

## **BROADBAND HEARING PANEL TWO**

Speakers: Susan Hildreth, Larra Clark, Miriam Jorgensen, John Horrigan

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>> SUSAN HILDRETH: So this is our data panel with Larra Clark, Miriam Jorgensen, and John Horrigan. So this panel will explore what we know about broadband connections and services in America's libraries. What are the metrics we need to assess? Where sufficient connectivity is in place, what are the metrics that we can use to assure success?

So Larra Clark, our first speaker, is with the American Library Association. She's the director of the program on networks in the ALA Office for Information Technology Policy, OITP. I have to say there is a lot of alphabet soup today but we can have a little dictionary that we attach to the live cast of this so everybody will know what we're talking about. Miriam Jorgensen, who is the Research Director for the Native Nations Institute at the University of Arizona as well as Research Director at the Harvard Project on American Indian Economic Development. And finally, John Horrigan, who is well known to our library community wearing many different hats, currently Independent Communications and Technology Policy Consultant.

So, folks, would you talk a little bit and then we'll have a chance to ask some questions.

>> LARRA CLARK: Thank you, Susan, and to all of the IMLS Board members and staff for bringing us together to discuss the broadband-enabled future of libraries and our communities. It is an honor to share the stage this morning with Chairman Wheeler and so many other distinguished speakers.

The ALA is the oldest and largest library association in the world, serving more than 57,000 members, and ALA-OITP works to secure national policies that ensure access to electronic resources as a means of upholding the public's right to a free and open information society. I would like to wish you all a happy National Library Week.

This morning I will draw on more than 20 years of research from folks like John Bertot, who is in the audience with us, and the Public Libraries and the Internet Survey, the University of Washington's Opportunity for All Study, ALA Office for Research and Statistics, and of course IMLS data. I would like to thank all of these researchers and funders like IMLS and the Bill and Melinda Gates Foundation for their many contributions.

First, a snapshot of public libraries. There are more than 16,400 public library buildings, more than the number of McDonald's in the United States, which is always a good way to think about the numbers and what they can mean in our communities, and they host more than 1.5 billion in person visits annually. Many of these visits include computer and Internet use, both wired and wireless. To support this use, we've seen ongoing improvement in library Internet speeds over the past decade.

In 2004, for example, only 20% of libraries reported speeds greater than 1.5 megabits per second. By 2012, we had nearly flipped the statistic. At the other end of the spectrum, however, fewer than 10% of our libraries reported speeds of 100 megabits per second or faster. Preliminary findings from this year's survey in 2014 show we've only added a few percentage points to this high end. And still roughly 10% of our rural and small libraries are still at 1.5 megabits per second. About half of our libraries have the bandwidth that we enjoy at home. At the same time, they have an average of ten computers in our rural libraries and 41 in city libraries and far more than that in libraries like Washington D.C. or New York or L.A. or Chicago.

We see nearly ubiquitous free public Wi-Fi and an exploding number of patron-owned devices. I'm sure anybody here - I know I've got my laptop, my smart phone, my iPad; we see this in our libraries as well. We're also seeing an increase in downloadable streaming and interactive digital collections, including things like from the National Archives of course, ranging from ebooks to practice test instructional videos. And then video conferencing in states like Maine where people are connecting with legal advice and job interviews and connecting with overseas military families.

In fact, even as speeds improve, library staff continues to report their bandwidth is not adequate. As Chris mentioned, a significant majority of libraries, actually 66% of our libraries

told us that they need more bandwidth to meet their library needs today - this is again data that will be released later on this year - and 88% of state library agencies report that a majority of their libraries need bandwidth upgrades this year or next. So the E-Rate is really, really important for libraries. So we're not standing still but too many libraries are falling behind right now.

This need for speed is driven by modern library services and the unique role libraries have as the one place for all. Nearly two-thirds of libraries report they are the only provider of free access to computers and the Internet. In one year, libraries posted more than 341 million computer uses, which does not include the wireless access. Libraries leverage Internet access to empower library users and support education, employment, and entrepreneurship.

I think John will talk a little more about public use, so I'll simply add a few examples here from the Opportunity for All study. In one year, roughly 30 million people used the library's computer or Internet access for employment or career purposes. About 32.5 million used library technology to achieve educational goals, including taking online classes, completing school work, or researching college programs. And 26 million people used library connections to access government information services and officials. Underlying many of these uses is the need for many people to increase their digital literacy skills. Nearly all libraries provide formal or informal assistance, learning everything from setting up an email address to uploading job applications to using new ebook readers and tablets, also called tech petting zoos.

