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ICANN77 | PF – At-Large NARALO Round Table  
Monday, June 12 2023 – 10:45 to 12:15 DCA

GREG SHATAN: We'll be getting started in just a minute. So if you could take your seats, please, that would be greatly appreciated. Thank you. If you're in the back of the room... Hello and welcome. If you're already seated, if you're in the back of the room and you're not seated, please find a seat. If you're online for coffee, or sorry, there's only one coffee line for 2000 people.

YEŞİM SAĞLAM: This session will now begin. Hello, and welcome to the At-Large NARALO Roundtable. My name is Yeşim Sağlam and I'm the remote participation manager for this session. Please note that this session is being recorded and is governed by the ICANN Expected Standards of Behavior. During this session, questions or comments submitted in chat will only be read aloud if put in the proper form as I've noted in the chat. I will read questions and comments aloud during the time set by the chair or moderator of this session.

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GREG SHATAN:

Thank you. Welcome all to the NARALO Roundtable here at ICANN77. It's my pleasure as the chair of the North American Regional At-Large Organization to be the quasi host of some of the events during this meeting. And this is a time when we'll be looking at some of the important policy issues, which while not directly within ICANN's narrow technical remit are extremely important to the functioning of the DNS and the Internet in general. I think we all learned during the pandemic how important connectivity was, especially connectivity at the edge, especially as people tried to move to the edge to avoid COVID. So I think the governments of the U.S. and Canada, while they

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had earlier programs going over time, responded with new programs that were designed to increase broadband access and connectivity and also downstream. Yes.

Well, so the microphone unfortunately is—the microphone won't move. Thank you for telling me I was not on camera. I don't know if this is an improvement on what you were seeing before. The other mic? Okay. I'll sit in front of this mic. Okay. I will see the microphone move over here. This is my Siamese twin, Harold Feld. Harold will be speaking but not first.

So we're going to take a trip through U.S. and Canada to look both at the government efforts and some point and counterpoint about government efforts to improve broadband access, affordability, device access, usability as well. While we may hear more about federal programs in the U.S. and Canada, we should certainly acknowledge and may hear quite a bit or some about programs at the state and provincial and local level as well.

So I'm not going to introduce each of our panelists, individually or extensively, their bios are in the program, and we have a heavy program here. So I'd like to hear from them more about them. But I will say briefly that we're going to turn to Canada first, even though they sent all their smoke here to Washington, D.C. But we'll turn to Canada first for the view from Canada.

First, we're going to hear from Marita Moll to my left, who you are seeing when I was talking before. Marita is from TeleCommunities Canada, and she'll be setting the stage for the discussion. Then we'll be hearing remotely from Andrew Martey Asare who will provide the

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end user perspective from Canada. He is the Business and Community Development Manager for National Capital FreeNet. After that, we'll move to the U.S. and I'll interject briefly after their presentations. Marita, please go ahead.

MARITA MOLL:

Thanks, Greg. Thanks for the introduction. Hi, everybody and everybody online. I'm Marita Moll, coming here from Ottawa, Canada. We really had to share some of our smoke. That was something we just had too much of. Sorry about that. It's all gone now. Thank God.

Yeah. I think I do have a few slides and I'm wonder if they might be caught up on this. I'm going to speak a little bit about the broadband strategies. I'm very conscious of the fact that there's an awful lot of people here that don't come from Canada or the U.S. And specific numbers on broadband strategies are not really all that useful. And there's quite a few people here who have heard this presentation before because we were at NASIG broadband panel. That was the more extensive description of what we're doing. But here, I'm going to start with—let's bring down the next slide, please.

Putting it in the whole idea of Internet strategy—we should not be focusing totally and only on the number one section in that rainbow, which is the carriage facilities. In 1998, I was part of a research team that was looking at national access strategies. I know that's like 100 years ago but it's still really relevant. These things all matter if we're going to bring Internet access to people on the ground in communities. There are seven. We put seven. There were seven different layers here. You could argue with the way it's positioned, but

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there's no question that the carriage facilities getting the broadband on the ground down to the homes is essential first, but that's not enough. You can put all that stuff there, nobody's going to use it unless you've got some of these other issues in place, people have to have the right machines, they have to have the right software, they need to have the access providers, and they need the education and training. And then overall of that stuff, there has to be some governance issues that are going to make sure that the right mix of things are put in because sometimes it's forgotten that affordability is an issue. If you can't afford it, then all these things can be there and you still can't get it. So I really wanted to impress on people in the NASIG. Here when we're talking about broadband strategies, we have to think a little bigger. That is a larger picture than that.

