquely know and govern their communities, this active involvement is a critically important component to finding lasting solutions in their communities.

Immediately after being established, we hit the ground running, actually rolling out our introduction of the Office in Native America, while at the same time working across the Commission to surface actions and proposals. We logged thousands of miles on a “listening tour” from here to the Hawaiian Home Lands, seeking the input of American Indian, Alaska Native, and Native Hawaiian leaders. We went deep into the Native Nations, meeting collectively and individually with Native leaders and Native associations, Tribally-owned and operated communications providers, as well as talking with Native consumers and businesses.

To obtain a firsthand view of the complexity of the problems, in places where the Commission had never been before, we engaged in distance education discussions from classrooms at the *Native* end of the signals. In remote health care clinics, accepting gracious invitations of the patients at the *Native* end of the line, we sat in on their diagnosis sessions with their far away doctors. We saw the human element of the lack of services, and the limitations of connectivity, speed, and reliability. Side-by-side with our Native Nation colleagues, we “kicked the dirt” within the Native Nations, to discuss how we can all help them with their development and deployment plans. Several times, we have had to reset our phones and blackberries, log off and log back in, and set our out-of-office automatic reply messages to let folks know we are traveling in unconnected regions.

To fulfill our mission and transform the communications landscape, the Office of Native Affairs and Policy cannot be just another outsider from Washington. Instead, the Office must be a knowledgeable and respected Native Nations and Tribal lands *insider*. Collectively, our four senior staff members have over 40 years of experience working in the trenches of the Commission and directly with Native Nations. We stand ready for the challenge.

Our work has just begun. Under the Chairman’s leadership, the Commission launched a series of groundbreaking endeavors at its March 3rd Open Meeting, on a day the Commission named “Native Nations Day.” It was a day of “firsts”—the first time that the Commission used its meeting agenda to address matters entirely and specifically developed for Native Nations; the first time that Tribal leaders formally addressed the Commission at the start of an Open Meeting; and the first time that the Commission initiated a comprehensive inquiry and rulemaking proceeding focused exclusively on Native communications needs.

From rules expanding broadcast opportunities, to proposed rules for new mobile wireless licensing opportunities, to an omnibus inquiry on a range of issues related to broadband adoption and deployment on Tribal lands, the proceedings of Native Nations Day will in part serve as the foundation for the nation-to-nation consultation with Native Nations that is a critical component of the Commission’s rule-making process.

The Proceedings of Native Nations Day—New Commission Approaches

The Rural Radio Tribal Priority Order. Native Nations want to provide information and community news to their people, and are looking at radio programming to promote and preserve Native culture and language, and to advance cultural dialogue. Last year, the Commission took steps to address the imbalance in the number of radio stations licensed to Native Nations and communities, as compared to the rest of the country, when it adopted an historic Tribal Priority designed to award a decisive preference to any federally recognized American Indian Tribe or Alaska Native Village seeking to establish its first non-commercial radio station on its Tribal lands. The Tribal Priority was greeted with enthusiasm by Native Nations, but it was noted that certain Native Nations, because of their historical or geographic circumstances, might not be able to take advantage of the priority. In a Second Report and Order adopted on Native Nations Day, the Commission addressed these special circumstances by adopting provisions to address the needs of non-landed Native Nations and those with small or irregularly shaped lands that make it difficult to meet some of the requirements of the Tribal Priority. In addition, the Commission adopted a Notice of Proposed Rulemaking seeking comment on proposals to apply the Tribal Priority to certain commercial FM channel allotments and potentially obviating the need to go to auction. The hope is that these new mechanisms can help

Native Nations deploy services in this critical and widely adopted media technology, as they also build designs and resources for new advanced broadband platforms.

The Wireless Spectrum Tribal Lands Notice of Proposed Rulemaking. While competitive market forces have spurred robust wireless communications services in many areas of our country, wireless connectivity for Native Nations remains at significantly lower levels. Native Nations have expressed to us many concerns that the situations they face at home involve the very basics of public safety—the inability to make a wireless call in an emergency. Native Nations have asked the Commission for greater access to robust wireless spectrum to meet the challenges of terrain and distance that many Native communities face and, for some time now, the need for this action has been critical. On Native Nations Day, the Commission adopted a Notice of Proposed Rulemaking to promote greater use of spectrum to help close the communications gap on Tribal lands and to ensure that Native Nations are at the center of the decision-making process. This NPRM, one of the most important requests from Native Nations in the last decade, strives to put licenses in the hands of those who will value the spectrum and build out on Tribal lands. Three of the five proposals launched in the NPRM would create new opportunities for Native Nations to gain access to spectrum through Wireless Radio Services licenses, while the other two proposals are designed to create new incentives for existing licensees to deploy wireless services on Tribal lands.

The Native Nations Notice of Inquiry. The Commission has said on many occasions that broadband is indispensable infrastructure for economic growth and job creation, and nowhere is that need more acutely felt than on Tribal lands. The lack of robust broadband services—and, in fact, even basic communications services—contributes to the challenges Native Nations face in building strong economies with diverse businesses and development projects. On Native Nations Day, therefore, the Commission launched a broad-based inquiry into a wide range of communications issues facing Native Nations—an inquiry that will provide a foundation for updating the Commission's rules and policies to provide greater economic, market entry, and communications adoption opportunities and incentives for Native Nations. The result of a broad collaborative effort across the Commission, led by the Office of Native Affairs and Policy, the Notice will lay the groundwork for policies that can help Native Nations build economic and educational opportunities for their own Tribal lands. The Notice seeks comment on the best ways to support sustainable broadband deployment, adoption, and digital literacy training on Tribal lands. Among other important questions, the Commission also asks about the possibility of expanding the Tribal Priority concept into a Native Nations Priority, to identify and remove barriers to entry, rather than using a case-by-case waiver approach, thus making it easier for Native Nations to provide other services—wireless, wireline, and satellite—to their communities. The Commission also asks about opportunities to use communications services to help Native Nations address public safety challenges on Tribal lands, including the broad lack of 911 and E-911 services, and the needs of persons with disabilities on Tribal lands.

Recognizing that, given their unique challenges and significant obstacles to broadband deployment, Native Nations need substantially greater financial support than is presently available, the Notice of Inquiry also seeks comment on a recommendation of the National Broadband Plan to establish a Native Nations Broadband Fund. The National Broadband Plan notes that grants from a new Native Nations Broadband Fund could be used for a variety of purposes, including bringing high-capacity connectivity to governmental headquarters or other anchor institutions, deployment planning, infrastructure build out, feasibility studies, technical assistance, business plan development and implementation, digital literacy, and outreach. In the Notice of Inquiry adopted on Native Nations Day, the Commission seeks comment on a number of issues associated with the establishment of the Native Nations Broadband Fund, including the need for such a fund, the purposes for which it would be used, and the level of funding.

The Low-Income Notice of Proposed Rulemaking. The Low-Income program of the universal service fund, commonly known as Lifeline and Link Up, has been, and continues to be, a critically important component in extending the reach of communications services to Native Nations. But with a telephone penetration rate hovering below 70 percent and a broadband penetration rate well below ten percent, much remains to be done. According to Gila River Telecommunications, Inc., a Tribally-owned telecommunications company, the telephone penetration rate for the Gila River Indian Community stands at 86 percent, still well below the national average of 98 percent but significantly above the average on Tribal lands. Gila River attributes its success in expanding the reach of telephone service largely to Lifeline, given that roughly 91 percent of the Community's elders participate in Lifeline. At the afternoon session of its March 3d Open Meeting, the Commission adopted a No-

tice of Proposed Rulemaking in which it proposes to reform and modernize Lifeline and Link Up—issues of great interest to Native Nations.

The FCC–Native Nations Broadband Task Force. One of the top requests from Native Nations in the National Broadband Plan was the creation of a new FCC–Native Nations Broadband Task Force that would ensure that the Commission’s consultation with Native Nations is an ongoing, continuous dialogue and a shared effort between partners. Chairman Genachowski fulfilled this request when, on Native Nations Day, he appointed to the Task Force 19 members representing Native Nations and 11 members representing Bureaus and Offices across the Commission. The Task Force will ensure that Native concerns are considered in all relevant Commission proceedings and will work to develop additional recommendations for promoting broadband deployment and adoption on Tribal lands. The Task Force will also coordinate with external entities, including other Federal departments and agencies. These efforts will culminate in more efficient ways of working with our Native Nation partners, the industries, and the institutions of Native Nations.

Conclusion: Coordinating and Consulting on a Commission-wide Native Agenda

Critical to the work of the Office of Native Affairs and Policy is its close coordination with other Bureaus and Offices across the Commission. Major rulemakings now always include the involvement of Native interests. For example, working closely with the Wireline Competition Bureau in the universal service reform context, the Office ensured that Native concerns were heard about losing voice service while undergoing a transition to new broadband technologies that may take longer to embed themselves in Native America than in other parts of America. To that end, the Office ensured that the Commission sought comment on whether a separate mechanism would be appropriate for Native Nations. Similarly, the Office of Native Affairs and Policy is working closely with the Wireless Telecommunications Bureau as they develop the Mobility Fund, which is a set of initiatives to promote deployment of broadband and mobile services and to provide an investment in wireless infrastructures, through a financially sensible transformation of the universal service fund. With our help and guidance, the Commission proposes to address Mobility Fund support for Tribal lands on a separate track to provide adequate time to coordinate with Native Nations, seek their input, and find good solutions. We will continue to provide guidance on a variety of rulemakings and initiatives throughout the Commission.

The Office of Native Affairs and Policy is ready to roll up our sleeves and pull out our laptops as we continue our mission. Native Nations Day was a success, and the Commission is proud of the work it has done so far. However, we must build on that success and the success of our other activities since the creation of the Office a mere eight months ago. Among other things, one of our top priorities is to overhaul, update, and increase the collaborative value of the Commission’s Indian Telecom Initiatives, or ITI, program, moving it from version 2.0 to version 10.0 and even beyond. We look forward to increasing the effectiveness and value of these regional workshops, trainings, consultation, and networking events. We also look forward to establishing a Federal interagency broadband working group that engages other Federal agencies concerned with Native Nations and with missions on Tribal lands related to broadband and communications deployment, such as education, health, public safety, energy, cultural preservation, and economic empowerment. With a new inter-agency initiative on Native broadband, the Federal government can coordinate both internally and directly with Native Nations on broadband-related policies, programs, and initiatives.

Internally, we look forward to working with colleagues across the Commission to increase the value of the information tools that the Commission has for Native Nations and Communities. For example, the Commission’s Spectrum Dashboard 2.0, which was unveiled last month, allows users to view the licenses and spectrum leases that cover specific or all Tribal lands. We plan to continue holding meetings with Native Nations to discuss how this and other Commission information tools can be improved and more responsive to the needs of Tribal communications planners. We also look forward to reviving an internal training and speaker series for decision makers and colleagues across the Commission on how to work with Native Nations and the basics of how to coordinate and conduct consultations with Native Nations.

In conclusion, we have heard several recurring themes in our conversations with Native leaders—continue to meet with us, listen to us, and use what we tell you to bring communications on Tribal lands into the 21st century. The overarching message is that, if consultations are to be successful, if future education and training sessions are to be well-attended and productive, and if efforts to inform, educate,

and put Native Nations at the center of the decision-making process are to succeed, we must do our work with Native Nations largely within their Native communities. Native Nations are aware of our Office's abilities and many have told us that, in order to best help them solve communications problems, we must work with them where the problems exist, see the problems first-hand, and endeavor to find the solutions in concert with them. We welcome all of these opportunities.

Thank you again for the opportunity to testify this afternoon. I look forward to answering any questions you may have.

Senator INOUE. Thank you very much, Chief Blackwell.

Regretfully, I must advise all of you that there's a roll call ending at this moment so I will call this hearing to a recess, but I'll be back in about 10 minutes.

[Recessed.]

Senator INOUE. Sorry to keep you waiting.

