NWX-DOC-NTIA-OTIA

Moderator: Karen Perry
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1:00 pm CT

Coordinator: Welcome and thank you for standing by.

At this time all participants are in a listen-only mode. If you should need any assistance during the call, you can press star followed by 0 to reach an operator.

Today's call is being recorded. If you should have any objection, you may disconnect at this time.

Now I would like to turn the call over to your host, Ms. Karen Perry. Thank you, ma'am. You may begin.

Karen Perry: Good afternoon and thank you for joining us today for BroadbandUSA's monthly webinar on broadband topics of interest. I'm Karen Archer Perry, a senior policy analyst with NTIA's BroadbandUSA.

Today's webinar, Measuring the Digital Divide: a Review of Recent Surveys and Data, will present information on two large-scale consumer studies, the Internet Use Study and the American Community Survey. Speakers from NTIA and the US Census Bureau will highlight the latest data from the

surveys about who's online, who's not and how and where people access the Internet.

Although we've seen some improvement in broadband adoption and use across America, there are still persistent digital divides. Broadband adoption in rural and tribal areas lags that in urban areas. Broadband use rises with increasing income and education. And adoption rates and technology choices vary by age and geography. While national trends are somewhat consistent or constant over time, detailed data by state, county, place, economic development region, school district and even census tract can tell a much more interesting picture.

Today our experts will provide an overview of two powerful data sets and they'll provide tips on how you can access and use the data yourselves. We hope that you'll be able to leverage this national data to better understand your own broadband landscape and add to that your local wisdom in order to take action to build partnerships and improve community connectivity.

Our presenters today are Rafi Goldberg, a policy analyst at the Office of Policy Analysis and Development at NTIA; Ryan Dolan, Data Visualization Specialist with the U.S. Census Bureau; and Gerson Vasquez, also a Data Visualization Specialist at the U.S. Census Bureau.

In addition to moderating today's webinar, I will also share a couple of demonstrations that highlight the work of two broadband colleagues who have created open source tools that leverage the American Community Survey data that Ryan and Gerson will be discussing.

Usually we tell you about next month's webinar at the end of this webinar, but I'm so excited about the March 20 program that I wanted to mention it right up

front. Last week NTIA, USDA and the White House announced the American Broadband Initiative and issued a detailed milestones report that lays out the Administration's commitments to accelerate investments in rural broadband.

The report highlights some early accomplishments and additional commitments over two years across 25 federal agencies. You can download the full report from our website under the Resources/Federal tab, and you can get more insights from the principles on our March 20th webinar.

Now I'd like to review the logistics for today's webinar. First, we'll open up the webinar for questions at the completion of all of the presentations, but please use the question box on the right-hand side of your screen to submit your questions or your comments at any time. Second, the presentations, along with a transcript and audio recording of today's session, will be available on the Broadband USA website within seven days of this webinar under the Events, Past Events tab.

Finally, visit our BroadbandUSA website for information about our technical assistance program, including useful guides, products, publications and other tools that can assist you with planning, funding and implementing your broadband project. The newest additions to our website are the American Broadband Initiative's Milestone Report, which is under the Federal tab, and a brand new interactive map with information on state broadband programs, which you'll find under the State tab.

As we begin, our first speaker is Rafi Goldberg. Rafi has spent the last seven years as a policy analyst at NTIA's Office of Policy Analysis and Development. While he's worked on a wide range of issues in the Internet policy space, from intellectual property to lifeline reform and even cell phone unlocking, one of Rafi's favorite and longest running projects has been

working to inform digital inclusion policy through NTIA's Internet use surveys.

In collaboration with his colleagues and NTIA Census Bureau partners, Rafi oversees every stage of the survey development, data analysis and reporting of NTIA's findings. Prior to starting in Internet policy, Rafi worked in the Office of the Governor of Massachusetts and he earned a master in public policy degree at Georgetown University and a BA at Tufts University.

When you go to the data central website and you see the note to contact the team using the email, data@ntia.doc.gov, all those emails go to Rafi. Even better, I can guarantee you he answers them and he is a marvelous explainer. Please welcome Rafi Goldberg.

Rafi Goldberg: Well thank you, Karen, for that very generous, you know, introduction. It's a pleasure to be a part of this discussion. One of the great things about working on policy in this space is that we have a wide range of valuable data sources at our fingertips. The one that I'm going to focus on today is NTIA's Internet Use survey, which we've been sponsoring periodically for almost 25 years now. And we're going to go to the next slide, please.