But In the meantime, governments have been getting up to speed on getting rural and remote people connected. This urgency was suddenly felt again during the pandemic. I mean, we had some urgency at the beginning, early days of the Internet people wanted to get in, it was not all rolled out, people in the urban areas and where the market was providing, they got good access. Even today, Canada is a really big country and there are many people that are not being connected. Greg, you're going to have to tell me when five minutes are up. Please go to the next slide.

This just describes the rainbow, something I hope you'll all kind of remember from universal access and broadband strategies. Going on to the next slide.

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Speaking specifically of the Canadian federal government program, yes, they've got a nice program in place now. They are connecting they say 98% by 2026 and 100% by 2030. This is aspirational but it's a good aspiration and we certainly support that, people working on the advocacy side of trying to make sure everyone has access.

Two main objectives. For these particular strategies that people have 50 megabytes per second down and 10 up, not great, but way better than if you don't have anything now, you can do quite a considerable amount with that. Expectations are higher, but people who don't have anything would be good with that for a while. Let's go on, please. Next slide.

These are a few of the specific programs that are in place. It's called Connect to Innovate, which is 585 million to the last mile infrastructure, 975 rural communities, including 190 indigenous communities. Indigenous communities, I want to say here—I've put asterisks to remind myself—is that a lot of those communities have started to seize the ball and said, "We want to own these networks. This is our land. These communications infrastructures must belong to us. We want to own and control them." And they have done that in many cases, and very successfully. So I think it's a great model that much of the rest of us would have liked to have followed but never really necessarily got it done. The Universal Broadband Fund, 3.225B, 3 billion—that's good enough—for large infrastructure projects targeting rural and underserved communities. And then there's a special fund for First Nations. Next slide, please.

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Here's the timeline. 2019. They announced that 2022-23 93.5% would have access and 2030, 100% would have access. That's the aspiration. The next slide, please.

That's a few other projects. They're not all infrastructure. One of them is to help federal small businesses connect. And the next slide is showing you again the same thing, I said before. But going on, please, one more slide.

The CRTC. That's good. Got a minute. The Canadian Regulator also has a certain program that has some access to funding. And much of that money is not coming from taxes but it's coming from telcos. This is their sort of public interest contribution. That gets handed out as well. And they're also at the regulator issue dealing with affordability issues and content. One more slide. This is the last one I'm going to show you.

We had an Auditor General's Report in March 2023 which said, okay, 91% of Canadian households will have access by 2021. However, just 59.5% of those are in rural and remote areas, and that number drops to 42.9% of households for First Nations Reserves. That is the reality right now. So that's what you have to keep in mind. Then that Auditor General also said something that's really important we're not hearing enough. At the level of families, the government needs to assess affordability in the context of household incomes when rolling out these access programs.

There. Look at that. I got a little bit left. So that's a little spiel on exactly what's happening. But I hope a larger context to put this in for people to whom these numbers don't necessarily relate even

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impossible to really compare American and Canadian programs because the landmass is so much bigger and the context is so different. But the percentages are still valid. If we want to connect 100% by 2030, we've got some work to do in Canada. Yes. Thank you.

GREG SHATAN: Thank you very much, Marita. Without further ado, I'm going to turn to Andrew for his perspective and really the end user perspective on these efforts.

ANDREW MARTEY ASARE: Okay. Thank you so much. Am I coming through okay?

GREG SHATAN: You're good.

ANDREW MARTEY ASARE: Great. So thanks, Marita, for giving that context. So that's what's happening in Canada. I'm going to talk about it from the end user standpoint. I work with an Internet service provider that is a nonprofit provider and focuses on digital equity. We've been doing so for 30 years.