Our next witness is the Chairman of the Department of Hawaiian Homelands, Mr. Alapaki Nahale-a.

Mr. Chairman.

STATEMENT OF ALAPAKI NAHALE-A, CHAIRMAN, HAWAIIAN HOMES COMMISSION; AND DIRECTOR, DEPARTMENT OF HAWAIIAN HOME LANDS

Mr. NAHALE-A. Chairman Rockefeller, Ranking Member Begich, Chairman Inouye, and members of the Committee aloha. My name is Alapaki Nahale-a, and I am the Chairman of the Hawaiian Homes Commission, which was created by Congress via the Hawaiian Homes Commission Act of 1921.

As the Chairman of the Commission, I also serve as the Director of the Department of Hawaiian Home Lands, charged with filling the purpose of the Act, to provide homestead opportunities for Native Hawaiians on the 200,000 acres held in trust for their benefit. It is especially an honor for me to sit before you because I am a direct beneficiary of the Hawaiian Homes Commission Act. I was only five when our family received our homestead, but I remember it like it was yesterday. The program was a turning point for my family, giving us the opportunities that come with home ownership and providing us a solid foundation upon which I could build a quality life for my own family.

And so, today, with gratitude in my heart and hopes for a better future, I thank you for this time to share the needs of the Hawaiian Community and the opportunities that broadband brings for the continued improvement of Native Hawaiians and all native people.

About 20 percent of the nearly one and a half million residents of the State of Hawaii are Native Hawaiian, and this percentage will continue to rise. While most people associate Hawaii with Honolulu and Waikiki, at its heart, Hawaii is still a rural state.

Broadband is a powerful tool that can be used to transform and advance our people with a greater level of economic self-sufficiency, educational achievement and cultural awareness and pride.

Native Hawaiians, like American Indians and Alaska Natives, face similar social, economic challenges, and we can better address these problems and help to improve our chances for success through the use of technology and access to broadband.

Broadband is a great equalizer for Hawaiians. It is the tool that will allow us to remain in our home communities and still thrive.

We can be safe with reliable access to police and fire protection; our young people can take advantage of college courses without having to move to another island; we can raise our families within our community because of enhanced economic opportunities; we can spread native language as a living language with high-speed connectivity between the schools, between the islands and beyond; and we can access healthcare specialists via teleconferencing from our local doctors' offices.

Ensuring equitable access to broadband is an important step in Congress' clear intent with advancing rehabilitation and welfare of Native Hawaiians.

Let me share with you some real examples: Last week I had the privilege to travel to the Island of Maui to visit Kahiki Nui, a 20,000 acre Hawaiian Homelands Community on the Slopes of Haleakala. It is the largest and most remote of our active homelands. Getting there involves a three-hour, four-wheel drive off-road adventure; and while residents there have no grid of electricity or running water, they do have telephone and broadband service. They can surf the net, get e-mail and Skype with friends and family.

With broadband access, remote parcels like Kahiki Nui can be opened up for greater homesteading possibilities. It allows my department to provide not only urban developer-built subdivisions, but also farming and ranch opportunities in remote areas.

Broadband deployment also serves as incubators for economic development. Hawaiian Homes Technology or HHT is a job creation and community capacity-building initiative which began in the Native Hawaiian Homestead Community of Anahola on the Island of Kauai. Through the use of broadband the opened a business that converts legacy data from files, microfilm, microfiche, diagrams, blueprints and images into digital, electric files. HHT has been able to create living wage technology jobs and economically challenge the Native Hawaiian Communities and develop homegrown technology and managerial skills.

Through broadband and information technology, Native Hawaiians can choose to live and work in the communities where they grew up without having to move away to support their families.

On the education front, prior to being appointed to the Hawaiian Homes Commission, I was the Executive Director of a culturally based public charter school located on Hawaiian Homelands in Keaukaha on Hawaii Island. And, toward the end of my tenure we began planning for long distance learning opportunities so our students could take courses via the Internet that currently were not available to them. It's similar to what Federal Communications Commission Chairman Julius Genachowski witnessed when he visited the rural Native Hawaiian Community of Nanakuli, where he witnessed firsthand how broadband connected the gifted high school student to an advanced placement calculus class being taught virtually from another island.

Broadband has allowed our cash-strapped public school system to leverage limited teaching resources, to reach multiple campuses and more students.

In conclusion, broadband will allow Native Hawaiian Communities to leapfrog over the digital divide that has historically held us back, enabling us to succeed in the 21st Century and beyond.

Sadly, nearly half of our homestead land does not have broadband connection. The FCC's National Broadband Plan recommends establishing a Native Broadband Fund; we fully support this. We believe that the deployment of broadband into Hawaiian Homelands and rural Native Hawaiian Communities accelerates our ability to address the social, health, education, and economic challenges we face.

With modern technology, imagination, and hard work, broadband infrastructure will allow Native Hawaiians to excel into the next century and beyond.

Mahalo.

[The prepared statement of Mr. Nahale-a follows:]

PREPARED STATEMENT OF ALAPAKI NAHALE-A, CHAIRMAN, HAWAIIAN HOMES COMMISSION; AND DIRECTOR, DEPARTMENT OF HAWAIIAN HOME LANDS

Senator Inouye and members of the Committee, my name is Alapaki Nahale-a. I am the Chairman of the Hawaiian Homes Commission which was created by Congress through the Hawaiian Homes Commission Act of 1921. As the Chairman of the Commission, I also serve as the Director of the Department of Hawaiian Home Lands, charged with carrying out the mission of the Act to provide housing and economic opportunities for Native Hawaiians utilizing the 200,000 acres that are held in trust for their benefit. It is especially an honor for me to sit before you, as I am among the 37,800 beneficiaries under this Act, born and raised on Hawaiian Home Lands in Keaukaha on the Island of Hawaii. Thank you for this opportunity to share with you the needs of the Hawaiian community. Broadband is a powerful tool to transform and advance our people to a greater level of economic self-sufficiency, educational achievement, and cultural awareness and pride.

The eight primary islands and the immediate surrounding ocean area cover roughly 79,625 square miles which is slightly larger than the State of Nebraska. While most people associate Hawaii with Honolulu and Waikiki, Hawaii is, at its heart, a rural state. I have taken the liberty of attaching a map with my written testimony to illustrate the truly rural non-contiguous nature of our state.

Today, Hawaii's population is approximately 1.4 million people. Native Hawaiians make up about 20 percent of the state's population and are most concentrated on rural Oahu and the neighbor islands. Our population is growing with Native Hawaiian students making up 28 percent of public school enrollment. Moreover, this percentage grows to 37 percent when you exclude Oahu schools.

Native Hawaiians, like American Indians and Alaska Natives, face similar social-economic challenges. They are overrepresented in the negative indicators including income levels, health and well-being, educational levels, prison populations, and homelessness. It is my belief that we can address these problems and improve our chances for success through the use of technology and access to broadband.

The State of Hawaii, and its rural Native Hawaiian communities in particular, face unique hardships in accessing broadband because of the state's non-contiguous configuration in the middle of the Pacific Ocean. Connectivity is provided by a combination of submarine fiber optic systems and terrestrial fiber systems. Since modern fiber optic systems no longer require a regeneration point in Hawaii, fewer trans-Pacific cables are located in Hawaii. Ultimately, this reduces Hawaii's connectivity to the rest of the world and results in higher costs to users which directly impact the state's ability to conduct advanced research, expand distance education, and further tele-health services for its citizens.

In order for rural and remote Native Hawaiian communities to have access to broadband, the infrastructure must first reach the State of Hawaii before it can be deployed to the rural areas of Oahu and the difficult to reach remote communities on the neighbor islands. Once within our state's borders, our islands are separated by miles of open ocean. As such broadband systems require both a heavily armored submarine and a protected terrestrial fiber optic network that is able to withstand the natural disasters that have historically plagued the Hawaiian Islands. This means higher costs for carriers to deploy and maintain network facilities with little means of recovering these expenses. In fact, some rural Native Hawaiian commu-

nities are relegated to dial-up service because service providers determined that any further upgrades were not cost-effective.

Broadband is a great equalizer for our Native Hawaiian communities. It is a tool that will allow us to remain in our communities and thrive. We can be safe with reliable access to police and fire protection. Our young people can take college courses without having to move to another island. We can raise our families in our community because we have economic opportunities. We can access health care specialists in Honolulu via teleconferencing and tele-health technologies.

In July 2010, Federal Communications Commission Chairman Julius Genachowski visited Hawaii to see firsthand the challenges that Hawaii and Native Hawaiians face. He addressed a Native Communications Roundtable attended by American Indian, Alaska Native, and Native Hawaiian leaders and community members who came to discuss their telecommunications challenges. Interestingly enough, whether the speaker represented the Inupiat people from northwestern Alaska, the Mandan, Hidatsa, and Arikara Nation from the great plains of North Dakota, or a Native Hawaiian homesteader from rural Waimea on Hawaii Island, the message was consistent—their biggest telecom challenges were the geographic isolation of their communities and the lack of capital to invest in a broadband infrastructure. These native leaders discussed with Chairman Genachowski the value of establishing a Tribal Broadband fund to support sustainable broadband deployment and adoption for native communities. He was given an aerial tour of Hawaii Island to see its expansive, remote nature, and the difficulty of reaching and connecting with many in Hawaiian communities.

Chairman Genachowski also witnessed how broadband connected a gifted high school student from the rural Native Hawaiian community of Nanakuli on Oahu to an Advanced Placement calculus class being taught on the Island of Maui. In the early days, instructor Michele Sera taught students on other islands via the telephone, and later through a dial-up Internet connection. Today, she is able to effectively teach students from multiple locations through video-conferencing. Broadband allows our cash-strapped public school system to leverage limited teaching resources to reach multiple campuses. This gifted student was able to take an advanced class not offered at his campus without having to travel long distances from his rural neighborhood. He was not left behind. This enlightened example must be expanded to other courses and programs throughout the state. This can only happen with broadband connectivity.

Native Hawaiians have led the way in the perpetuation of their native language. Their efforts have resulted in a highly regarded program where children learn and speak their native language from age three all the way through a doctoral program at the University of Hawaii at Hilo. Imagine how far and how fast this Native language renaissance can spread as a “living language” with high-speed connectivity between the schools, between the islands, and beyond. Embedded in the native language revival is a healthy dose of self-esteem about the literary greatness of our ancestors to propel our young people forward with self-confidence and optimism.

Broadband deployment into Native Hawaiian communities can also serve as incubators for economic development. Hawaiian Homes Technology (HHT) is a job creating and capacity building initiative which began in the Hawaiian homestead community of Anahola on the Island of Kauai. Through the use of broadband, they opened a digitization business, converting legacy data from files, microfilm, microfiche, diagrams, blueprints, and images into electronic files. HHT has been able to create living wage technology jobs in economically challenged Native Hawaiian communities. Through broadband and information technology, Native Hawaiians can choose to live and work in the communities where they grew up without having to move away to support their family. With broadband infrastructure in more communities, a person’s imagination, entrepreneurship, and old-fashioned hard work will be the only limitation to success.

Broadband deployment can also be a powerful tool to preserve Native Hawaiian culture and history. One such project, *Ho’olaupa’i*, focuses on digitizing daily newspapers published in the Hawaiian language between 1834 and 1949. For years, these newspapers languished in museum archives, many too fragile for people to access. Today, the newspaper pages are individually digitally scanned and converted into searchable text files using optical character recognition software. After being reviewed by language experts, these files are uploaded to www.nupepa.org, where members of the public can explore the wealth of information and wisdom stored in these pages.