Karen Perry: Oh I forgot, I'm supposed to keep it here. Oops.

Rafi Goldberg: Yes. Okay. So let me give it back to you.

Karen Perry: Okay. I got mixed up here. Sorry about that. My mistake.

Rafi Goldberg: That's okay. Okay. And here are the slides back. So it's important to know at the outset that when we talk about federal broadband data we could actually be referring to any of at least three different data collections. First there's

NTIA's Internet Use Survey, which is fielded as a supplement to the Census Bureau's current population survey. This is the one that I'm going to be talking about for the remainder of my presentation.

But separately, back in 2013, Census started adding a couple of questions about broadband subscribership to the American community survey, which is a different data collection that Ryan and Gerson are going to discuss a little bit later. And then finally there's the FCC's Form 477 data collection. This one is actually pretty different from the NTIA survey and the ACS because the FCC collects data from Internet service providers rather than from US households.

Next slide, please.

So what is the current population survey? Well primarily it's the source of some of our nation's official labor force statistics, including the national unemployment rate that you hear about on the news every month. Each month the Census Bureau interviews over 50,000 households around the country. The sample is constructed to yield a good estimate not only at the national level but also for every state as well as for the District of Columbia.

From NTIA's perspective, one of the most exciting things about the CPS is the opportunity for other federal agencies like ourselves to sponsor supplemental questions that get asked during particular months. That's how NTIA's Internet Use surveys work. Since 1994 we have partnered with the Census Bureau to periodically add a computer and Internet use supplement to the CPS.

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As you can see from this quick timeline, the CPS has been the source of computer and Internet use data for a very long time. It actually goes back even

another decade before NTIA starting sponsoring its own supplement. Back in 1984, '89 and '93 there were a few computer ownership questions in the annual school enrollment supplement that is sponsored by the Department of Education.

And then since 1994 NTIA has partnered with Census on 14 additions of our survey and we're planning on our 15th one this coming November. This has given us a great opportunity to track changes in how Americans utilize computers and the Internet.

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So what kind of data do we get from these surveys? I pulled a couple of examples here from the recent blog post that we posted. Here in this first figure you can see Internet use over the last two decades broken out by race or ethnicity, and we have fairly good news here. While African Americans and as well as Hispanics were still less likely than whites or Asian Americans to use Internet in 2017, the gap has narrowed over time.

Next slide, please.

Now this next chart is slightly different. It's tracking the proportion of school age children living in households with home Internet service, broken out by population density. The problem of some children not being able to use the Internet from home is sometimes known as the homework gap, as it can make it more difficult for them to access the resources they need in order to complete assignments from home.

And here we see that the children in urban areas are more likely to have Internet service at home than their rural like counterparts.

Next slide, please.

One last example is back to Internet use overall, this time broken up by family income. And the digital divide here, while narrowing somewhat over time, is unfortunately still quite substantial. Historically we have observed that income is an important predictor of Internet use.

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And what we learned from NTIA's surveys doesn't stop at basic Internet use statistics. We ask over 50 questions in our recent surveys, including about what devices and technologies people use, where they go online and what Internet users do once they are online. And just as importantly, we also ask what challenges Americans experience that prevent them from taking sole advantage of the Internet, like reasons like some households still don't have Internet service at home and how privacy or security concerns may deter certain online activities.

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So where do we learn more? The data central section of NTIA's website is the place to go for everything related to our Internet use surveys. I encourage everyone to check it out at ntia.doc.gov/data but I'd like to do a quick demo of it for you all right now, and we'll just get set up for a second here. Okay. And so hopefully now you should all be seeing data central and…

Karen Perry: Full screen.

Rafi Goldberg: …first get to the section. Sorry.

Karen Perry: Full screen.

Rafi Goldberg: Is it bigger now?

Karen Perry: Yes.

Rafi Goldberg: Okay. Excellent. So when you get to Data Central, you'll see three major
                   sections. The first one on the left is our Digital Nation blog, which is where
                   we talk about our latest research and analysis using data from the Internet use
                   survey. Whenever we get results back from the survey, we start writing a
                   series of posts with highlights from the results. We've done a few already on
                   our most recent survey and there will be more coming soon.

                   Now I'm going to skip over the middle option for just a second and first go to
                   our research center. So this is where outside researchers can go to access
                   complete data sets for every survey NTIA has sponsored since 1994, along
                   with the complete technical documentation and even sample code. And you'll
                   see if I click here, we have all of our data sets available for anyone to
                   download.