First of all, in 2016 the government announced the universal service objective. That is their 50 megabits download and megabits upload and unlimited usage goal that Marita alluded to. A key distinction is an objective set by the CRTC. It's not an obligation and so having the right kind of regulatory or legal powers to enforce it has been a problem.

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But from an end user perspective, in 2016 they had that you need to have more than 50 megabits per second. So in 2015, about 80% of the marketplace end users were connected at less connectivity available. Then by 2019, there's already been as 40% shift in the market where people had 50 megabits per second download or more. So that's one thing that has happened that the government did.

In terms of addressing affordability, the measures that were introduced in 2016—charges, affordability—never passed. So that kind of stalled in CRTC proceedings for a while. In 2019, the CRTC, FSS, and everything finally put in place a roughly 40% or so drop in most access rates and 31% drop in some traffic rates. And so if you're an end user, you're not seeing an article that says something like your Internet bill was about to go down, the CRTC has dropped some rates, but they never went through. They got appealed through the court system by the incumbents in Canada, also got appealed all the way to the cabinet or the government in Council of Canada, and then eventually got reversed by the CRTC in 2021. So those drops in price never came into effect. There was a nominal 10% drop in traffic rates that most small ISPs have mentioned is basically inconsequential for end users. So you would have heard as an end user in 2016, the Internet was about to get cheaper, you also been told you should be getting faster Internet, but none of that has been translated so far. Also, you would have heard in 2016 that you're going to be getting fiber access or fiber to the premise is going to become available. The CRTC had a very beautiful regime that it wanted to put in place called disaggregates to make that happen. To date, there has been no uptake on that. So there has been predominantly exclusive access to incumbents from

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2016 to date. So small and medium-sized, yes, I've not been able to access that or be able to provide that to end users as well. So as an end user, you in most places in Canada have the choice of one or two providers if you want to have fiber to the premise connectivity.

Also, in addition to that, there have been affordability programs that the government has negotiated either behind closed doors or incumbents have originated themselves. So there's a Connected Families Program, which is voluntary but attempts at which small and medium-sized ISPs cannot participate in. So the fact we have issuing incumbents participate in that. And there's a few other incumbent programs as well. So the end user hears that affordability programs are becoming available. They might have the option of getting it from some of these programs, the Connected Families Program. It runs kind of like a lottery, they send you something in the mail, then you get to apply for the program. And then there's an end date to that, and it's been pushed a couple of times, it's been extended a couple of times. But again, it's effective and exclusive program for incumbents in Canada.

Then the government Connectivity Strategy was announced in 2019. Marita covered most of that. It totals somewhere about \$5 billion in funding towards connectivity. For context, most of the kind of references related to the U.S. about a factor of 10 to 1. So she mentioned most of the funds available for that. Particularly what was missing was anything that deals with adoption in a comprehensive way, affordability or adoption. So the end user again is hearing the government takes this very seriously, everybody's going to be

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connected by 2030, there's lots of money being put into it, but it's not translating to affordability.

I should also mention that the government reports service availability metrics, not adoption metrics. So their goal is to reach service availability by 2030, so 100% of people having access. When they say access, they mean services being available to them. It doesn't represent choice or affordability.

And if some people are here on the call from Quebec, I'm sure they'll be happy to know that they have hit their goal already, and the problem is solved in Quebec. So they have hit 100% availability as well.

So that's kind of maybe the end user perspective. You take all of those government programs, you add on COVID. Essentially, there's kind of like a silent grand bargain in Canada where it's like service availability, 100% of it by 2030 is a go at all costs. And the effect has been that you've been paying more for Internet services. Between 2013 and 2021, the average Internet connectivity price in Canada went up 50%. And also very late in the last two years, most of the mid-size and small ISPs have been purchased by incumbents. So the likes of Distributel, EBOX, Teksavvy, VMedia, Axion, and of course the large merger between Rogers and Shaw.

So, yes, service availability is improving. That's the goal. That's what the government is targeting. But affordability is getting worse. And choice is also being removed for most end users in Canada.

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GREG SHATAN:

Thank you, Andrew. I think that's very helpful and a good counterpoint. I will mention that Marita, while it says on her card in front of her government program is also really an end user, but she is playing the part of the Canadian government for our purposes today.