So we have a lot of data to understand the library technology landscape but we also have gaps. We still don't know the number of people that are using library Wi-Fi, for instance, at the state or national level, we're just beginning to fill that gap, or about the quality of the access they experience. We're starting to do bandwidth taps now through the Digital Inclusion Survey, so we'll have a better grasp on this probably later on this year. We also lack national information on remote use of library resources, including library website visits, time spent online, and with what types of library resources. But perhaps most glaringly today we have a wealth of data with USAC that remains largely locked away from us. I am thrilled that IMLS has begun to drill down into this rich vein but we really need it to be publicly available. And the ALA continues to call for more

data transparency, including block four of the E-Rate information.

In closing, though, I would like to say that data is useful as a rear-view mirror but not a crystal ball. In a focus group five years ago, five years ago, an Indiana librarian put it this way: At one time we would have said a T1 line was just the world, but it changes too fast. This was in the course of two years we went from one T1 to two T1s to three T1s to now 15 megabits of fiber. Unfortunately, more than half of libraries haven't caught up with her. We hear from today's gigabit libraries that abundant bandwidth can be a mighty library service that enables robust, simultaneous use of recording studios and 3D modeling camps, new community partnerships, and co-working spaces like here at D.C. Public, telehealth, access to electronic health records, and global connections. Bandwidth should not limit what's possible through our libraries. We need to bring more gigabit libraries to our communities. Thank you very much.

*Applause*

>> MIRIAM JORGENSEN: Larra is a lot taller than I am.

Director Hildreth, distinguished members of the panel, and also Chairman Wheeler and Mr. Power, thank you for convening this panel and also for your opening remarks.

As Susan told you, my name is Miriam Jorgensen and I'm Research Director at the Native Nations Institute at the University of Arizona and also at the Harvard Project on American Indian Economic Development. At the Harvard Project and Native Nations Institute, I work to understand the conditions that lead to better economic and wellbeing outcomes for American Indians and Alaska natives living in their homelands. These are critical questions.

Reservation-based American Indians and Alaska natives remain some of the poorest people in the United States. Recent research by Harvard Project-affiliated economists Randall Akee and Jonathan Taylor reminds us that even in 2010 per capita incomes for American Indians living on reservations remained less than half of the U.S. average. They are below the per capita incomes of Hispanics, African Americans, and Asian Americans by a very wide margin.

There are over 560 federally recognized American Indian and Alaska native nations in the United States, more than 300 in the lower 48 states and more than 200 in Alaska. Finding ways to make progress against these socioeconomic shortfalls is vital for the many people living in these communities who would like to return to these communities and even for the many non-native United States citizens who live near American Indian and Alaska native lands.

It is with this background that I come to my work with the Association of Tribal Archives, Libraries, and Museums, also known as ATALM. It's a non-profit native-led organization founded in 2010 with support from IMLS - thank you very much for that - that provides culturally relevant training and services to the nation's 519 tribal archives libraries and museums. My work with ATALM has largely involved survey and statistical data analysis.

Most recently, I've partnered with ATALM staff and an ATALM Board member, Traci Morris, who is an expert in tribal digital media, to conduct a study which we have called Digital Inclusion in Indian Country: The Role of Tribal Libraries. The findings from this study will be released in several weeks, but I would like to share six preliminary findings as I believe they are important to the discussion today and because they ultimately speak to the possibility for changed life outcomes for citizens of American Indian and Alaska native nations.

First, tribal libraries are less able to offer Internet access than our non-native public libraries. Only 88% of tribal libraries offer Internet access as compared to between 95-99%, depending on the statistics you refer to, of non-tribal public libraries. Additionally, nearly 40% of tribal libraries rate the acquisition of more public access computers as extremely important, the highest rating that they could give it.

Second, tribal libraries are key points of Internet access for reservation residents. Forty-three percent of tribal libraries that offer public access are the only source of free public computer and Internet access in their communities, and two-thirds of tribal libraries are in communities where no more than 30% of homes have any Internet access. In fact, many have no Internet access at all.

Third, a significant fraction of tribal libraries with access do not have very good access. And as Larra has pointed out, that's critically important. Of 100 tribal libraries that

reported speed of their Internet connection, fully one-third cannot offer connection speeds greater than three megabits per second, which is a bare minimum for operating many web-based applications that improve human capital and offer connections to the broader economy.

Fourth, the E-Rate program could make a difference but it's vastly underutilized by tribal libraries. An earlier study I did for ATALM in 2011 found that at most 15% of reporting tribal libraries received E-Rate discounts. By comparison, data released just yesterday by IMLS suggests that, since 2000, 90% of non-tribal public libraries have benefitted from E-Rate. Data from our survey points out that only 17% of tribal libraries have even applied for E-Rate.

This leads to my fifth point - confusion over eligibility and a general lack of awareness limits tribal libraries' access to E-Rate. Twenty-eight percent of reporting libraries indicated that they were unsure if their library was eligible for E-Rate, and another 50% said that they'd never even heard of the program. These findings are consistent with the fact that information about E-Rate has never been disseminated specifically to the tribal library community.