Hawaiian cultural treasures, locked safely behind the climate controlled walls of the Bishop Museum, can also now be shared with the community at large without ever stepping foot on the museum’s Honolulu campus. The website www.hawaiiilive.org features images of Hawaiian artifacts and cultural treasures, along with pri-

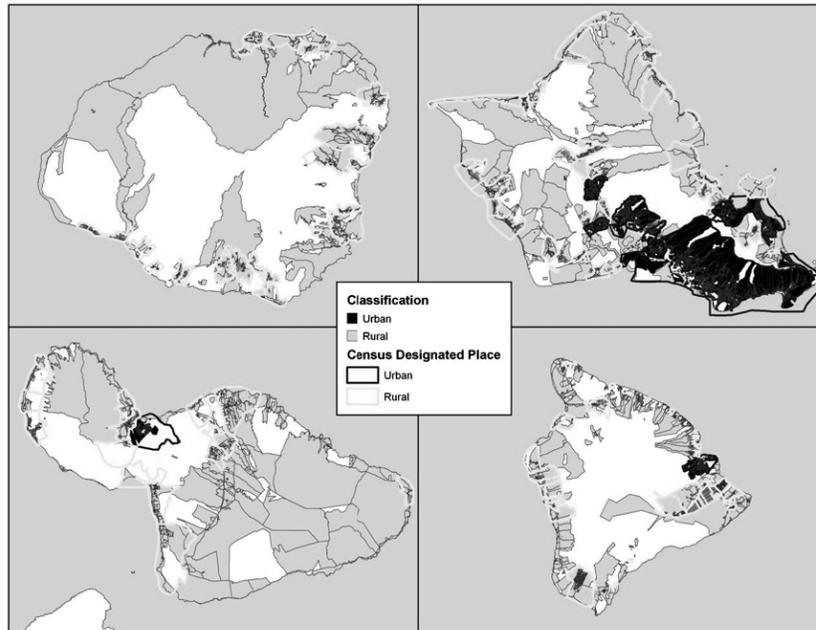
mary source materials which educators utilize to teach Hawaiian history and culture. The educational resources include contemporary videos, historic footage, archival audio files of songs and chants, essays, and lesson plans which are tied to the public school benchmarks. Through broadband, students and teachers now have unprecedented access to authentic Hawaiian educational resources.

Broadband is just beginning to provide rural Native Hawaiian patients with quality acute health care services using tele-health technology which eliminates the time and expense of traveling to major hospitals on Oahu. On the rural island of Molokai, a Native Hawaiian cancer patient utilized video conferencing for a virtual consultation with her Molokai medical providers and her oncology specialists in Honolulu. The system was not perfect, and at times the screen images would pixelate or even freeze. Nevertheless, the patient and her husband explained how much they valued the videoconference tool, without which she would have had to travel to Oahu for each oncology treatment. Every trip is expensive, time-consuming, stressful, and emotionally and physically draining. The Molokai medical team even shared anecdotally that without the videoconferencing, some Native Hawaiian patients would forego treatment with specialists in Honolulu because of the cost and stress.

Unfortunately this tele-health option is not yet widespread. However with improved technology and broadband infrastructure, the reliability and viability of this service will undoubtedly expand to other health care services.

Despite the challenges of geography and expense, broadband can be the great equalizer for Native peoples, particularly those residing in rural communities. We believe it will allow Native Hawaiian communities to leapfrog over the digital divide that has historically held us back, enabling us to succeed in the 21st century and beyond.

The FCC's National Broadband Plan recommends establishing a Native Nations Broadband fund. We fully support this. We believe that the deployment of broadband into Hawaiian Home Lands and our rural Native Hawaiian communities accelerates our ability to address the social, health, education, and economic challenges we face. Thus far the Native Hawaiian community is beginning to recognize the transformative effect of broadband. With modern technology, imagination, and the necessary broadband infrastructure, Native Hawaiians will be able to excel into the next century and beyond.



Senator INOUE. Thank you, Mr. Chairman.

And, now it's my pleasure to call upon the President and Chief Executive Officer of the Native Public Media, Ms. Loris Ann Taylor.

Ms. Taylor.

STATEMENT OF LORIS TAYLOR, NATIVE PUBLIC MEDIA AND NATIONAL CONGRESS OF AMERICAN INDIANS (NACI) TELECOMMUNICATIONS SUBCOMMITTEE

Ms. TAYLOR. Thank you. Chairman Inouye, Senator Udall, members of the Committee, on behalf of the National Congress of American Indian and Native Public Media, I am honored to provide testimony on how to close the digital divide for our country's Native Nations.

In the United States, there are 565 federally recognized American Indian tribes and approximately 4.1 million American Indians and Alaska and Hawaiian Natives. Thirty-two percent of this population still is without basic telephone service. Twenty-five percent live at or below the poverty line. Twenty-two percent are unemployed. Ninety percent of Native Americans have no access to high speed Internet. Less than 0.3 percent of the broadcast stations in this country are licensed to Native Americans.

The absence of adequate communications services in Native America is no accident. Decades of failed Federal policy, market forces, and the socioeconomic conditions of Native American populations, located in some of the most remote areas of the country, result in high build-out costs for all media. Because of these factors, wire-line carriers frequently end their deployments at the borders of tribal land or serve the populated fringes, not the entire reservation.

In February 2010, the Federal Communications Commission adopted a proposal that promotes the sovereign rights of tribes by giving them a priority in the allocation of spectrum that serves tribal lands. The Native Nations priority is currently limited to broadcast spectrum and to tribes with reservations.

Two hundred fifty-three tribes, almost half of the 565 federally recognized tribes, are landless. For the Native Nations priority to be truly meaningful, it must be extended to all tribes and to all forms of spectrum.

We applaud recent FCC proceedings that explore that potential.

Last year, the FCC established the Office of Native Affairs and Policy to coordinate Federal Communications' policy and redress years of policy neglect of Native Nations. Within months of its creation, the Commission launched three proceedings. Those proceedings seek to extend the broadcast tribal priority to improve access to mobile wireless communications, and to inquire into ways of improving broadband deployment to Indian country and strengthening the FCC's nation-to-nation consultation process.

Collectively, these proceedings focus more attention on the communication needs of Native Americans than has been the case for the preceding history of the Communications Act.

It is critical that this attention not be fleeting or symbolic. With a budget sufficient for its mission, the Office of Native Affairs and Policy cannot carry out its mission of consultation with tribes on a government-to-government basis.

There is currently no line item in the FCC's budget for the Office of Native Affairs and Policy and its consultation with tribes. We ask that you take this office and its functions as seriously as we do by assuring that it is adequately funded.

NCAI has proposed a budget of \$1.5 million for the Office of Native Affairs and Policy.

Only a handful of tribes and tribal organizations received grants from the Broadband Initiatives Program and the Broadband Technology Opportunities Program administered by the Department of Commerce and the Department of Agriculture. It is not too late to assure that funds intended to stimulate service to unserved and underserved areas can achieve that goal by bringing broadband service to tribal lands.

We recommend that funds returned to those programs be reserved for the deployment of broadband services to tribal lands.

We also support the establishment of a Native Nations Broadband Fund targeted to the needs of Indian country. We also believe that grants should not be limited to deployment costs. Access is part, and only part of the problem. Unlike telephone and broadcast services, which are instantaneously available, broadband technologies cannot effectively be used without training.

Programs that teach digital literacy are needed, and Native Americans are eager to learn. A study conducted by Native Public Media and the New America Foundation shows that where Native Americans had Internet access, their rates of use intended to be higher than the national average.

We therefore support the creation of a Native Nations Broadband Fund, with the ability to award grants for the advancement of digital literacy, as well as for providing service to tribal headquarters and other tribal anchor institutions.

In reforming the Universal Service Fund to make broadband services more available, it is important not to destroy the traditional high cost, Lifeline and Link-up programs that make basic analog phone service affordable to many in Indian country. Existing programs are equally essential for traditional broadcast services, which remain the simplest, cheapest, and most effective form of mass communications.

For the first time in 7 years the FCC in 2007 accepted applications for new non-commercial FM stations and has awarded construction permits that would double the number of native stations.

Because of the economic recession and threatened cutbacks in Federal funding to MTIA's Public Telecommunications Facilities Program many of those permits are now at risk of expiring.

If these permits expire, the opportunity for reapplying is not likely to arrive for many years to come.

We urge action on two fronts: first, to give the holders of these permits a chance to extend fundraising efforts, a 1-year tolling of the construction period for these permits; and second, the preservation of funding to the Public Telecommunications Facilities Program and Corporation for Public Broadcasting

Without continued support for station operations from CPB, all native stations are in jeopardy. Some day Indian country will have access to high speed Internet services, wireless communications,

multiple platforms and all the wonders of new technology, but that day has not yet arrived, and will not arrive for some time to come.

For the foreseeable future we need your help in preserving and expanding the Public Broadcast System in Indian country.

And, on behalf of the National Congress of American Indians and Native Public Media, I again thank you for the opportunity to share this testimony with you.

[The prepared statement of Ms. Taylor follows:]

STATEMENT OF LORIS TAYLOR, NATIVE PUBLIC MEDIA AND NATIONAL CONGRESS OF AMERICAN INDIANS (NACI) TELECOMMUNICATIONS SUBCOMMITTEE

Chairman Rockefeller, Ranking Member Hutchison, members of the Committee, on behalf of the National Congress of American Indians (“NCAI”) and Native Public Media (“NPM”), I am honored to provide testimony on how to close the digital divide for our country’s Native Nations.

In the United States, there are 565 federally recognized American Indian Tribes and approximately 4.1 million American Indians and Alaska Natives. Thirty-two percent of this population still is without basic telephone service. Twenty-five percent live at or below the poverty line. Twenty-two percent are unemployed. Ninety percent of Native Americans have no access to high speed Internet. Less than 0.3 percent of the broadcast stations in this country are licensed to Native Americans.

The absence of adequate communications services in Indian Country is no accident. Decades of failed Federal policy, market forces, and the socioeconomic conditions of Native American populations located in some of the most remote areas of the country result in high build-out costs for all media. Because of these factors, wireline carriers frequently end their deployments at the borders of Tribal land or serve the populated fringes, not the entire reservation.

The Tribal Priority

In February 2010, the Federal Communications Commission (FCC) adopted a proposal that promotes the sovereign rights of Tribes by giving them a priority in the allocation of spectrum that serves Tribal lands. The Native Nations Priority is currently limited to broadcast spectrum and to Tribes with reservations. Two hundred fifty-three Tribes, almost half of the 565 federally recognized Tribes, are “landless.” For the Native Nations Priority to be truly meaningful, it must be extended to all Tribes and to all forms of spectrum. We applaud recent FCC proceedings that explore that potential.

The Office of Native Affairs and Policy

Last year, the FCC established the Office of Native Affairs and Policy to coordinate Federal communications policy and redress years of policy neglect of Native Nations. Within months of its creation, the Commission launched three proceedings. Those proceedings seek to extend the broadcast “tribal priority”; to improve access to mobile wireless communications; and to inquire into ways of improving broadband deployment to Indian Country and strengthening the FCC’s nation-to-nation consultation process. Collectively, these proceedings focus more attention on the communications needs of Native Americans than has been the case for the preceding history of the Communications Act.

It is critical that this attention not be fleeting or symbolic. Without a budget sufficient for its mission, the Office of Native Affairs and Policy cannot carry out its mission of consultation with Tribes on a government-to-government basis. There is currently no line item in the FCC’s budget for the Office of Native Affairs and Policy and its consultation with Tribes. We ask that you take this Office and its functions as seriously as we do by assuring that it is adequately funded. NCAI has proposed a budget of \$1.5 million for the Office of Native Affairs and Policy.

BIP and BTOP Programs

Only a handful of tribes and tribal organizations received grants from the Broadband Initiatives Program (BIP) and the Broadband Technology Opportunities Program (BTOP) administered by the Department of Commerce and Department of Agriculture. It is not too late to assure that funds intended to stimulate service to unserved and underserved areas can achieve that goal by bringing broadband service to Tribal Lands. We recommend that funds returned to those programs be reserved for the deployment of broadband services to Tribal Lands.