                   A huge part of the value of NTIA's Internet Use Survey lies in the studies
                   external researchers have done using our data, so we really want to encourage
                   use of our data sets. You'll see we also have a dedicated email address, which
                   was already mentioned by Karen, data@ntia.doc.gov, to field any questions
                   that you usually have about our data.

                   So finally I want to show off my favorite part of Data Central, this section in
                   the middle, which is our Data Explorer visualization tool. We created Data
                   Explorer because a lot of our users are kind of in the middle category between

our audiences from the other two sections. They may be advocates, local government officials, journalists or others who want to dive deeper into the results but don't necessarily have the time or background to work with our raw data sets.

With Data Explorer you have dozens of metrics from our Internet Use survey at your fingertips. Now when you first open Data Explorer you'll be greeted by this map, breaking down Internet use by state. And if you scroll down, you'll see that we also have the same information available in tabular form. But it's not just a static mass of results from our most recent survey. If you click on a different data collection, say October 2007, you'll see that the map instantly recolors to show in this case Internet use back in 2007.

So even better when you hit the Play button in the middle over here, you'll see that Data Explorer begins to cycle through every available data collection to give you a sense of how the country has changed over time. Now we just don't stop at basic Internet use. If you click on the big dropdown menu near the top, you'll find metric tracking what devices Americans use, locations of Internet use, online activities and as well as other categories.

So for example if we select tablet use, the map will instantly change to show tablet use broken down by state. Now we've been tracking tablet use since 2011 and you can see how quickly tablets have taken off in the United States. Now being able to break down by state is great but we don't stop there. Near the top you'll see a button to switch between showing the map and displaying a chart.

If you select chart, Data Explorer will instantly swap out the map and plot a line showing how tablet use has changed nationally. Now that's very helpful, but even better is that when you're in the chart mode, we get a second menu

that lets us break out metrics by different demographic groups. So, for example, if I select "age group", it will instantly add lines showing the tablet use broken out by age group.

There are some interesting differences here with younger children and the 25 to 44 set using tablets at a higher rate than other age groups. And we could also switch to, say, family income and see some very substantial disparities in the tablet adoption based on income. There are a lot of stories that you can tell using Data Explorer.

If I switch for a second to see what proportion of Internet users reported searching for a job online, we'll see that this was a particularly important activity for, you know, the lowest income households. And we can get more clarity here if we break it down by employment status to see, perhaps unsurprisingly, that unemployed Internet users were far more likely than their peers to search for a job online.

So finally a very important question we ask in our surveys is why some households still don't have Internet service at home. If we look at some of these metrics we'll see for example that more than half of offline households now say that their main reason for non-use is a lack of need or interest in home Internet service. This was most common among those not in the labor force, which includes retirees and others who neither work nor are actively looking for work.

If we switch back to age group for a moment, we'll see that indeed it's the age 65 plus population that is most likely to say it. In contrast, if we switch metrics to the second most common reason for non-use, expense, then the age groups reverse order on the chart with younger households far more likely to say they're not online because it's too expensive. And if we look at race or

ethnicity, Hispanics, African Americans and other groups historically less likely to use the Internet from home are more likely than their white counterparts to cite expense as their main reason for non-use.

So that is NTIA's Data Central at ntia.doc.gov/data. And if you're interested in hearing the latest from us, we have, I promise, a very low volume mailing list that you can sign up for that's linked from the main page. And with that I'm going to turn it back over to Karen to introduce our next presentation.

Laura Spining: Karen, you may be on mute.

Karen Perry: Thank you very much, Rafi, and Laura as well. As a reminder, I wanted to let you know that we will have time for questions at the end of the session. So please do use the question box on the right-hand side of your screen to submit questions or comments at any time.

Our next speakers are Ryan Dolan and Gerson Vasquez, who currently serve as data visualization leads within the Data Dissemination and Training branch of the U.S. Census Bureau's Communication's Directorate. They've both been instrumental in growing the Bureau's data visualization presence.

Ryan Dolan began his career with the Census Bureau in 2009 as a decennial partnership specialist in Minneapolis out of the Kansas City Regional Census Center. In that role he developed and nurtured partnerships with federal, state, local and tribal governments and elected officials throughout the region, increased awareness about the 2010 decennial census. He mobilized community-based organizations, minority and faith-based groups, schools, media outlets, businesses and other grassroots entities in communities throughout Minnesota.