Sixth, and circling back to the points that I made at the outset, Internet access at tribal libraries supports community prosperity and wellbeing. Tribal libraries do not simply offer public access to computers and the Internet. They provide training that helps patrons make use of the possibilities technology offers. Half of tribal libraries report providing training in general Internet and computer use, 40% provide training in how to access government information such as Social Security, Medicare, and income tax data, another 40% offer training in how to find job-related information, 35% offer training in access to health-related information.

A tribal librarian from the southwest summarizes the ideas of my testimony well. He said our tribal community uses the donated reference computers to access tribal employment applications, Social Services resources, and college online homework. The computers allow them to access information that will improve their lives, knowledge not readily available to them because they do not have technology at home. Most connect to the Internet via cellphone and hang around our library during off hours to access Wi-Fi. Our computers are busy all day from open to close. It is beautiful to see our tribal people learn in that way, but it's sad that we do not have more than six computers

and that they do not have them at home. Our statistics reflect the need for more stations for our population base. This is a shout-out to Chris. He also added if you see anyone from the Gates Foundation, please let them know.

In conclusion, I'll note that tribal libraries are culture-bearers for their nations, collecting and making available key materials about language, history, and material culture. At the same time, tribal libraries are often the only place in native communities where tribal members can access social services, jobs, banking and travel information, and stay in touch with distant friends and family. The access that tribal libraries provide makes tribal people's lives better every day. They are at once part of the past and part of the future of native nations.

I commend the Institute for Museum and Library Services for its interest in Indian country and for its support of ATALM. I am hopeful that these forthcoming data point to a pathway for significantly improved broadband access in tribal communities through their tribal library systems. Thank you for your invitation to testify and I welcome any questions that you might have.

*Applause*

>> SUSAN HILDRETH: We'll have some questions for you later, Miriam. And IMLS is totally behind you working to try to make sure our tribal libraries have better access. John.

>> JOHN HERRIGAN: Thank you very much, Susan. Let me first thank IMLS for inviting me to participate in today's hearing. It's wonderful to be here and see so many friends and familiar faces, both on the dais and in the audience.

Let me begin by saying that libraries fill two important roles in a society where more and more goods and services depend on the Internet. I want to touch on them today in making the case that investments in additional bandwidth in libraries are critically important to helping all Americans have a chance to translate digital abundance into tools that can open doors to connectivity. I'm going to do it with a bunch of data points.

First, libraries serve a critical role in providing a place where people can improve their level of digital skills. And the need to improve people's digital skills is important and I think it's often overlooked in today's mainstream discourse. Our

digital culture tends to assume that once early adopting elites get the latest technology, then everybody follows and immediately gets it, yet there is ample evidence that there is wide variation in the level of digital skills in the general population. Recent research I've done that I'm going to be releasing in a few weeks - so you get to hear it first - finds that, based on a 2013 survey, that there is significant variation in the digital skills even among people who have all the digital tools that we take for granted today.

Today, 80% of Americans have advanced Internet access. And by that, I mean they either have broadband at home or they have a smart phone. Within this group of highly wired people, nearly one-fifth or 18% has low levels of digital skills; that's 34 million Americans. And low levels of digital skills tracks closely with low levels of online activity, particularly in consequential areas such as looking for work or going to a government website. For instance, among those with low digital skills, just 10% used the Internet during their most recent job search. For those with high levels of digital skills, 52% used the Internet in their most recent job search. Taking another example, among those with low digital skills, just 2% say they have ever taken a class online. Among those with high levels of digital skills, 26% had taken a class online. A huge gap.

These differences in online use are important because, for the most part, it's the expectation in society that everyone is connected at home with broadband. Recent research I've done on the Comcast Internet Essentials Program, which serves low income families with school-age children who get free or reduced price lunches, shows this. When asked, these set of new Internet users recently signed on via Comcast Internet Essentials - when asked, 83% of those respondents said that their children's school expected that they had Internet access at home. Sixty-five percent said that their financial institutions or banks expected that they have broadband at home. And 53% said that their health insurance companies expected that they have broadband at home.

So there are two things going on. One, more and more institutions expect people have connectivity online at home, and at the same time many Americans have insufficient levels of digital skills. This means we need to begin to look at digital equity differently. Stakeholders often view digital skills as an issue that only affects the disconnected, people on the other side of the Digital Divide. But as I've shown, many people, about one-fifth of adults with advanced online access have low levels of digital skills. This means they lack digital



readiness, which I think is the term that captures the scope of the challenge we have in ensuring that all segments of society are ready for next generation information and communications technology.