The Native Broadband Fund

We support the establishment of a Native Nations Broadband Fund targeted to the needs of Indian Country. We also believe that grants should not be limited to deployment costs. Access is part, but only part of the problem. Unlike telephone and broadcast services, which are instantaneously available, broadband technologies cannot effectively be used without training. Programs that teach digital literacy are needed, and Native Americans are eager to learn. A study conducted by Native Public Media and New America foundation shows that where Native Americans had Internet access, their rates of use tended to be higher than the national average. We therefore support the creation of a Native Nations Broadband Fund, with the ability to award grants for the advancement of digital literacy, as well as for providing service to Tribal headquarters and other tribal anchor institutions

Traditional Forms of Communications

In reforming the Universal Service Fund to make broadband services more available, it is important not to destroy the traditional High Cost, Lifeline and Link-up programs that make basic analog phone service affordable to many in Indian Country. Existing programs are equally essential for traditional broadcast services, which remain the simplest, cheapest, and most effective form of mass communications. For the first time in 7 years, the FCC, in 2007, accepted applications for new non-commercial FM stations. It has awarded construction permits that would double the number of Native stations. Because of the economic recession, and threatened cutbacks in Federal funding to NTIA's Public Telecommunications Facilities Program, many of those permits are now at risk of expiring. If these permits expire, the opportunity for reapplying is not likely to arise for many years to come. We urge action on two fronts: first, to give holders of these permits a chance to extend fund-raising efforts, a 1-year tolling of the construction period for these permits; and second, the preservation of funding to PTFP and CPB. Without continued support for station operations from CPB, all Native stations are in jeopardy.

Some day Indian Country will have access to high speed Internet services, wireless communications on multiple platforms, and all the wonders of new technology. But that day has not yet arrived and will not arrive for some time to come. For the foreseeable future, we need your help in preserving and expanding the public broadcast system in Indian Country.

On behalf of the National Congress of American Indians and Native Public Media, I again thank you for the opportunity to share this testimony with you.

Senator INOUE. And, thank you very much, Madam President.

And, now may I call upon the Chief Executive Officer of Sacred Wind Communications, Mr. John Badal.

STATEMENT OF JOHN BADAL, CEO, SACRED WIND COMMUNICATIONS, INC.

Mr. BADAL. Mr. Chairman, members of the Committee, I want to thank you for the opportunity and the invitation to speak to you today about something that I feel very passionate about.

I also want to especially recognize my Senator, Senator Tom Udall from New Mexico, who has worked diligently and has the same passion as I in bridging the digital divide on Navajo Lands in New Mexico.

I will briefly summarize the information I've given to the Committee, Mr. Chairman earlier this week.

The three major actions that can be taken to deliver broadband to unserved tribes in our perspective is localize the service provider, create incentives and coordination with the Departments of Commerce and Agriculture, and the FCC, for tribal or rural telephone company ownership of the Telecom's Systems serving the tribes, amend Federal rights of regulations that hamstring rural companies need to install infrastructure on federally-managed lands, continue and expand Federal programs that assure affordable services on tribal lands that promote—also promote computer

literacy and broadband education for the adult population in poor areas.

Sacred Wind Communications is a private rural telephone company that was formed in 2004 to resolve the digital divide on the Navajo Reservation in New Mexico. We were created solely and simply to change a telecommunications formula that has not succeeded in reaching Navajo homes over the past seven decades. That formula, still applied on other parts of the Navajo Reservation and on many tribes and other rural areas of this country can be described as follows: The wrong class of company, using a single technology, lacking local synergies, is charged with the obligation to serve the most costly areas of the country.

For example, in 2004 there were five national telephone companies that provided basic telephone services on portions of Navajo Nation, covering three states, and approximately the size of West Virginia.

All were owned by an out-of-state company whose most unprofitable exchanges, more than likely, were the Navajo lands that they served. All were copper landline-oriented in their solutions approach, which ran afoul of the tribe's sensitivities to land preservation and to the BIA's rights of way processing. None had ventured into the wireless world, to reach into remote homes in a distance and land use friendly alternative to landline.

The result for the Navajos was, and is, some of the lowest telecommunications availability in the country, on par with the Third World.

The Navajo Nation is one of the poorest areas in the United States, with over 40 percent of the population below the national poverty level, who live in one of the highest costing areas to provide telecommunication services.

Less than 60 percent of Navajo households have access to basic telecommunication services and far fewer have access to broadband. Where the Navajo Nation scores highest is in the instances of poverty, teen suicide, teen pregnancy, diabetes and disabling accidents.

Sacred Wind in 2006 acquired the Last Mile assets of one of those five companies earlier referenced, and secured a \$70 million loan from the USDA's Rural Utility Service.

At the time of acquisition only 26 percent of our customers had access to basic telephone service, and 1 percent of those living on the border with the nearby towns had access to broadband Internet service.

Not only is it our mission to reach the elderly in remote areas with basic phone service, but an interesting statistic, and our experiences, cause us to believe that broadband will be popular in remote areas of Navajo lands. Sixty-one and a half percent of the grandparents on Navaho lands are the caregivers to their grandchildren.

We, Sacred Wind, introduced the very first broadband link to the Navajo community in Northern New Mexico in 2007. We applied for and received the USDA RUS Grant to establish the very first personal computer and Internet training center in our territory. The center was visited by over 4,000 people in a 2-year period and was declared by the RUS to be one of their top success stories.

That center was used for academics, for job searches and for the sale of Navajo arts and crafts.

Following that model, Sacred Wind developed a broadband service that is content-rich for our tribal customers. We have even added the newly produced Rosetta Stone Navajo Language training as an integral part of our broadband package.

Our Internet subscriptions grew more than 100 percent in the last 12 months.

Sacred Wind is unique in that we're not a tribally-owned company, but in always our focus is tribal. We hire and train mostly Navajo and other tribal individuals, a number of whom are Army, Navy and Marine veterans who bring with them well-developed technical skills and a solid work ethic.

Sacred Wind was recognized as—nationally in 2009 as the most inspiring small business in America, as part of an American Express NBC Shine-A-Light contest.

And the nine or so telecommunications companies today that are owned by the tribes they serve have similar success stories, and along with Sacred Wind, tested—testified to the value of local ownership increasing basic and broadband avail—availability to over 90 percent of our populations.

A chief factor in delivering adequate tele—telecom services to tribal areas involves the ability to use Federal lands for infrastructure development. Unlike the permitting processes in place within boundaries of municipalities or counties, the permitting processes on federally-managed lands often serves as an impediment to development.

In fact, the 4-year achievements of Sacred Wind might have been accomplished in three or even two, had a more efficient permitting process been made available. Generally, it takes Sacred Wind 2 years to develop—or receive, rather, authorization to place any infrastructure via telecommunications power or a copper wire on tribal lands or allotted lands.

The Navajo Nation manages a professional and effective land use review operation, which includes a land department review of the network plan, an environmental office review, a historical preservation office review, fish and wildlife, land appraisal, and Tribal Department of Justice review.

After all that, the same documentation is then submitted to the BIA. The Navajo Nation and any tribe that builds its own rights of way review operations should be able to authorize infrastructure development on its own lands for their own people.

Similarly, tribes should be given the opportunity to influence their own telecommunications future. The Federal Government through the Departments of Commerce and Agriculture and the FCC should coordinate targeted programs that would encourage and enable tribes to own and operate their own systems, which in many cases, might call for a partnership with a rural local telephone company, and assuming the service responsibilities of the out-of-state companies.

Those should include regulatory changes that encourage the creation of privately owned service territories and wireless spectrum allocations that are coincident to tribal boundaries.

Such programs should not be limited to infrastructure development, but also computer literacy and Internet training that would accompany the expansion of broadband in unserved tribal areas.

With that, Mr. Chairman, I thank you very much. Thank you, members of the Committee. I am honored, sir.

[The prepared statement of Mr. Badal follows:]

PREPARED STATEMENT OF JOHN BADAL, CEO, SACRED WIND COMMUNICATIONS, INC.

Sacred Wind Communications is a private rural telecommunications company that was formed in 2004 to resolve the digital divide on the Navajo Reservation in New Mexico. We were created solely and simply to change a telecommunications formula that had not succeeded in reaching Navajo homes over the past 7 decades. That formula, still applied on other parts of the Navajo Reservation and on many tribal and other rural lands across our country can be described as follows:

The wrong company, using the wrong technology, lacking adequate resources, is required to serve the most costly areas of the country. Or, algebraically: $X+Y+Z = F-$

1. The company: A non-rural national or regional company, with bigger, more profitable markets elsewhere, will usually avoid too much attention to high-cost, low-return areas;
2. The technology: Urban network (and marketing) solutions are applied in cookie cutter fashion to geographically and demographically diverse areas;
3. The resources: With the more remote rural areas included in a larger telecom company's rate base, the telecom company does not fully qualify for the Federal programs that support development of infrastructure in those remote areas.

For example, in 2004 there were five local telecom companies that provided basic telephone services to portions of the Navajo Nation, an area the size of West Virginia:

- All were owned by an out-of-state company whose most unprofitable area, likely, was the Navajo area they served;
- All were copper landline-oriented in their solutions approach, which ran afoul of the tribe's sensitivities to land preservation and to the BIA's rights of way process;
- None owned and operated a mobile wireless affiliate, which prevented them from seeking service alternatives.

The result for the Navajos was, and is, some of the lowest telecommunications availability in the country, on par with parts of Africa.

"Localize" Service Delivery

Sacred Wind acquired the "last mile" assets of one of those companies in 2006 and secured a \$70 Million loan from the USDA's Rural Utilities Service. At the time of acquisition, only 26 percent of our customers had access to basic telephone service and 1 percent of those, those living on the border with a nearby town, had access to broadband Internet service.

Despite the U.S. Census Bureau's data showing that over 50 percent of the Navajo households in this area were below the national poverty level, only 1 percent of our customers were participating in the federal Tribal Lifeline Program, a low income discount program, when we started. Part of the reason for this, we discovered, was that the Navajo tribal members living on the reservation shared the same telephone prefix numbers with the nontribal people living in nearby towns. Thus, the phone company's employees could not easily identify a tribal resident from a nontribal resident. Another reason, though, for this omission can be attributed to the local phone company's out-of-town ownership—it's just too costly for them to focus on a high maintenance, low return customer base.

The stories we hear about the elderly, without access to basic, let alone broadband, telecommunications services, surviving alone for 3 days with a broken leg or hemorrhaging as a result of a feral dog attack are not exaggerated. Such tragedies occur regularly in our remote areas. And, our intuitive assumptions that broadband will benefit tribal and other rural people to the same degree that urban populations are benefitted by broadband are borne out in the successes of tribally-oriented companies. Sacred Wind, for example, introduced the very first broadband link to a Navajo community in northern New Mexico and concurrently, under the

auspices of an USDA–RUS Internet training grant, established the very first Personal Computer (PC) and Internet training center in that unserved area. The center was visited by over 4,000 people in a two-year period and was declared by the RUS to be one of their top success stories. We saw people applying for jobs online, we saw children using the Internet for academic research, and, one of the most popular uses of the Internet, we heard from many people who were able for the first time to e-mail and send photos to their family members in Iraq and Afghanistan. One young girl brought into the center a report she wrote for her class—it was the very first “A” she ever received. Such was the demand for selling Navajo handicrafts online, we developed an arts and crafts website for the community and witnessed that the artisans were able to sell their handicrafts for about 3 times what they would receive from the local trading posts.

Following that model, Sacred Wind provided PC and Internet training to another Navajo community just prior to our rolling out broadband service in their areas. After an 8-month trial period, 64 percent of our customers were still subscribing to Internet services, though the majority at speeds under 768 Kbps. Nonetheless, we have experienced throughout our service territory an increase in our broadband subscriptions of over 100 percent just in the last year.