Gerson Vasquez began his career with the Census Bureau in 2008 as the first bilingual Hispanic partnership specialist in the Atlanta region for the Census in 2010. He worked in the partnership and data services program conducing decennial census promotion and outreach to elected officials, tribal leaders, local congressional offices, members of the media and community leaders of diverse races, ethnicities and cultures.

What I most enjoy about working with Ryan and Gerson is their enthusiasm for data, people and stories. Plus, you never know what maps they're going to be creating. One day they're mapping craft breweries in the United States and the next day it's public libraries. Today it's computer and Internet use in every county, place and census tract in America. Please welcome Ryan Dolan and Gerson Vasquez.

Gerson Vasquez: Thank you so much, Karen. Yes. Karen, as you kind of explained there our backgrounds a little bit, Ryan and I both came aboard prior to 2010 Census; and at the end of the day, we were really excited to participate in promoting participation in the census because we know how important the data is. And since then we've just grown more in the data and data sources that the Census provides in all its censuses and surveys, and as data folks we know that quality statistics can really go a long way towards making the most informed decisions.

Nowadays working with the Data Dissemination and Training branch for the Census Bureau, Ryan likes to describe it, you know, we're kind of like in medicine general practitioners. We know a good bit about all sorts of data sources from the Census Bureau and in cases where you need more details, we can help get you to specialists, so to speak, or subject matter experts as we call them in the building for those purposes as well.

And one thing we've realized in our data travels is that basically the ACS, the American Community Survey, and the decennial census, the one every ten years of course, make for the most requested data sources. So without further ado we'll move on to the American Community Survey which is really our foundation for a lot of the questions we get asked.

I mean it's such a robust survey in the sense that it has - it surveys - first off, if surveys over 3.5 million addresses and it helps inform over 675 billion of federal government spending each year, covering a variety of topics, over 35, and it helps support over 300 evidence-based federal government uses and produces, at the end of the day, 11 billion estimates each year. So that's quite a bit of data.

Now I say three key annual data releases but I'm only focusing on two, and really one when it comes to this particular release and how it leads to more computer and Internet use data, and that's the one-year estimates for larger populations and the five-year estimates for the most geographies covered. But we can move to the next slide now.

So one of the things in those 35-plus topics is we cover a variety of social, demographic, economic and housing characteristics, where there are things like ancestry, educational attainment and so, also age, Hispanic origin, race, things like that, income, industry and occupation, and of course the topic of the day for us today would be that computer and Internet use that you see in the far right column, which is a little bit unique with this most recent release of the American Community Survey, or the ACS.

And like Rafi mentioned in his presentation, that question got added in 2013 really to support the Broadband Data Improvement Act of 2008 to really help

federal agencies measure nationwide development of broadband access and decrease barriers to broadband access.

We can go to the next slide.

Oh one thing I actually forgot to mention in the last slide but I'll mention it here, and you can see it when you get the presentation after the fact, is that you'll find embedded links, hyperlinks. Like in this case in this particular slide the key word releases in the title will actually link over to more information on this slide and on the particular geographic areas available for each vintage of estimates from, in this case, the ACS.

Now as you see here on the screen, the one-year estimates are great for keeping up with current trends and year-to-year changes but they only serve geographic areas of 65,000 or more. And me being from Georgia, I can tell you right now a lot of the counties and places, or cities and towns as we call them, aren't going to necessarily cross that 65,000 threshold. So that's why today we're really going to be pinpointing the five-year estimates, because at the end of the day it lets us reach the deepest level of geography.

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Now as far as that five-year geography and the ACS in general, the geographic areas it covers, we see on this hierarchy here different things like nation, regions, divisions, states, counties, census tracts and block groups. I mentioned all of them down the center line because when we started moving more into visualizations and mapping that center line is very important because it nests so neatly in the hierarchy. So when you're creating clean maps of all tracts within counties or all block groups within the census tracts then

within in counties, it really lends itself to clean mapping and data visualizations.

Now for the five-year geography, the reason we're focusing on it is because it does allow us to get to all 578,000-plus geographic areas. That represents 87 different geography summary levels available.

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The five-year estimates, besides giving you the most geographic flexibility, also, you know, things to point out that are important is they help describe the characteristics over a specific period of time, not a single point in time. When we're talking about a single point in time in the Census Bureau, a lot of times that is the decennial, or ten-year, census. It's kind of what we call the snapshot. You freeze that moment in time and that statistically is represented in the decennial count.