So we're going to move to the U.S. perspective. We're starting with Grace Abuhamad. Grace is the Chief of Staff of the NTIA, the National Telecommunications and Information Administration, part of the Department of Commerce. Grace is also well known to many at ICANN as she is an ICANN alum. So we'll turn to Grace and then she'll be followed by Harold Feld, the Senior Vice President of Public Knowledge, and Shane Tews who among many things is the non-resident senior fellow at the American Enterprise Institute. So, Grace, I will hand you the mic.

GRACE ABUHAMAD:

Thank you, Greg. It's really wonderful to be back at ICANN. This is my first time invited to speak at an ICANN meeting. So I appreciate it. I was usually engaged at the staff support level so this is exciting. Thank you very much, NARALO, for the invitation. I'm here representing NTIA, which most of you know as the GAC rep at ICANN for the U.S. government. But in this administration in particular, we have a huge historic moment that we're engaging in the United States. And NTIA is the leader, the largest administrator of grants for Internet infrastructure built out in the United States at the moment.

Many of you know that the Internet is no longer a luxury or a hobby or a research project for many, but now a necessity for access to work, health care, engagement in social justice, and many other things. We

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have been talking about the digital divide. Many of you have been engaged globally on these issues. But we've been talking about the digital divide in the United States for over 20 years. This is a historic moment where the American government, the Congress and the administration have worked together to invest nearly \$65 billion in infrastructure. Now, this money is spread across a variety of different programs, NTIA administers roughly 45 billion of those programs. So I'll walk you through what some of those programs are. I will give you a high-level overview of what some of the other ones are in the administration. But I think my colleagues will give you more detail.

By the way, I have a little handout, which may be helpful for some of you. Oh, thank you, Shane. My colleague Lucas over here, if you would like a paper copy, Lucas is here in the audience and can give you a paper copy. We'll also provide one online. It helps sometimes to have these one-pagers just to keep track of all the different programs. There are a lot of them.

They each have different funding amounts, audiences, purposes, requirements, etc. So I'll walk you through the ones that we manage at NTIA. The biggest one is the broadband equity access and deployment program which is a state grant program, which means that as the federal government, we're giving money to states for them to deploy broadband programs in the states and territories of the United States, so 50 states and six territories, including Washington, D.C.

One of the big highlights of the BEAD program that I would like to sort of talk about with you today is the requirement for local coordination. So there are many requirements in the BEAD program but one of those

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requirements is that states engage locally with their communities to define a program that makes most sense for access and deployment in their state. As members of the At-Large community, you know what it's like to coordinate and how difficult that is at times and what it's like to build a movement. So I think hopefully in the discussion today, we'll get to talk a little bit about some lessons learned and best practices that we could deploy.

Our second big program is the Digital Equity set of programs. That's a nearly \$3 billion dollar program. It's designed primarily for skill building and capacity building. So you're bringing people online with infrastructure and higher speed programs. But you also need to make sure that people are able to use the Internet and have the right tools and skillsets to use and engage with the Internet. That's also an effort that the At-Large community has engaged in over the years.

We have a Tribal program. So again, for our indigenous communities in the United States, just like Canada, we have a dedicated \$3 billion program to serve tribal communities.

We also have a Connecting Minorities Community program. So that's \$268 million, a smaller program for NTIA. But the focus here is on minority serving anchor institutions. So, universities, colleges, etc., Hispanic serving institutions, BIPOC communities, etc. So focusing on a pilot here about engaging in capacity building and access for underserved communities.

Then finally, we have a program that we call the Middle Mile program. So just like there are many layers of the Internet, there's sort of layers of types of infrastructure. In the Middle Mile program, it focuses on

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building large sort of backhaul infrastructure to allow for the last mile connections to the end user to be more affordable and competitive at that level.

One of the sort of the big goals here in this simple but ambitious mission at NTIA and in the government right now is to ensure that these programs are not only providing Internet service but providing affordable and reliable service. So we have slightly different definitions of what reliable means than the Canadian programs, and we can talk about those comparisons. But those are the key principles of the program to ensure that the access is both reliable and affordable.