Our experiences at the Internet training center led us to understand, too, that, in order to create a broadband service even more attractive to our customers, we had to develop a product that carried some cultural significance with it. It was not enough to advertise broadband service by a rate of speed and assume that our customers would realize the worth of that speed. Sacred Wind has designed, in collaboration with Navajo customers and Navajo government employees, a broadband service that offers ready access to Navajo history, to Navajo traditions, to modern preventative medical advice and traditional medicines, and to governmental programs. Just recently we signed an agreement with a Navajo language revival group to include, as a cornerstone in our service and integrated into our higher capacity broadband packages, Rosetta Stone’s Navajo Language online instruction. This is the most comprehensive, tribally focused broadband product available on Navajo lands today.

Sacred Wind is unique in that we are not a tribally-owned company, but in all ways our focus is tribal. We hire and train mostly Navajo and other tribal individuals, a number of whom are Army, Navy, and Marine veterans who bring with them well developed technical skills and a solid work ethic. We have designed a fully Internet Protocol (IP)-based network tailor made for our geography: a robust fixed wireless tower infrastructure and fiber optic and copper landline network that now can reach over 60 percent of the unserved homes in our territory with both basic voice services and broadband. The remaining 40 percent will be reachable with the further installation of one or more relay poles from our main towers, a final stage that should be completed by 2013. Using the most efficient technology for a geographically challenging area, the company has increased basic telecommunications availability from 26 percent to 60 percent in four (4) years and broadband availability from 1 percent of its landline-served customers to 99 percent, and to 100 percent broadband availability to its fixed wireless-served customers.

The 9 telecommunications companies today that are owned by the tribe they serve have similar success stories and, along with Sacred Wind, testify to the value of local ownership and local focus of a community’s telecom provider. But, even local ownership has limitations when it comes to seeking land use authorization on federally managed lands.

Amend Federal Rights-Of-Way Practices

A second chief factor in delivering adequate telecom services to tribal areas involves the ability to use Federal lands for infrastructure development. Unlike the permitting processes in place for installing copper wire, fiber optic cable or telecommunications towers within most municipal or county boundaries, the permitting processes on federally managed lands often serve as an impediment to growth. In fact, the four-year achievements of Sacred Wind described above could have been accomplished in two (2) years had a more efficient permitting process been made available.

On Navajo-occupied lands in New Mexico Sacred Wind has applied for rights of way authorizations from the Navajo Nation, from the Bureau of Indian Affairs, the Bureau of Land Management, the U.S. Forest Service, the county and the state. No process is as difficult as at the Bureau of Indian Affairs. Generally, it takes Sacred Wind two (2) years to receive authorization to place any infrastructure—be it a communications tower or a copper or fiber line—on tribal land or allotted lands. The Navajo Nation manages a professional and effective land use review operation, which includes a land department review of the network plan, an environmental of-

rice review, an historical preservation office review, fish & wildlife, land appraisal, and tribal department of justice review. After all that, the same documentation is then submitted to the BIA.

There is no distinction in the land use review process between a communications tower or fiber optic cable that is to serve only the Navajo people and a gas pipeline that would traverse tribal lands to supply off-reservation communities.

In the most recent example of how the permitting process affects Sacred Wind's network development, we submitted 2½ years ago a request to attach a fiber optic cable along 11.6 miles of an electric pole line that has existed for over 30 years. That fiber route is needed to add capacity to our fixed wireless and copper infrastructure that serves over 500 customers. Because the fiber is to be attached to an existing pole line within an existing utility easement, we asked the BIA for a "categorical exclusion" from having to conduct a centerline survey and an archaeological and environmental assessment along the easement. We were told that, in order to qualify for the categorical exclusions to have such surveys and assessments waived, we were required to submit the centerline survey, archaeological and environmental assessments to demonstrate no possible harm to the easement! Such work cost us over \$170,000; and the BIA appraised the easement for fee purposes to be over \$100,000; and we're still waiting for a notice to proceed.

Coordinate Federal Government Policymaking

Finally, a third factor, in part related to the second, that affects infrastructure development on tribal lands is the lack of coordination of assistance and policy among various government offices. With the U.S. Department of Agriculture's long-time leadership in helping to develop telecommunications and broadband infrastructures in rural areas, and the U.S. Department of Commerce's involvement in the Broadband Stimulus Program that stemmed from the American Recovery & Reinvestment Act, and the Federal Communications Commission's commitment to develop a National Broadband Plan that would also benefit rural and tribal areas, one would assume that the Federal government speaks in unison in promoting the development of tribal and rural infrastructures. Contrarily though, it appears that the very model of rural telecommunications development is being torn apart. The local rural local exchange carriers (RLECs)—which include Sacred Wind and all tribally owned telecommunications carriers—are either handicapped in facing off their competition or are being threatened with a change in national telecommunications policy.

For example, the Federal Universal Service Fund's (USF) support for rural carriers—even as it is being reformed as we speak—carries restrictions in the use of the RLECs' infrastructure that often penalize a company for the use of their networks for the provision of unregulated services. RLECs generally receive most of their USF support for provision of service along the "local loop" or last mile, and receive other forms of support for provision of interexchange services not associated with the local loop. Accordingly, when a company employs its infrastructure for broadband services to customers outside of its territory, or to deliver added capacity to others' cellular phone towers, or to even use its own fixed wireless communications towers for mobile wireless communications, the company can actually lose more money from USF support than it could gain from free markets. As the Federal USF is being reformed, encouraging USF recipients to seek other sources of revenue could help sustain the company and the fund.

The FCC, too, has been hosting regional forums on ways to stimulate telecommunications infrastructural development on tribal lands. I believe they will conclude that local ownership is the answer. While there is a state regulatory and FCC process for a tribe or rural local exchange carrier to acquire a larger company's network, as the 9 telecom tribes and Sacred Wind have gone through, the process now involves seeking waivers from rules that have "frozen" further changes to forming new USF-supported territory. With the current USF program's future uncertain, moreover, few USF-qualified companies would risk any new rural acquisitions or service territory expansions until the economics of such expansions were known. As it is, many RLECs in this country, including tribally owned telcos and Sacred Wind, are concerned about the USF reform's impact on our ability to pay down our current construction loans.

Similarly, while the FCC schedules from time to time auctions for the sale of spectrum licenses for mobile and fixed wireless communications services, and offers small rural and tribal carriers a discount from the auction sale price, the licensed territories are not coincident with tribal lands or with a small RLEC's service territory. Such change in spectrum license allocation, while less favorable to the national or regional mobile wireless carriers, would make the bidding price and the use of the license more attractive to the smaller companies.

We RLECs indeed see ourselves caught in a policy war at the FCC that we may not be winning. As stated above, the locally owned rural carriers, among them all tribal telcos, have done a superlative job in building telecom networks in their areas. It is the national telecom companies that have fallen down in developing modern infrastructures in many of their rural service territories. These RLECs should be used as a model for further broadband development, but are threatened by the FCC's apparent predilection toward mobility. With the FCC's inclusion of mobile wireless carriers in the USF program, and the ultimate disbursement of over \$1.5 Billion annually from the fund to national and regional mobile wireless carriers, less support for the past decade has been made available to RLECs, the local companies. Much of the contention surrounding USF reform today revolves around the FCC's apparent abandonment of the RLEC-rural model in favor of a mobile carrier-national model. If this move toward mobility impacts RLECs as it portends to, rural employment, rural development, rural telecom service, and RLECs' debt service may be adversely affected.

This is not to say that mobile services development should not be encouraged in tribal and rural areas. It should be built around a "localized" model, though—one in which a tribe or RLEC would have opportunities to offer such alternative services to its customers either singly or in partnership with a larger carrier. But, as a policy matter, it certainly should not preempt "fixed" services to the home.

No single technology is appropriate for Sacred Wind's entire service territory where the distance between communities and the population density make landline deployment unaffordable, where the mountains and canyons within its territory, which separate hundreds of Navajo homes in small clusters many miles from each other, make mobile wireless communications unworkable in considerable parts of Navajo lands. Along flatter terrain, linked to communications towers that parallel a roadway, mobile wireless is appropriate. And, even satellite broadband has its place. All such alternative solutions should be made available to all Americans in as cost effective a manner as possible. [*To distinguish one wireless technology from another in geographically challenging areas, fixed wireless systems take the antenna (and the signal) to the home, while with mobile service the customer must travel from the home to seek the antenna (and the signal)*].

In either case of a mobile or satellite alternative for rural areas, the local RLEC with a fixed wireless infrastructure already in place offers the most viable solution: mobility can be added to the incumbent RLEC's infrastructure and the RLEC's technicians can be trained to service a satellite unit where the RLEC has partnered with a satellite company to offer such complementary services. The health of the RLEC is required in both cases.

To ensure that tribes are given the opportunity to influence their own telecommunications future, the Federal government, through the Departments of Commerce and Agriculture and the FCC should coordinate to create more programs that would encourage RLECs to develop tribal-oriented systems, and to encourage tribes to own and operate their own systems, using all alternative telecommunications solutions to meet their needs. Many tribes will need your help.

There exist in New Mexico, for example, three major tribes and 19 Indian Pueblos with populations that range from a few hundred to many thousands. Most are poor and all but the Mescalero Apache Tribe and the segment of Navajo lands served by Sacred Wind, are served by national or regional carriers. If USF support systems remain intact and the regulatory environment would be open to it, we believe that the majority of those tribes could economically justify acquiring and owning their own telecom systems or by way of tribal consortia. Only by understanding how each tribe is served today can we reach conclusions as to how they best can be served tomorrow. Resources for such understanding are near at hand—talk to the tribes and seek council from the nearest RLEC.

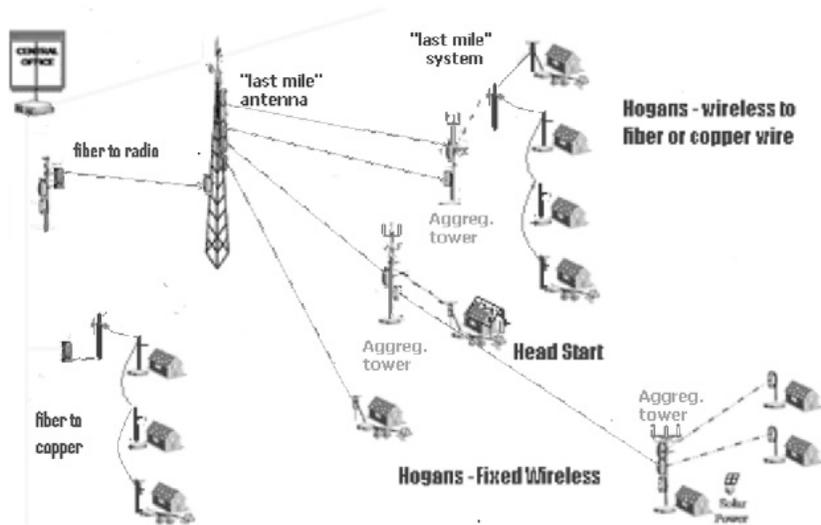
Recommendations

Our recommendations to help tribes bridge the digital divide are:

1. Create and implement programs that encourage local ownership of telecom networks.
 - a. Create FCC regulations that incent tribal or RLEC acquisitions.
 - b. Revise FCC spectrum allocations and processes for tribal-specific spectrum use.
 - c. Ensure that any FCC USF reform does not reduce tribal RLEC support.
2. Continue and expand telecommunications development plans for tribal lands that take advantage of the most appropriate technologies.

- a. Departments of Commerce and Agriculture should help tribes assess the viability of localizing telecom systems.
- b. Departments of Commerce and Agriculture should coordinate grant/loan projects that would incent tribal or local RLEC start-ups.
- 3. Remove land use impediments for tribal infrastructures.
 - a. Departments of Commerce, Agriculture, Interior, FCC, and Homeland Security should coordinate land use policies that affect telecom infrastructures on federally managed lands.
 - b. New land use policies should take into account a system's services to tribal members.
 - c. Departments of Commerce and Interior should incent tribes to establish their own rights of way procedures and, where tribes have their own review operations in place, remove the Federal government from the process.
 - d. Change the Federal utility easement application to include use of the easement by telecom utilities.
 - e. Eliminate the archaeological & environmental study requirement on pole attachments on in-place pole lines.
 - f. Eliminate the archaeological & environmental study requirement in an easement or on a site where such studies have already been conducted.
- 4. Continue and expand PC literacy and Internet training programs for tribal members.
 - a. Establish and implement programs supporting the development of broadband content that reinforces tribal culture and values.