You can look at the ACS as more of characteristics and that data are pooled over 60 months, weighted to produce estimates and controlled for different variables. Five-year estimates are not an average of one-year estimates, they're an aggregate. And if you want to get into the methodology and more information just in general about the ACS, you can link to that with the ACS, in parenthesis in the title there, to find out more. And Ryan and I can also get you over to more information and subject matter experts.

The estimates are based on geographic boundaries as of January 1 of the last year in the five-year period. So right now we're on 2017 five-year release so that would be the geography based out of 2017, and the dollar value estimates similarly are inflation adjusted to the most recent year for the period, so in this case again 2017.

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Now what makes this five year a little different is since we added the computer and Internet use questions in 2013, we finally go through that five-year cycle to help produce estimates at the lowest geographic level. So that's why we've been very excited and enthusiastic, as Karen noted, to talk to NTIA, or anybody that will listen really, about the release, which came in December of last year; and now it gives us access to all these different things at that census tract and even block group levels in many cases.

At the census tract level, for instance, you can get to different subject tables like the S2801 and S2802, which really help to look at different things as far as cross-tabulating certain data variables, in very interesting ways we find. And then you have also 22 new and detailed tables, and each one of these links on this page will take you to additional resources so you can dive in headfirst into some of this information.

Next slide, please.

So when you're talking about those two key subject tables that in this case we're looking on this slide at the American Fact Finder Table shells for the S2801 and S2802. The S2801 for example on the left side -- it may be a little hard to see, and we'll go to a live demo soon so we can see this a little more crisply -- are things like types of computers, types of Internet subscriptions, household income, and so on and so forth, whereas the S2802 starts to bring in rates in Hispanic or Latino origin in Internet use and accessibility, educational attainment, employment status and so on.

Next slide, please.

So when we're talking about that table one of the easiest ways to get to it is through the AFF, or the American Fact Finder, which Ryan will demo shortly, but one of the other - there are other methods to access the data too, depending on your uses of the data. And actually, Ryan, if you could go back to the last slide, I do want to point out a couple things.

Thank you, Ryan. So besides the American Fact Finder, we also have a growing census API, and Ryan and I have really tried to tap more into that. Because of the way you can pull data and extract data from our census API, you can really do a lot of cool things as far as applications and, ultimately, visualizations, which is of course our passion.

And also we have within the American Fact Finder once again a download center, which lets you do things like for these tables, download all census tracts for an S2801, S2802 or detailed tables, so that's very important too. And we have a network of data dissemination specialists across the nation who can also help with that when Ryan and I aren't available and we can help you get in touch with them as well.

Go back to the next slide, please.

And ultimately within the American Fact Finder you also have some at least straightforward visualization methods or applications where you can create a simple thematic map. It's limited because you can only map one variable at a time. In this case you're looking at no computers for all census tracts in Washington, but that's something that you can do quickly. It's pretty lightweight and it does give you an immediate visual so you can really start to play with the data in a more visual format.

And of course once you get to this point, you can extract data, you can start to download it either through the fact finder API or other methods to really start creating visualizations. But without further ado, I could talk my way through it but I think Ryan would be the best person to show you a little bit more of how that looks when you're actually in a live environment. So, Ryan?

Ryan Dolan: Sure. Thank you. Can you hear me?

Gerson Vasquez: I got you.

Ryan Dolan: Great.

Karen Perry: You sound good.

Ryan Dolan: Awesome. So I'm going to just quickly walk you through how to actually extract some of the data using American Fact Finder. To start you'll first want to go to www.census.gov, as you can see on this screen here. And you can see in the website, you can browse by topics, you can type in the search, but what I like to focus on today is really just our data tools and applications.

So you go to Explore Data and then click on Data Tools and Applications and you'll get a whole list of wonderful data tools that'll help you look through the many survey's and censuses that we conduct on an annual or ten-year basis. So today we're going to focus on American Fact Finder, which currently is the primary data retrieval source for most of the proprietary services the Census Bureau conducts, and I've already got that loaded up on this page.

So we're going to be, for example in this case, Gerson mention Table S2801. There's also you can type in by topic or key name or key word. So for example in this case, if I wanted to just search for American Fact Finder,

which you can also get to by going to factfinder.census.gov or by clicking on one of the handy links that Gerson included in one of the slides, I can type in computer and Internet, hit Go. And what you'll notice is my selections box here that will be right in the upper left-hand corner and then I can just take a peek at the table if I'd like to.