I hope we can get to a discussion. We had a conversation on Saturday about this North American School for Internet Governance on Canadian and American programs. We didn't get to discuss much of the comparison between the two. But I hope that we do get to do some of that today. And I would very much appreciate if we could use the conversation too to discuss some best practices that the At-Large community has learned in engaging with local communities. This is something that NTIA has worked on at a smaller scale. But in this new environment, we're really trying to build a movement for digital equity and Internet access around the United States. So we could use some tips. I hope to engage with you on those. Thank you.

GREG SHATAN:

Thank you, Grace. Without further ado, I'll turn directly over to Harold, and I'll hand him our shared microphone.

HAROLD FELD:

Thank you. Public Knowledge is a NGO based here in Washington, D.C. We're focused on freedom of expression, open Internet, and access to affordable connectivity for all. What I'd like to say meaningful Internet access. Traditionally, there's been a lot of focus in our policy on creating the physical infrastructure, which is, of course, important. But one of the things that the pandemic demonstrated was all of the problems that in addition to the physical infrastructure we have, I do want to also focus to some degree on things that we do in the United States that are important that are not just about money.

The first success story I want to talk about is Tribal Broadband, which of course continues to remain some of the least connected areas of the country. This is a matter of grave concern. But in addition to the funding that has now become available in the last few years, one of the important things that the FCC did was to make spectrum available on tribal land without the need for auctions, both by having what we call a priority window which allowed tribes to apply for licenses without needing to participate in the national auctions for distribution of spectrum and by developing unlicensed spectrum regime and other sorts of spectrum sharing, which allow tribes in very diverse rural environments from Alaska to Hawaii, the American Southwest Florida, where you have a variety of different—whether it's open and arid or radical weather conditions, all of these things affect the ability to provide a physical infrastructure and making different sorts of spectrum available through different access regimes is an important element to allow for the construction of reliable Internet access in these areas.

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I want to talk a little bit about affordability. Again, affordability is not just an urban poor issue. There is a tendency to think of this as affordability is for urban poor and physical deployment is for rural. In fact, both are applicable in both environments. But a program administered by the Federal Communications Commission called the Affordable Connectivity Program, which grew out of something called the Emergency Broadband Benefit, which was a program that was started during the pandemic, provides a \$30 a month subsidy for those who qualify. In fact, I would say the vast majority of the large ISPs in this country have programs that are designed specifically to provide quality, affordable broadband that meets the subsidy. It's not a perfect program for a variety of reasons, one of which is it forces you to choose between mobile and fixed in the home. We think that mobile is as essential as fixed broadband. But it is a program that is providing people who live in areas where there is access to the physical infrastructure but otherwise could not afford it. But in addition, this is a problem in rural America, both because one of the reasons why we see a failure of deployment in rural areas is the return on investment problem. It's not just that the physical infrastructure costs more to deploy and maintain in these areas because of the population density or lack of population density. But it is also because people who live in these areas generally tend to be poor. And again, tribal areas where there are huge issues involving poverty for historic reasons, where providing a source of revenue for these systems is critical to their continuing existence.

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Sorry, I'm told I'm talking too fast. It's the balance between trying to get in so much in time and making sure that everything gets translated, so I apologize.

The program has been enormously successful. It supplements a program that we had previously called Lifeline, which provided a \$10 a month subsidy, which does not provide nearly enough broadband capacity for people to be able to participate in modern society and take advantage of the education and economic or just personal creative expression opportunities that come with a broadband connection.

Other elements that are of important concern that are being addressed now, we have an ongoing proceeding at the Federal Communications Commission on digital discrimination by which we mean the problem of providers who under invest in areas where that have been subjected to traditional discrimination on the basis of race or income or ethnicity. We have a problem that I like to describe as the problem of holes in the distribution of broadband. People tend to think of broadband as being kind of there or not. But we have a lot of areas because we have no franchising system, no licensing of broadband the way we did have other public utilities. So you have places where the carrier simply stopped building because they were moving on to a different schedule, or where that particular corner of the county or whatever is a little too low or at the bottom of a mountain or at the top of the mountain. And so there's no broadband within this area that we would generally think of as served, that we wouldn't necessarily think of as being excluded. But there are a number of people in these situations that do not have broadband, and

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this is something that needs to be addressed. Some of this is being addressed by encouraging new sorts of providers, either local government, building out systems or cooperatives, non-commercial systems. These are popular in some areas of the United States. In other places, states have passed laws prohibiting local governments from providing these kinds of networks, and in some places you see obstacles to cooperatives participating in the grant programs. One of the important things for the program that was being administered by NTIA is that it explicitly prohibits any kind of discrimination against non-commercial providers like cooperatives like municipal systems.