Attachment 1: Configuration of Fixed Wireless to Copper Landline Network with Fiber Optic Backbone for Capacity. "Distance Friendly" & Economical in Serving Wide or Geographically Challenging Unserved Tribal Areas



Attachment 2: Sacred Wind's Internet Training for Rock Springs Chapter Members and at the Huerfano Chapter of the Navajo Nation, Enabled by an USDA-RUS Community Connect Grant



Attachment 3: Fixed Wireless Antenna Attachment on the Home, West of Yatahey, NM



Senator INOUE. Thank you, very much, Mr. Badal.

And, may I now begin the questioning.

Mr. Blackwell, I have several questions. I'll ask one, but I'll submit the rest, if I may.

Mr. Blackwell, there are 565 federally-recognized tribes, approximately 231 federally-recognized Native Alaskan entities and about 38,000 beneficiaries of more than 200,000 acres of Hawaiian Homelands held in trust throughout the Hawaiian Island chain. And it's a lot of ground to cover. And the scope and breadth of your responsibilities are, naturally, very great.

Do you feel that you office has sufficient resources to fulfill your responsibilities and achieve your goals; if not, how much do you need?

Now is a good time. I'm Chairman of the Appropriations Committee.

[Laughter.]

Mr. BLACKWELL. I'm well aware of that, sir. Well, now that we have an office we can do much—we can do much more than just what one person can do. I was that single person for 6 years. Now that we have an office, we can move forward on many fronts at the same time.

The support that we have from the commission is clear and unambiguous from the unanimous decisions to create the office, and the Chairman is very supportive of our goals. These include increasing the consultation and coordination with native communities so that we can create more robust records for the commission

to act on. These goals include increasing the overhauling and increasing the effectiveness of the commission's ITI Outreach or Indian Telecommunications Outreach program. And, it includes getting to places where the commission has never before been in Native America.

Senator INOUE. You don't know how much you need?

Mr. BLACKWELL. Well, Senator, the offices—

Senator INOUE. Seriously.

Mr. BLACKWELL. I'm sorry?

Senator INOUE. Seriously.

Mr. BLACKWELL. Well, the office is still new. We are evaluating the need and working with the Chairman's office and the Offices of the Managing Director to ensure that we have the resources that we need.

If you wish, I can follow up with you on that, sir.

Senator INOUE. Please do, because I've been advised that you're overworked, and you don't have enough staff. So, I'll be waiting for your response.

Mr. BLACKWELL. Thank you.

Senator INOUE. I'll now call upon the Chairman of the Hawaiian Homelands.

Now, will you tell the Committee how many families currently live on Hawaiian Homelands, and how many have access to broadband?

Mr. NAHALE-A. We have approximately 10,000 homesteads right now; so, roughly, 10,000 families on the land. We don't have hard numbers on how many access broadband. We estimate that less than half. A lot of those families have access to commercial broadband and so they're not connecting for cost reasons.

But, I want to highlight that one of the big issues for us is that less than half of our 200,000 acres has access to broadband currently; so that's another issue for us, is how to—how to develop in regions where there is currently no broadband access.

Senator INOUE. I'm certain the Committee is not fully aware of the history of Hawaiian Homelands.

Like most native people, when the Federal Government took the responsibility of dealing with them, in the case of Hawaiians, they put them out in the most remote areas, away from Honolulu. Nanakuli, when it was established, had a trail; same thing with Waimanalo. You would have to climb over a mountain or go on a beach trail to reach that community.

The other homeland reservations were on other islands in remote areas, and one can imagine the challenges you have.

What is the most remote? You mentioned one on Maui. Are there other remote communities?

Mr. NAHALE-A. There are. We have other areas on Maui, Keanae and Hana. Hawaii Island we have land near, you know, near the top of Mauna Kea. I think those would be our most remote locations.

If I could share very quick stories, Senator, mentioning other homesteads, my sister-in-law's father, who's already passed, told us stories about—there was an old road into their homestead, and so every day the material for their house, which they built by hand, was dropped at the highway, which was about a half-mile from the

homestead; so every day after school on the way home, they'd pick up a few pieces of lumber and walk it into their homestead; and that's how they built their house. That area since has urbanized, but I would hate to develop Hawaiian homes in that fashion.

Senator INOUE. If I may, Mr. Chairman, I'll be submitting a whole series of questions also for your consideration.

Mr. NAHALE-A. Of course.

Senator INOUE. And now, Mr. Badal, in your testimony, you recommended that the Departments of Commerce and Agriculture should coordinate telecommunications grant and loan projects.

In prior hearings before this committee on the American Recovery and Reinvestment Act, some members questioned the need for broadband programs in two departments.

Do you have any opinion on that?

Mr. BADAL. Yes, sir, Mr. Chairman. I believe that unless the tribes are given greater opportunity to develop infrastructure on their own—on their own lands, and unless they work—in many cases where they don't have the technical skills within themselves—unless they work with the rural telephone company that is proximate to the reservation and has the telecommunications—has the telecommunications expertise, and unless there are incentives for the rural telephone company and the tribes, financial incentives, to start an in—an operation on a very high costing area to serve with low generation of income, this job is not going to get done any—in our lifetimes.

Senator INOUE. Well, Mr. Badal, I will be submitting also, several questions, if I may, for your consideration.

Mr. BADAL. Sure.

Senator INOUE. I can imagine the problems you have because I've visited Navajo lands several times; and as you noted, they are much larger than some of the states of the union.

Mr. BADAL. Yes, sir.

Senator INOUE. And, Ms. Taylor, if I may: Native Nations and communities have always faced a communications divide. We have seen it with traditional landline telephone services and wireless communications, but how does lack of access to high-speed Internet impact or divide our Native Nation's face? Does it raise the stakes or make divide that we face more critical to remedy?

Ms. TAYLOR. Thank you for that question. I think in the context of tribal homelands and—and you've referred to statistics earlier—ten percent broadband penetration rate. In some communities where 911 doesn't exist, where roads remain unpaved, and where telephone service is still for one in three families—those are pretty dire situations in these communities.

So, in terms of technology, if we want to spur the economy, if we want to improve education, if we want to make health available long distance, and if we want to improve education for our young people, we need technology.

Last year, Native Public Media and the New America Foundation did a study on the Internet use, media and technology in Indian Country and found that where Native Americans were provided access to the technology, they were using it at a greater levels than their counterparts.

So, simply saying that—that without technology that people are not willing to adopt this is a misperception. You know, when we—when we think about the technology in terms of what America takes for granted, as I was flying in yesterday on the airplane, I saw all the towers that surround Washington, D.C.

In Hopi Country, or in Navajo, or in Sioux Country, or even in the Hawaiian Homelands you— you rarely see these towers because they don't exist. If we're going to bridge the digital divide, if we're going to bridge the media divide, we need to have the technology.

Senator INOUE. And, you're maintaining that we don't at this time, obviously.

Ms. TAYLOR. We don't at this time. Let me just tell you, I come from the Village of Oraibi in Northeastern Arizona on the Hopi Reservation. In my village, to this day we have no running water, no electricity, no telephone, and certainly no broadband service.

Last year, in 2010, at my home in Flagstaff, Arizona I was—my home was flooded three times. I can tell you that not only is technology important during a time when there's an emergency, when you're looking for real time information about the Red Cross or about the Forest Service, or about mitigation, or where you're going to go in terms of shelter for that night, you need information; and whether it comes through the broadband technology, or whether it's Terrestrial Radio station that, you know, that—this is something that is absent from Indian country.

When you ride out to Hopi Country, for example, and where you may not—where the nearest hospital may be an hour and a half away, you literally are taking your life into your own hands.

These conditions are prevalent, not just on the Hope Reservation, but across the nation, and so, I have to submit that we really are at a critical threshold. The longer we wait, the longer Indian country remains or lags behind.

Senator INOUE. In other words, what we take for granted, the other Americans, are not available to you at this moment.

Ms. TAYLOR. Correct.

Senator INOUE. I thank you very much. I have many other questions I'd like to submit to you.

Now, may I call upon Senator Udall.

**STATEMENT OF HON. TOM UDALL,
U.S. SENATOR FROM NEW MEXICO**

Senator UDALL. Thank you, Chairman Inouye, and thank you for your longstanding leadership on issues effecting Native Americans and Native Hawaiians.

I know that the Chairman in many capacities has been a real champion, both on the Indian Affairs Committee, I think several times, and then with your role as Chairman of the Appropriations Committee in this hearing, where you serve in your role as pro tem, and the former Chair here. And it seems like wherever you are you end up being a great champion for tribes.

So, all of us very much appreciate that, and I think we have benefited from it in our states, as Senator Begich and I know over the years.

Senator INOUE. Would you like to run my campaign?

[Laughter.]

Senator UDALL. I'd be happy to. I'd be happy to. I think you just finished, though. And you didn't have much of a problem. I think you might hurt yourself with me as a campaign manager.

But, particularly, I'd like to thank all of the witnesses today, and thank you, Mr. Badal, for your comments.

You know, most people probably can't imagine life without a telephone; yet today, as Ms. Taylor said, more than 30 percent of the households in Indian country don't have basic access to telephone service.

For members of the Navajo Nation in particular, this situation is even worse. And, statistics don't adequately convey the hardships created by this lack of telephone service. Not having a landline or cell phone reception can mean the difference between life and death. Imagine not being able to call an ambulance when you or your loved one is in medical danger.

We recently had a man outside of Gallup, New Mexico, who missed two opportunities for a lifesaving kidney transplant because he lacked telephone service at home and could not be contacted at home to notify him about the transplants.

Members of this committee know how essential it is that our nation's rural areas and tribal lands are not bypassed when broadband networks are built out across the Nation. And although they are among the least connected, these areas are precisely where broadband technology can help the most, I think, as all of you have synthesized in your testimony.

By overcoming physical distances and geographic isolation, broadband can help improve economic development; can help improve education; and can help improve access to healthcare.

So, I was very pleased when FCC Chairman Genachowski paid particular attention to this issue and all of the commissioners pledged their support for addressing this appalling digital divide affecting Native Americans and establish the office. And, I hope they'll follow your advice, Ms. Taylor, on the resources that are needed. And, I may have an opportunity here in a minute to ask Mr. Blackwell about that.

But, Mr. Badal, maybe to start with you: Sacred Wind won a nationwide award for the most inspiring small business, and I'm pleased that you can be with us today to share that story. And, as you know, western states like New Mexico have more public lands and tribal lands than other areas in the country.

And, the southwest can also be a sensitive place to build infrastructure, which is what we're talking about doing here in many ways since we have archeological treasures and sites considered sacred to the region's native communities.

However, I think in your testimony, as I've read it, you have come up with several ways that you think we could do that a little bit better.

Could you talk a little bit about how Federal agencies could make it easier to use existing easements and rights of way that have already been built; how to ensure the tribal sovereignty in that process is respected; and how do we ensure that local communities not feel like new infrastructure is being punched through their lands without their approval?

Mr. BADAL. Mr. Chairman—and thank you, Senator Udall. I'll be glad to answer those questions.

I think one of the things that—that could be immediately changed in Federal regulations is the—the establishment of what we call all utility easements. You know, when—when one utility company acquires, through a right-of-way process, which involves archeological and environmental assessments and centerline surveys, one—when one of those companies acquires an easement, it should be allowed to be occupied with less of a process by any other utility using the same easement.