It also gave me - because I haven't added any geographies for it, this will give me all the information in Table s2801, which Gerson mentioned. That's a subject table so it'll break things down by total and percent and then it breaks down with a different cross-tab. In this case in the first one it'll be income and types of Internet subscriptions.

What's nice about Fact Finder when you get into this screen is that let's just say you really don't want to know necessarily what the United States has but you wanted to add geographies so we're going to pick on the state of Washington for a few examples today, as Gerson had in the previous slide, and I'm just going to go on down here to -- again I'll show you that one more time -- is add and remove geographies, and I'm going to do down and select census tract.

I'm going to select by State, which in this case is Washington, and let's just say we wanted to pick one county but we could also just pick all census tracts within Washington. But I'm just going to say I want to pick Ferry County, this small county I believe northeastern Washington sort of, a little bit rural. And I can add that to my selections.

Now what you're going to see is I've got to click there and add to my selections and show the table. And then I'm going to have a very robust table here that's going to have all of the census tracts, all of the three census tracts that are contained within that county.

And if I wanted to maybe look at for example like satellite Internet service, you'll notice in this case if I were to add the state of Washington, which I think it's always good to have a comparison, so if I wanted to look at maybe on the state level, I'm just going to add one state and I can add this to my map as well, and you'll notice it'll be on the left-hand side.

If I wanted to look at the comparison, say for satellite Internet and subscriptions throughout the state of Washington, and compare that to Ferry County, you'll notice there's a story to tell right here that on average in the state of Washington you have 5.1% of folks in Washington subscribed to satellite Internet, whereas the three census tracts in Ferry County are about 22.5, 26.6 and 17.7.

And if I wanted to visualize that I can even create a map within this, which you've seen on a previous slide, by clicking on the Create a Map button right up here, and then I would simply follow the level of geography that I'd like to map because American Fact Finder can create a map for one single series of geographies. So, in this case, I have three census tracts so I would click on the census tract, any one of these variables, and then I'd follow on the left-hand side to click on satellite Internet subscription. So, in this case, I want to map the percent.

The thing you'll notice, and I've already done the map because sometimes they take a while to load, that we have Ferry County visualized here. And what's nice about this basic tool that we have is that you can customize the data classes. So you can change it to, say, two data classes and I can say user defined and say I just want to look at areas that are over 20%. So you can make the map tell a very different story that might suit your needs.

In addition, if I wanted to, say, look at all census tracts in the state of Washington, I can do the same thing as we've done before and let's just say we want to look at the same type of map but we want to - first of what's really important is downloading the data. So if I wanted to download the data into a spreadsheet, I can do that here as well, and I can also modify the table.

So if there's - if I don't want to see the total, maybe I just want to see the percent, I can actually click on any of these filters and then check in what I'd like to see. Sometimes it helps to declutter the table and only allows us to bring in the things that we need. And I think I've - let me just do this one more time. Now I have all of the census tracts within the state of Washington, along with the state of Washington. So you can kind of again keep that same comparison.

And if I wanted to create the map again, I would hide the table tools, click on the Download button - I'm sorry, click on the Create a Map button, and then do what I said before, just follow along the variable in which you'd like to create, and in this case it was satellite Internet service and I believe I have the map already finished for you.

And again, the nice thing about this basic data visualization tool is that you can define the number of data classes. I really always like to use two because you can kind of look at one specific threshold and have that map really kind of synch for you. So all the areas in green in this case would be areas that subscribe to satellite Internet at 20% or greater, and you're going to keep changing to that to whichever you would like.

So that's a little of mapping with American Fact Finder. And then we've also created just a very basic visualization with the same data using Tableau. And you can get a free subscription to that with Tableau Public. And so you can

really do the same thing. So here I was - I think we were at Ferry County in the previous example, so you can kind of break it down even more by looking at the types of Internet subscriptions and do fun things like toggling by the state, number of Internet subscriptions or selecting specific counties if you'd like to.

So that's a little bit of data visualization on this exciting new data release. You'll probably be seeing a lot more products coming out from both Gerson and myself visualizing some of this broadband connectivity data in the very near future. So I encourage you to go to census.gov and search for some of our data visualizations there. And that's all I have. And so for this I will hand it on back to Karen.

Karen Perry: Can you see my screen?

Ryan Dolan: Yes.

Karen Perry: All right. Thank you very much. My bet is that everybody would like it if Ryan and Gerson did that all again and slower. I always feel that way. That's one reason why we are recording this webinar and why the slides and the recording will be available and also why we will be providing contact information at the end so that you can reach them if you have further questions.