Another thing that is important that we've learned about our digital navigators. This is the idea that we need people within the community to train people in the community to let people know not just about the availability of subsidy programming, not just let people know about the availability of equipment, which, of course is another element that's important. But to help people learn the capacities of broadband beyond maybe the thing that is forcing them to get online. You may have people who get online because there's a government form that they must fill out or because they have children who can only do their homework through online resources and we need to ensure that they and their parents understand how this technology works. My final thought that I want to leave folks with is this is not a fire-and-forget effort. We are going to have to continue even after the big push to build out the infrastructure, even after the big push to bring people online, we're going to continue to need to have public resources to maintain these systems and to continue to work with communities to ensure that these communities, once they are connected, remain

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connected and continue to see the new services that we know are going to be part of the future.

GREG SHATAN:

Thank you, Harold. Let's go directly to Shane Tews.

SHANE TEWS:

Thank you. So first of all, to our Canadian colleagues, I want to make sure—everybody was upset about the fire and I was like, “Is everyone okay?” Nobody was asking. That must've been quite a fire. I hope everyone's okay out there.

So to do kind of clean up here, I think in this space the two questions that I think about the most are adoption versus availability. A lot of the assumption is that adoption is because of affordability, and sometimes that isn't the case. Ron, you brought this up and we'll hopefully get to this during the conversation. There are some places that are very well situated to be very well connected. But for certain reasons, people just choose not to put the tools in place and it hasn't necessarily a financial issue. So that's where we need to find places to come in that are not necessarily fiber. We need to be looking at fixed wireless and satellite, which we're really seeing satellite have a moment. And I've learned it's been interesting learning a lot about them.

Grace mentioned what's going on at NTIA, which is a very big program. Sorry. I talk to you quickly. I'm still getting used to hearing multiple billions. I'm just trying to put that all in perspective. So I'm always looking at charts and graphs, trying to figure out how much money

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we're trying to spend to relieve this problem of not having everyone online. Which brings us to two key things I think are very important, and hopefully, we can learn from our colleagues up north because they may have some ideas that we haven't implemented yet, and that's around measurement and metrics.

Harold, you and I talked about this for a nanosecond on the prep call. When they did the Broadband Technology Opportunity Program known as BTOP back in 2009, it was a \$7.2 billion program, which seemed huge at the time, but there wasn't a lot of follow-up on the measurements to find out where that funding eventually landed and how much of that resolved the problem. So we need to, I think, think a lot about that as we're trying to solve for as close to 100% connectivity as we can get.

There was another program at the Federal Communications Commission known as the Connect America Fund (CAF) that was put in place in 2012. And that was to bring us to 10 megabits, which none of us in this room could probably survive on. But it did bring a new level of connectivity. And in 2018, it was found that was at a 95% level. That was the one thing they did measure. Like 95%, that's as close to as 100% as you're probably ever going to get.

So it's important as we're spending just massive amounts of money to be constantly thinking about again the question of adoption and availability. The other thing about adoption—and I know, Harold, you were just getting to the tail end of this, about the getting people digitally connected. Looking at the programs to see how are we helping people understand the importance. Now, the Coronavirus

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definitely brought that up because we have so many things went from mostly analog to somewhat digital way of processing information and getting into programs to becoming very much digitally forward and mobile forward. And we saw—you mentioned the Affordable Connectivity Program—that when people were allowed to have funds and how they wanted to connect our household, a lot of them chose mobile. So for them to have mobile, that meant that they understood the importance of all the digital elements and applications, the apps, and the ways to stay connected. And we need to keep that in mind. I love fiber. Fiber is amazing. You can do things so much faster and efficient. But the people that I think are making those decisions sometimes are sitting in front of laptops and not thinking about how everybody wants to really connect on this at a consumer level.