Let me give you an example: We have been working for two and a half years to string 11.6 miles of fiber along an electric pole line that has been in existence for over 30 years. We were—we even applied for a categorical exclusion from having to conduct archeological, environmental and centerline surveys for that easement because it had been in place for 30 years, and the archeological and environmental had already been done 30 years ago.

Well, we were required to conduct the archeological, environmental assessments and the centerline survey as part of the application to apply for a categorical exclusion so that we wouldn't have to conduct the archeological and blah, blah, blah.

We're still waiting for our notice to proceed after two and a half years.

Another thing that I think could be done to change Federal regulations is to make a distinction in whether BIA, BLM or whatever land use authorization regulations they have, to make a distinction between infrastructure that is going to be directly surveying the tribe on whose land the facilities we placed from facilities that are placed on tribal lands across the tribal lands serve elsewhere. And, an easy example is, if a—well, an easy example: If Sacred Wind wants to install two miles of fiber that would run across the tribal lands, or if a telecommunications tower on—on tribal lands, the right-of-way process for us is exactly the same as stringing a high—a high voltage transmission line across Navajo lands to serve the City of Gallup or serve the City of Farmington or Albuquerque, and I think that's wrong.

Senator UDALL. Thank you for that answer. And, I have other questions also that I'd like to submit for the record, but I have two quick more questions, just one to Mr. Blackwell:

And, not to get you into the budget issues, because I know you're going to visit with the Chairman about that; but as you're becoming operational, what resources or other initiatives do you see as being vital to the FCC's success in addressing the digital divide on tribal and Native Hawaiian lands?

Mr. BLACKWELL. Well, thank you for the question. Consultation coordination is essential; the ability to work directly with native nations and native communities to find the solutions that will be lasting. It's a—the process has lasted 70 years at a point where telephony has—has—the way in which the rules were created then largely didn't result in—in significant service. We—the statistics have been cited time and time again.

Right now, one of our goals is to place the native nation itself in the center of the process that it can be a unique demand aggregator; it can be an entity that can bring new solutions to—

to the fore. And, whether it's the tribe serving itself or working in concert with a partner, I believe that that will provide new development models.

We have a notice of inquiry open at the commission right now. All of these matters are being raised in it. We're looking into the possibility of extending the native nation's priority to other—identifying and removing other barriers to entry. We're looking at employment and adoption models.

That consultation and that solution—that development of solutions also has to occur within Native America. We can't just sit here in Washington and try to come up with solutions.

We have to go where the problems exist; that is how one best understands how to pull together the solutions.

Beyond that, there is an incredible need right now, with the explosion of broadband, for additional training and information.

Prior, when the Commission had a liaison to tribal governments—the job that I had for a while—I spent a lot of time pushing information into Indian country.

Now we have partner organizations that we can work with that know their constituencies much better, can reach out and touch their grassroots much better than we can.

It's our job to share that information, to get into a two-way dialogue and return to Washington with—with that knowledge in hand to further affect our rules and create new opportunities.

So, in a nutshell that's the answer to your question.

Senator UDALL. I appreciate that comment.

Ms. Taylor, you know we know how indigenous languages and native languages are disappearing all across the world at a dramatic rate, and we see that also in the United States, in our tribes; Zuni, and Hopi, and Navajo, and others.

Could you talk a little bit about native radio stations and new communication technologies that can be harnessed to preserve and enrich cultural activities in native languages; I know Mr. Badal talked a little bit about that in his testimony on the Rosetta Stone.

Please.

Ms. TAYLOR. Thank you. You asked me about the right subject. I love—radio is my life.

In this country, out of the 565 Native Nations and Native Hawaiians and including the Alaska Natives, we have 42 native stations that are on air today; approximately 11 of those stations are streaming over the Internet. We have a great demand for communications, a good robust, healthy backbone in Native America. We have approximately 38 construction permits right now to build new stations; and then we have a few more that are still MX'ed across the country, and we hope that they'll be untangled soon.

And, I lay that as the framework to—to say how vital these stations are.

When you, again, look at the context of what we have in terms of communications in Indian country or in Native America we're—we don't have a lot. So, these Terrestrial Radio stations in most tribal communities are the communication systems that—if you don't have a tribal newspaper and if you don't have television, if you don't have broadband, these native stations are essential and critical in providing the information that we need to make deci-

sions on a day-to-day basis; information about our own health; information about the electoral process; whether it's a tribal election; whether it's a national election in terms of culture and language

And, you're exactly right. A lot of tribal communities are facing a—a—a real critical situation of—of language loss. What—what these stations do for their communities is to provide the vital, cultural and language programming. So, if you come to Sioux country, you'll hear Sioux on the air. If you come to Navajo, where we have six stations, you'll hear Navajo. If you go to Hawaii, you'll hear Hawaiian language programming.

This is essential, because at the end of the day, localism and diversity is important. With 565 nations and more, we contribute to the intellectual capacity of this country. We contribute to the diversity in terms of history, and culture, and language. We contribute to—to civil society in many ways. That's what this country is about. And, these stations allow us to participate in democratic processes that's available to all Americans.

And, so, we're really asking for something that—that other Americans already have. And, so, in terms of—of just what these stations play in—in tribal communities, I can't emphasize enough. And so, so—so if we—if we're looking at a—a—a serious defunding issue of public service media, which is, I understand around \$400 million, which is a lot of money, the unseen consequences to the smallest stations in this country that serve native nations is basically this: We will go dark if we lose funding because over—all our stations rely on funding, not just from PTFP and from CPB, of at least 50 to 100 percent.

So, literally, we are the last to come on board; we're going to be the first to feel the consequences.

Senator UDALL. I appreciate your comments.

Thank you, Mr. Chairman, for holding this important hearing.

Senator INOUE. Thank you, very much.

Senator Begich?

**STATEMENT OF HON. MARK BEGICH,
U.S. SENATOR FROM ALASKA**

Senator BEGICH. Thank you very much, Mr. Chairman. Thank you. I just want to echo Senator Udall's comments. You have been a great ally for the Alaska Native community and this hearing is a very important one because the new age of connectivity, not just for—as Myron talked about, before he had to leave—just having a phone to call someone, but it's the commerce, the medical, the educational opportunities. It is really determinative, at least in my state, of the future of our rural community, especially the most remote.

Ms. Taylor, when you were describing your home community, as you can imagine, I was thinking of many communities in Alaska that have the same situation. And, in a lot of ways it's appalling to think that we have that in this country with the wealth and resources at our fingertips. To be very frank, it's more of a comment. I have some questions I'm going to ask in a second, but when you think about the unemployment levels that we have—and I've heard the Chairman eloquently talk on the floor, and I can't recite his exact quote, but I remember when we were talking about unem-

ployment might reach 10 percent and the Chairman said in Indian country, that would be a blessing if it could get to that.

And, he's right, because Myron, who was here earlier, his community hit almost 22 percent unemployment. A lot of our rural communities have 40–50 percent.

Senator Udall, I remember when we were doing the stimulus bill, you made some incredible comments. You remember that 2 years ago we were running around this place trying to figure out how to solve the unemployment problem, and it was reaching eight, nine, 10 percent. But we have communities all throughout rural America, and rural Alaska, for example, and Native country, Indian country, that has 30, 40, 50 percent unemployment; and if we're going to attack that issue, part of it is going to be how we communicate.

As you can imagine, throughout this time we get a lot of comments in our office about taxes. In rural Alaska, it will take about 30 minutes to download a 1040-EZ form. I mean, that's not the long form; it's the short form. Thirty minutes to get the form, blank. And, then how they send it from there is another question. We've seen already almost a 50 percent drop in grant applications from rural communities because everything's now done online, so in order to apply they have to go online; and if they can't get online because they don't have broadband or high speed broadband, it just complicates and folds out the problem.

So, the hearing is important.

Let me, if I can, first to you, Ms. Taylor. I think your comment on the Pullock service cuts of the Pullock T.V. radio. As you describe those small communities, the small communities will be the ones that really get hit; the small radio stations, because they have the base funding that I know, Senator Inouye, the late Senator Ted Stevens worked on aggressively to make sure those small communities had some sort of communication.

So, I want to echo what you said, and I want to make sure I heard it, that if we have dramatic cuts in public radio, rural communities, Indian country communities, will be probably the hardest hit because not only will the station go dark, it will go off the air permanently because they have no other financial resources they can tap into—am I hearing you right? I want to make sure I'm not putting words in your mouth here.

Ms. TAYLOR. You are absolutely on the money. We have stations that rely on funding from the Corporation for Public Broadcasting for their day-to-day operations. As I mentioned earlier, we have approximately 38 new stations that we would like to bring on-air, and—and these are stations that are self-service stations, primarily, that are being built to serve Native America.

About 10 percent of these stations receive their operating revenue from tribal government, from state, county, religious organizations, and schools. And, that's a very small amount. It—I think all of you are aware that the socioeconomic conditions in Native America are—are much more pronounced. Fifty percent high unemployment rate, joblessness; but still, most people will say, well, the creature needs our housing, you know, food on the table, a roof over your head.

I would have to say that information is just as essential. Without information, I don't know how society can function adequately. I mean, right now, if you can just look at the landscape of what's happening here in Washington, D.C., this—this budget discussion that we're having at the national level seeps down to families on tribal homelands. They want to know what's going on here, just as the people in Los Angeles, or New York, or any of the cities in Florida, and other states.

So, you are—you are absolutely correct, we are facing a very serious situation.

Senator BEGICH. Thank you very much. And, we're very proud of those stations, KBNA, which is a nationally renowned, native-speaking great program, but maybe there's not an answer to it, but more of a statement; maybe there's some that don't want information to flow.

So, I'll leave it at that.

Let me ask Mr. Blackwell: First off, thank you for being here; thanks for the focus that you're bringing to this issue, and I, like Senator Udall, am anxious for you to get together with the Chairman and indicate your needs, because we know this is an important office for all the reasons that have already been stated by the testimony.

One of the questions I have is about the FCC's Native Task Force, how will you be working with that; and how will the FCC and the Native Nations and Communities be working together to implement some of that work that comes out of the task force?

Mr. BLACKWELL. Well, thank you for the question. That was the—the task force is comprised of elected and appointed tribal leaders from across Indian country, and we'll be working directly with them to review existing proceedings at the commission to—use them as a—a sounding board for ideas that—that are presently within the bureaus and offices. We also hope that through these members—let me step back for a second.

The—the FCC Native Nation Broadband Task Force is comprised of elected and appointed tribal leaders and senior officials from across the bureaus and offices at the commission.

So—so that would be the body that was working together. And, in our—we're looking right now at scheduling our first meeting in the near future in a face-to-face format, and then following up, routinely, and trying to meet together as often as possible.

But, part of the work also, is not just reviewing and making sure the Native voices are heard in all the relevant commission proceedings, but also to surface new issues, new recommendations.

We also hope that through the Native leadership on this task force that it will become something of a watering hole for other tribes that are on the learning curve to understanding about what's—what's going on in the communications field, and new opportunities, and hope that we will lead to more Native Nations becoming involved in work with us at the Commission.

Senator BEGICH. Very good. Thank you very much.

Mr. Badal, I don't know if you noticed that the Chairman and I were smiling a little bit when you were testifying because the description you gave of the poles when you were trying to put wires

on them, and what you had to go through, was amazing, to be very frank with you.

And, if I heard you right, did I hear you say, it's regulatory requirements or it's statutory requirements?

Mr. BADAL. Well, these requirements are embodied in the Federal Government CFRs, and these are regulatory.

Senator BEGICH. Right.

Mr. BADAL. They are founded somewhere in the statute. But, I'll see if I could—those regulatory—I think those rules require regulatory changes.