The depth of information that's available in both of these data sets is huge. One of the exciting things though is that people have already started to use the data. People outside the government have used it and I wanted to show you two quick examples.

So I wanted to highlight two other organizations that have used the new American Community Survey data set to offer tools and services that you can use as well. So today I'll show you web applications that are developed by Bill Callahan and Angela Siefer at the National Digital Inclusion Alliance and by Bob Ballance at Internet is Infrastructure. I'm sure that there are more applications out there. So if you have a resource or a tool that you want to share, please add it to the chat because we would love to know.

Within days -- with days of the publication of the December release of the computer and Internet survey data, Bill Callahan created a series of maps, and really two different sets of maps, one to show the percentage of households that reported that they had a wireline Internet subscription, that would be cable, fiber or DSL, and a second to show the percentage of households with no Internet subscription. This is data that he pulled out of the data set that we just looked at. His maps are available by census tract and region and they're interactive, and I'm going to show them to you in just a minute.

The other tool I wanted to show you was developed by Bob Ballance. We had the pleasure of working with Bob Ballance when he was a presidential innovation fellow and together we worked with community leaders, carriers and open data experts to understand how to localize national data so that broadband planning teams could understand that data and use it as part of local broadband action plans.

Lucky for us, when Bob left the government, he created Internet is Infrastructure, and the I3 Connectivity Explorer provides visualizations for a number of different data sets, the American Community Survey population data, demographic and income data, as well as the FCC wireline deployment data, wireless deployment data, wireline subscription data. He also includes

M-Lab speed test with about six months of results in there and most recently he's added the ACS computer and Internet data.

Today I'll focus on the ACS computer and Internet data. Bob's tool is in controlled introduction but he'd be happy to provide access to anyone. Just email him at ballance@internetisinfrastructure.org, and remember Ballance has two Ls.

I want to make sure we have time for questions so I've kind of pulled up a lot of screens to show you so I'm more going to show screens than do a lot of live demo. So this is the screen for the National Digital Inclusion Alliance website that has a number of maps. The way that Bill and Angela set it up is in order to make it more manageable -- I think somebody needs to go on mute on our line -- the way people set it up is that they did the maps by region.

The map I wanted to pull up here is the map for the western region. So this is the western region of the United States and it shows Internet service subscriptions by census tract, and it is an interactive, zoomable map that you can kind of - that you can zoom into any particular area you want to look at. The area that I've zoomed into is Pierce County Washington.

I picked Pierce County because it has the city of Tacoma in it, which is a somewhat urban city, but it also goes all the way out to Mount Rainier National Park so that you can see at Mount Rainer National Park, surprisingly, there's a 71% subscription rate. There aren't that many people there. Down here, you've got a lower census tract with 57%. You know, you can really go - you can really see that in this county, this area right here which has great water views, has a 90% subscription rate, but if you go down into some of the urban areas, you've got a 47% subscription rate, or this rural area right here, you can see that that track has a 54% subscription rate.

So you can really rove around and realize that it isn't the county as a whole that has one subscription rate but it's quite diverse. The corresponding map that he developed is one that shows the Internet gaps, and that's one that you can explore as well.

As I mentioned, I'm going to give you a very quick tour of these tools in the hope that they're ones that you're going to come and look at at a later time. This is the Bob Ballance's Internet is Infrastructure Connectivity Explorer. And again, I've pulled up the same county so this is Pierce County, Washington. And we've got Tacoma right here at the center and Mount Rainer over here on the eastern side.

On the homepage, Bob provides a number of sort of top-level statistics: population, area, density, median income, poverty rate. He also pulls from the FCC for 77 data to indicate the percentage of census blocks that do not have a 25/3 provider and the percentage of census blocks that only have one 25/3 provider.

What we wanted to focus on was the new ACS data, and in this particular visualization, what Bob is showing - what we're showing here is the percentage of households that have any broadband subscription. So this is any broadband subscription at all, so this includes pretty much everything but dial up. So it's satellite, it's cell phone and it's all the wireline.

In his next release Bob's going to add a dropdown that actually allows you to layer it and see all the different types of subscriptions, but this one means any subscription that one has. The second number there indicates sort of the null of that, those people who don't have a subscription. The other thing you can see in this is the plus or minus factor associated with each region and so you

know what kind of a certainty it is or how close it is, how much variation there is in the number. And so you can also, again, similarly go and see a range of diversity in the region.