So those are just some kind of wrap up points to the great things that my colleagues have said here that we need to be thinking about adoption versus availability, which is a key part of that affordability, measurements and metrics. The last two things to think about is we need to think about workforce. We know we want to put so much of this in place as quickly as possible that it takes a level of education and possibly rescaling of our current workforce. So we need to be thinking about how we manage that forward and putting programs in place for that, and then just the supply chain management that we all learned about during COVID. There's a lot of things that are not as ready as we might think they need to be to make our wishes come true here. So I look forward to the discussion.

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GREG SHATAN:

Thank you, Shane. And you actually left some time on the clock, which is good. We started a little bit late. And I'd like to leave some time for interchange, which we now have. I'd like to throw out a question or a couple of questions for the panel. But then, certainly, the panelists can ask each other questions. I do like the question that wasn't answered over the weekend, which is, how do we compare and contrast what Canada and the U.S. are doing since we have folks from both sides of the border on that. But the questions—these are some of the questions that I threw out beforehand—whether current approaches are effective, and more broadly, how do you properly define effectiveness for programs like this? And I'll let anybody who wants to speak first. Marita?

MARITA MOLL:

Okay. I'll take a quick stab at this. We don't know until we actually see it in place. A lot of this is aspirational. People are getting connected. We don't have a lot of information about how that's working. We heard interesting stories from Andrew about what was happening on the ground. Yeah, people are connected that they can't afford it, it's too expensive. It's not enough. Evidence isn't there for us anyways, in my view, to give us a good answer to that question. It's still early days in really getting everybody connected. I think, in my opinion, we lost 20 years in answering that question. Because in Canada, we had a great program. Right from the start, we got off like great guns firing. All these things were in place. We had education programs, we had things going on the ground, and it all fell apart. We lost all those things. And now the pandemic showed up and realized that those things really had to be there. I think now we're waking up again.

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GREG SHATAN: To follow on that, Marita, why did the previous effort fall apart?

MARITA MOLL: Quick answer, Greg, is changes in government policy. This is another thing here that we get these numbers and big things being rolled out. Governments change, policy changes, policy directions change, other things became more important. That was my answer.

HAROLD FELD: Yeah, I'm going to echo a number of themes that it's very early. I do think there are some programs that we're seeing that have success. I do think we are seeing a tremendous amount of built out in tribal areas as a consequence of the combination once in a generation combination of spectrum availability and money resources that are making it possible to do build out in areas where there is virtually no infrastructure. I also think the Affordable Connectivity Program has been a success in its goal of making sure that people who desperately need a connection can remain online. It started as a short term emergency benefit. It was called the Emergency Broadband Benefit that was designed primarily for people who are unemployed, who had lost their job when we were shutting down the economy as well as people who suddenly needed broadband in order for their children to be able to participate in the K through 12 education. That became a regular program which is now surpassed in terms of enrollment. The previous Lifeline program, which again is not surprising because the Lifeline program was not a program that really allowed people to use

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broadband, it was a program that allowed people to have certain limited access to broadband. On the other hand, we're also seeing some of the problems. ACP is so successful that it's running out of money. And in the current political environment, it is very hard to get a program refunded. So we will have to see if we can actually maintain the success.

I will mention metrics, which is something Shane mentioned, and I agree we have had a lot of issues in this country. In terms of mapping, I think that it's been unfortunate that a lot of times, the effort to map broadband access in official Washington has been more about confirming the awesomeness of our wisdom and policy of whichever it is at the moment rather than getting real information. So that when we hit the pandemic and suddenly people needed real information, it wasn't there. There are a lot of efforts since then to reform how we do the mapping to focus on some of these metrics. While I think we probably have the best maps that we have ever had, it's clear that we still have a lot further to go.

SHANE TEWS:

I'm going to add something to what you mentioned is I feel like we have the opportunity, sometimes for an unfortunate reason, which is people weren't doing what they probably should have been doing for a while. But we are trying to solve today's issues with a decade or maybe past a decade's old way of thought process. The example that I think of is our Universal Service Fund that we have in the United States. It was created with a completely different idea in mind. And it started as a fee that was on your landline which most people don't have

anymore. It's gone from—I'm guesstimating—it was like 6% up to almost 36% of a fee. The whole program really is dysfunctional.