Senator BEGICH. Here's the question, and I think I know the answer to this. I know, when I was mayor of Anchorage we had a university campus area, kind of mixed use with the hospital and university. What we did with them, because every building had to go through zoning, was we did a campus-wide process which they developed; and once they developed it, then they went through it. We signed off on the process, but they made sure it worked with their campus setting; and we no longer participated until, of course, they went to the local city council to get approval for it; but not in the process—because it seemed like every time they'd come back, we'd have special parking requirements in one building; and they'd build a building right next door, have new requirements; and yet they wanted to share the parking, because they operate different times; and so we developed something where they kind of took control of that with some guidance from us, but then we stepped back.

Is that something that would work on tribal lands? Because it sounds like we have multiple agencies you may have to go through to get a right-of-way.

I'm not going to comment for the Chairman, but two and a half years to get something that already exists for something else, when all you're doing is tacking another line on this pole with some holes, seems a waste of money, a waste of time, and the taxpayers and your rate payers are paying for this. Am I wrong?

Mr. BADAL. It is a waste of time and resources. The right-of-way fees that we have to pay, I think, are unnecessary. We work on a, almost a daily basis with different offices of the Navajo Nation. I think we have a very good working relationship with the Navajo Nation's Land Department that also often agrees with us, that getting—or conducting archeological permit or doing a centerline survey, or so.

And in conducting an archeological assessment during an evaluation is—is unnecessary in certain instances where facilities—the easement already exists, or we're replacing an analogue pedestal with a broadband loop carrier cabinet, that now provides broadband for everybody.

The Navajo Nation believes that—that it has to follow BIA processes or their work gets bounced back.

Senator BEGICH. Gotcha.

Mr. BADAL. So—and, we've had meetings then with us and with the Navajo Nation with the BIA, and it's—everybody says our hands are tied, our hands are tied because this is what is written.

Senator BEGICH. But, they write the regulations.

Mr. BADAL. Yes, sir.

Senator BEGICH. OK, I just want to make sure I'm not missing the boat here. So, I'm going to leave it at that. I look to the Chairman. I noticed in your written testimony you have several written recommendations regarding some ideas of changing procedures and, you know, to be very frank, BIA has a lot of things to do. This should be the least of their worries if they have tribal governments that are willing to manage that for them, because obviously, the tribal governments are going to manage for the best of their community, I would assume.

Mr. BADAL. Yes.

Senator BEGICH. So, I think they'll do the right thing at the end of the day, as long as the procedures are, you know, approved; and they often let the tribes do that.

I mean, I'm perplexed, let me just say that, and maybe there should be a 6th seat there, maybe for the BIA, but we'll leave it at that.

But, I think your testimony and your recommendations are very interesting and maybe ones that we should help proceed with.

Thank you, very much, to all of you.

Senator INOUE. If I could follow up on my friends' inquiries:

Mr. Badal, your problems were with the Bureau of Indian Affairs.

Mr. BADAL. Mr. Chairman, I'd hate to say my problems are—and I don't mean to denigrate or criticize them. It's—

Senator INOUE. A challenge.

Mr. BADAL. Yes, we have—we have challenges dealing with several layers of—of government, but I think the—the interpretation of the regulations are a little more stringent on—on—in our experience, on the BIA side. Now, I work with an Indian Pueblo, the Laguna Pueblo in New Mexico as well. They have a BIA office right next door to the government offices, and they have a different relationship altogether.

Senator INOUE. But, I assume that the BIA, Bureau of Indian Affairs, would be specially concerned with the welfare of Indian Country, and so I'm going to be chatting with them.

Mr. BADAL. Thank you, sir, thank you.

Senator INOUE. And, Ms. Taylor, your testimony reminded me that at one time there were 50 distinct languages among Indians in this land. About how many are extinct now; do you have any idea?

Ms. TAYLOR. Wow.

Senator INOUE. Because, for example, a Cherokee would not be able to communicate with a tribe up in the Pacific Northwest.

Ms. TAYLOR. Well, you know, I was just reading about language families in indigenous Americas; 1491, the book—I don't know if you read it—but they—the scientists estimated that at one time there were approximately 62 language families in America alone.

Senator INOUE. Sixty-two?

Ms. TAYLOR. Sixty-two, which is remarkable, that there's such an expansive linguistic asset, I would say in North America at one time. I don't know if that number is true or correct. I don't have any way to validate, but I can say that—that across the country, all the 565 federally-recognized nations, Alaska Natives, and the Hawaiians, many of them still speak their native language. And,

in some communities they are robust and healthy; in other communities they are facing a serious language loss.

Senator INOUE. Thank you, very much, Ms. Taylor. I just want to note that Mr. Blackwell had some training before he became a member of the Federal Communications Commission. He was a senior staffer on the Indian Affairs Committee, and his passionate concerns for Native Americans, Alaskans and Hawaiians, I'm happy to see, still exist in you.

So, keep it up. I'm serious, because I want you to do a good job; and if you need more money to help these people, we'll get it for you, believe me.

Mr. BADAL. Thank you, sir. I will keep it up.

Senator INOUE. I want to thank the Chairman of the Office of Hawaiian Homelands for being with us today. It's a long trip to be here just to testify. I hope you found your presence here meaningful.

Mr. NAHALE-A. Absolutely. Thank you.

Senator INOUE. And, I will be carrying on a conversation with you on how better to help your departments.

So, with that, thank you all very much for testifying before the Committee.

And, I would like to announce that the record will be kept open for 2 weeks; if you have any additional statement to submit, please do so. If you want to make any changes to your testimony, you're free to do so.

Thank you, very much.

Mr. NAHALE-A. Thank you, it's an honor.

[Whereupon, at 4:19 p.m., the hearing was adjourned.]

A P P E N D I X

Before the Federal Communications Commission Washington, DC 20554

In the Matter of)
)
Innovation in the Broadcast Television) ET Docket No. 10-235
Bands: Allocations, Channel Sharing, and)
Improvements to VHF)

To: The Commission

COMMENTS OF THE NATIONAL TRANSLATOR ASSOCIATION

The National Translator Association (“NTA”) hereby comments on the above-captioned Notice of Proposed Rulemaking (“NPRM”), released November 30, 2010, and published in the Federal Register on February 1, 2011 (76 Fed. Reg. 5521). Comments were due within 45 days of Federal Register publication and, accordingly, these Comments are timely filed.

NTA is dedicated to the provision of free over-the-air television and audio service to all areas that do not receive adequate coverage from a full complement of primary broadcast stations. Its membership includes, but is not limited to, owners and operators of TV translator and LPTV stations that rebroadcast the signals of full-service television stations.

NTA urges the Commission to hold any decision on this Rulemaking in abeyance until all rulemakings and the Table of Allotments are released so that the entire rebanding plan can be considered. Many future proposals will have an impact on the questions raised in this proceeding. Further, the preamble to the instant Rulemaking states that this Rulemaking is in furtherance of a “National Broadband Plan.” There is no such thing as a “National Broadband Plan.” The plan forwarded to Congress by the Chairman’s office was never adopted by the Commission; from the timing, it appears that no other Commissioner saw the plan before it was released, and the plan itself contained no factual predicate for the need for 500 MHz of additional spectrum for wireless that the Chairman specified.

There is a reason that, in the ordinary course of events—and *prior to any implementing proceedings*, a draft of such a plan would be released, public comment sought on the proposals, and the public policy developed. Nothing purifies ideas better than sunlight.

Introduction

NTA is participating in this and related Commission proceedings not because it believes that repurposing of up to 120 MHz of the existing television bands (hereinafter, “repacking”) is in the public interest. but rather because the assumption at the highest levels of the Commission appears to be that repacking is going to occur and the only remaining questions concern the details.¹ NTA believes that any repacking, even if confined to primary stations, will be greatly disruptive to the installed translator base. Translators have been fitted in on channels selected to avoid

¹Today the Commission is refusing to accept any new TV translator applications, even in rural areas (*see* DA10-2070, October 28, 2010); the referenced notice states that the approximately 18 months that had been available for filing new applications was sufficient time for filing all that were needed. This reasoning is absolutely wrong, given the time it takes for planning, engineering, and arranging funding. The freeze on acceptance of new TV translator applications clearly demonstrates how repacking will result in the loss of expanded service to the public.

interference to primary stations and other translators. Any change in the primary stations' channel assignments will have a ripple-down effect, as translators are forced to dodge the new full-service assignments.

It is presumed that a large sum of money will be generated by the auction of the recovered spectrum. As described below, NTA urges the Commission to include a funding plan to cover the cost of any translator modifications made necessary by repacking changes, whether made necessary directly by a primary station change or indirectly by the forced change of another LPTV station or translator. It is important that any program for covering costs be set up as a grant program. Volunteer translator groups have trouble making initial outlays associated with reimbursement plans.

Combining Multiple Program Streams Through a Single Translator Channel

The NPRM discusses "Broadcast Television Channel Sharing"² by full service stations. The transmission of multiple program streams from different primary stations is already permitted under the translator rules, and a few translators are so operating.

If a translator passes a single digital signal that has two or more program streams already combined in it, no extra equipment is required. The signal comes in fully encoded and goes out unchanged.³

If a translator is to receive and combine two separate program sources, however, the process gets much more complicated. It is necessary to go down to video and audio and process both programs through the full encoding routine. The extra equipment approximately doubles the cost of the translator equipment. Because there is no economic advantage and the quality (definition) of the combined outgoing program streams is compromised, such combining has been little used and only in those instances where two output channels are not available.⁴

If repacking forces a translator to combine two or more program sources at the translator input into one RF channel, substantial costs will be incurred. Simple fairness requires that such costs be covered from the auction proceeds.

Impact of Moving Primary Stations

If primary stations are forced to share one RF channel, there will be many instances where one or both will be required to relocate a significant distance as part of the process of combining programming streams. There are many instances where a translator is sited at a particular location because the input signal is uniquely available there. Changes in the location of the sources of primary signals are going to require modifications of a significant number of translator systems, including some relocations.

Again the associated costs should be covered through a grant program financed from the auction proceeds.

Forced Use of Low Band VHF Channels

A significant number of translators are "stuck" on low band VHF channels, which are known to be undesirable for digital television. The technical inferiority of the low band VHF channels is not being accepted by the FCC as the basis for approving a minor change move to a high band VHF or UHF channel, in the absence of an actual conflict.

Further, the Commission is not accepting major change applications.⁵ Thus it is not possible to file an application to move a low band VHF translator to a high band VHF or UHF channel as part of the process of moving to digital operation.

Accordingly, NTA specifically requests that low band VHF translators be allowed to displace to high band VHF or UHF channels as a minor change when converting to digital operation.

Improving the Performance of Digital Stations on VHF Channels

NTA has already submitted comments in MB Docket No. 03-185,⁶ in which it was suggested that the maximum ERP for digital LPTV stations and translators be in-

²NPRM, paras. 18-24.

³Many translators take the signal down to the transport stream and apply the error correction capability of the 8VSB system, thereby "cleaning up" the signal before retransmitting it, but this processing is the same regardless of the number of program streams in the signal.

⁴Over the last 20 years, there have been many time periods during which the FCC has declined to accept new applications, forcing doubling up as new primary stations have become available.

⁵Freeze on the Filing of Applications for New Digital Low Power Television and TV Translator Stations, DA10-2070, October 28, 2010, at para. 1.

⁶See NTA Comments in MB Doc 03-185, dated Dec. 17, 2010, page 6.

creased from 0.3 kW to 3.0 kW. As all translator applications are tested by the FCC for outgoing interference to other stations using the OET Bulletin 69 Longley-Rice Terrain Dependent Algorithm, there is very little potential for interference arising from such a power increase. NTA repeats the recommendation that the VHF ERP limit be increased to 3.0 kW.

Conclusion

When and if repacking occurs, there will be major disruptions of existing translator systems. NTA urges the Commission to remain constantly aware of the impact of repacking on the delivery of television programming to the translator-served public.

NTA continues to believe that the Commission's refusal to accept any new translator applications—even in rural areas—is unfair and unwise, and asks that the freeze be lifted at the earliest possible moment.

Respectfully submitted,

NATIONAL TRANSLATOR
ASSOCIATION

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