There's much more to see but we want to make sure that we have time for some of your questions. So I'm going to hand the phone off to Laura and invite you to if you have additional questions, I'm sure we won't get to all of them but we'll do our best to follow up. Please, Laura, what questions do you have for our audience, for our panel?

Laura Spining: We have definitely more questions than I think we'll be able to get to but I'm going to try to go through them, starting with a couple questions that were asked - let me just start with this one which gets to - so you've shown us the three different federal data sources and how does my community decide kind of where to start and what's the best way to get started?

Rafi Goldberg: Sure. This is Rafi. I'd be happy to take a crack at that and then, you know, others can join in. You know, I think, you know, we're really lucky in this field to have, you know, so many federal data sources to choose from. It can definitely be intimidating when, you know, when you're trying to get started. But the way to think of it is that our different data sources are better suited to different, you know, activities.

So NCA's Internet Use Survey because we're able to ask so many different questions are a great way to really drill down into what people are doing online, what are, you know, some of the reasons why, you know, some households still aren't using the Internet, things like that. And that's, you know, really great mostly for making a national policy.

But when you're looking at the individual communities, it might be more helpful to look at the American Community Survey questions. The - a sort of a tradeoff there is that they're only three basic questions on the ACS about computer and Internet use. But on the other hand the sample size is much larger. If you think the 50,000 households in the CPS is a lot, the, you know, ACS includes about three million households per year and that allows you to really drill down into, you know, a smaller geographic areas as well as, you know, certain demographic groups that really aren't represented in the CPS.

So if you're most interested in what your individual community looks like, you might want to start with the ACS numbers, although certainly the NTIA Internet Use Survey can be helpful as well in getting a general sense of, you know, what the trends are in your states and around the country. And then - yes?

Karen Perry: One of the places I like to look also is the Connectivity Explorer just because it integrates a number of the data sets, so it's a good place to get a snapshot of the ACS data, the FCS data, as well as some of your local demographics. So I just put up one more screen to give you a quick peek of sort of what they call a 10,000-foot level kind of view of kind of the number of providers, the tracks that are covered, the subscription level, how it tracks to income, how it tracks to poverty.

And you can add that to who are the providers and kind of look at all the data together. So if you can snapshot it all and then combine it with community conversations, we're finding that pretty powerful. That's also a place where our technical assistance folks can give you a hand kind of helping you navigate this stuff.

Laura, give us another question.

Gerson Vasquez: Real quick, this is Gerson with the Census Bureau, I'd just like to echo what Karen and Rafi have said and just specifically to kind of give you an idea on the ACS and the American Community Survey, I would highly suggest looking at the data profile tables, or the DP tables, for the geographic level that you're interested in because a lot of times what happens is we have a saying in our branch that you don't know what you don't know and usually you're not looking for a statistic in a vacuum.

So much of the point Karen was just making, sometimes you're amazed at what other data or corollary data you might see aside it, you know, besides the primary data you were looking for. So data profile tables are a good way to look across the spectrum of what ACS collects, be it economic, housing, demographic or social characteristics and get a better idea of what's available at that level, including the computer and Internet use.

Laura Spining: Thank you. And I'm - there are so many questions. I wish we could get to them but we're going to have to start to wrap up now, and I know - I believe we have on the slides the contact information for the - Ryan and Gerson from Census, as well as Rafi from NTIA and I will say that's the most commonly asked question that I'm getting in the chat box is how to follow up with folks about more specific questions that are relevant to their information.

So with that, I will also share that we received on the line some information about other data resources out of Purdue University and we'll share the link for that following up on this website as well. And with that, Karen, I think we're going to have to wrap up.

Karen Perry: So I wanted to thank our speakers today and I also wanted to thank all of you for the questions and apologize. We did not get to as many of them as we

would have liked to. We knew we were being very ambitious with this webinar in terms of the amount of information we wanted to share and the depth of it so we do invite you to follow up directly with any of our speakers or also directly with BroadbandUSA. We are more than happy to work with you directly and to get all those answers chased down. We would very much like to be as responsive as we can.

Again, I wanted to highlight that our next webinar is another exciting one. It is on the American Broadband Initiative and we will have principles talking about the administration's strategy for promoting broadband connectivity in America. And again, I wanted to highlight that BroadbandUSA is here. We've got a great amount of resources that are available to you. We welcome your comments, communications and your interactions with us at any time. Thanks to all for joining us and we look forward to connecting with you again next month on a webinar if not before.

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