This leads to my second point for libraries, namely that they are the vanguard in the forces we bring to bear to bolster digital readiness for the entire population. Libraries are both access points for those without broadband at home and information resources for people with service. We know, according to the Pew Research Center, that about 30% of Americans do not have broadband at home, that's a 2013 figure, and that translates to the 34 million households or 90 million people. But about half of those people are Internet users; they just don't have high speed service at home. This creates the need for third places for online access; not home, not work, but a place where people can use the Internet. Libraries clearly fill that third place through the provision of public Internet terminals for those without access and for many who do have access at home, but they do more as they also help people negotiate a complex and quickly changing information environment.

Here are some data points from the Pew Research Center to help eliminate this. Thirty-five percent of Americans in 2012 said that they had accessed the Internet at a library for free. This is the same figure, 35%, that we found in a survey I conducted in 2009 for the National Broadband Plan which showed that at that time 35% of Americans had used the Internet at a library for free. Forty-four percent of American adults have used a public library website, 30% within the last year, and 77% of Americans say that free access to computers and the Internet is a very important service for libraries to provide. And Americans expect more from libraries as technology changes in a digital age. Again, according to the Pew Research Center, 63% of Americans over the age of 16 say they are likely to use mobile apps that libraries may provide to access programs and services at the library. Sixty-five percent of library patrons say they would like to have a tech petting zoo to try out new technology. And 60% would like to have a digital media lab to help them digitize personal material.

In conclusion, let me point out the temptation to think that we've lived through most of the Internet revolution. Yet we've only lived through the very beginning. The advent of the Internet of Things raises the stakes and changes the stakes as the Internet's usefulness will expand in unforeseen ways. This

will challenge many of us, many of us who are highly wired, to keep up with the necessary knowledge to troubleshoot gadgets and understand new applications. That means, as a society, we will need to provide additional educational resources to learn what these new services are all about.

This leads to three implications I want to leave you with. One, digital readiness is the next great social policy challenge for those interested in equity in the Internet; two, libraries and librarians will be on the front lines in helping Americans negotiate a world where digital applications matter more and more; and finally, libraries will have more demands placed on them in time, which makes the case for them to have additional bandwidth very compelling. Thank you very much.

*Applause*

>> SUSAN HILDRETH: Okay, we have some questions for our panel. I don't know if we have any audience questions. But I'm so excited to hear the term digital readiness. We have been struggling with that term for so long. And we use the term digital literacy and literacy doesn't - people think what does that mean. I'm not literate? That is just the term of the day - digital readiness. Thank you, John.

Carla, did you have a question?

>> CARLA HAYDEN: I'm back in it again.

>> SUSAN HILDRETH: Then we're going to take you off the stage, Carla.

>> CARLA HAYDEN: Okay.

>> SUSAN HILDRETH: Go ahead.

>> CARLA HAYDEN: However, and especially Larra and John, what are some of the challenges that libraries face in terms of collecting better data and providing the things that you need to make a case?

>> LARRA CLARK: Well, I think there are a few challenges. One is just library staff time. A lot of our libraries - I think everybody feels that strain, if you will, but many of our libraries may only have a few staff people and so the data collection piece can be tricky. Gathering some of the digital statistics also is hard. Where do you collect the data? How do

you collect the data? The methodology is really important. And there was a third thing that I'm just blanking on that just came into my head. Maybe I'll -

>> SUSAN HILDRETH: Fatigue. Survey fatigue.

>> LARRA CLARK: Well, survey fatigue is always, always an issue. Maybe I'll let you, John, while I think of my third thing.

>> JOHN HERRIGAN: I'll just start with methodology and go to intentional research questions framed to assess outcomes from library access at the Internet. That's not something librarians are probably well suited to do. So I think it creates the need for funding for university researchers to get in there and really be on the ground in assessing outcomes. Because, inevitably, having worked at the FCC on the Broadband Plan, you get questions from policymakers on what are the outcomes, what dial was moved, and I think we have to be very intentional about that.

>> LARRA CLARK: What I was going to say, the third thing that when I think about our colleagues in the school environment, for instance, is that our community comes in and out of the libraries. We have these spikes in access and we have a strong commitment to privacy. And so folks come in and out and use our library resources and keeping track and getting to those outcomes can be much more challenging in the library environment as opposed to having a steady population that is in the school building every day. So I think that's another challenge for really being able to capture the impact of library service.

>> SUSAN HILDRETH: So I know our Board member Charles Benton is going to pose a question for Miriam, but I just wanted to acknowledge that Charles Benton, who is on our Board and also was formerly on the National Commission Board, has been committed his entire life to digital access. We know he's a great champion. He's out there all the time. We're so happy he could be with us today. He really has been a leader for years in this area. So, Charles, question.

>> CHARLES BENTON: Thank you. I've got a script here. Miriam, I was really interested in your point that there is very little information about E-Rate that's being shared with tribal libraries. I'm wondering what your thoughts are on funding -