So I think we need to take this opportunity. I understand what NTIA is doing is triage in a lot of points. It's like, okay, we need to get this out there and make sense to as many people as possible. I think the way that they're doing it through the states is a very good program, a programmatic way of doing it, because not every state has the same challenge. I think that's fantastic. I think for North America, because we are all connected, we should be thinking about how do we want to manage this going forward and not thinking about next year but into the next decade and help guide the process that has apparently been a little broken, not just for you guys. We've had a little bit of that too.

ANDREW MARTEY ASARE: Oh, sorry.

GREG SHATAN: Please go ahead, Andrew, and then I'm going to go to the floor. Go ahead.

ANDREW MARTEY ASARE: I was just going to say from a measurement standpoint, it's good to measure service being available. We kind of need to move beyond that. So being able to measure adoption in Canada, that's the Canadian Internet Use survey, but it's not really connected to any of the measurements from a service availability standpoint. So be able to measure service availability, which we're currently doing, which is a

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good, that's just a start. And the goal shouldn't be 100% service availability, it should be 100% adoption, then we should look at adoption, then we should look at affordability. And then we should look at other aspects of adoption. That could be usability, security issues, issues around design and choice. There's a spectrum of things that we can measure that we are currently measuring. It has been measured in very fragmented ways. As an example, in Ontario in 2021, we were measuring—

GREG SHATAN: All right, Andrew has frozen. You've just unfrozen. Good.

ANDREW MARTEY ASARE: Oh, sorry. You lost me for a bit. I'll just give you an example. In Ontario, we measured at about 94% availability for services in 2021. But when the Canadian Internet Regulatory Authorities (CIRA) that manages the .CA domain, they have their own tests that they do from end users only about 34% were hitting the federal requirements. So there's this huge gap between ... It's not incumbent to the government to measure at all.

GREG SHATAN: Thank you, Andrew. Thank you for the providing a real-time example of the challenges of broadband access as well. I'd like to turn to some hands that we have up in the floor. First go to Eduardo Diaz.

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EDUARDO DIAZ:

Thank you, Greg. Eduardo from ALAC. To answer that question, “Is the current approach effective?” we have to wait until the end of the program to know if the approach was correct. But I can talk about the way they’re doing it now, which I was very surprised if you go to the notice of the NOFO where all the criteria for the program is, I was really surprised to see that the planning that has been put together to bring infrastructure and data literacy, you have to go down and interview communities one to one, you have to do surveys. This is the approach that we do here at ICANN. We go to the end user to find out what their needs are. Then that will translate into a plan that will put the equipment or the infrastructure where it’s needed.

The other thing that surprised me to about this—and I heard that this is not people sitting behind a laptop, making plans, things like that—is that the plan has to be put for public comment for a month. I read that and say, “This is ICANN. This is the way we work.” To me, we will see at the end, but it is an approach that will bring what’s needed and not is what I think I need. So I think answering this, we have to wait but the things that require for this program is very stakeholder-type thing. So I was very surprised. I’m very happy to see that. Thank you.

GREG SHATAN:

Thank you, Eduardo. I don’t know if Grace can take credit for that being an ICANN alum. Probably not. But nonetheless, it is good to see that there’s more of a bottom-up process since ICANN loves bottom-up processes. End users love them most of all. The person at the top of the bottom-up chain of end users in ICANN is Jonathan Zuck, the chair of ALAC, and he is next. So please bring your bottom to the top.

JONATHAN ZUCK:

Hi. Jonathan Zuck for the record, humble NARALO participant. Thank you for this discussion and these insights. This is such a long-standing issue. Shane, you're forever in my heart for mentioning metrics. Thank you very much.

First of all, you mentioned something about this shouldn't be a fire-and-forget type of exercise. One of the things that the pandemic brought with it, in addition to a willingness to be chipped by Bill Gates, was a demand side that didn't necessarily exist on broadband. We talked paternalistically about it, revealed the need, but a lot of this is also a demand side problem where people don't understand why they need broadband. And you mentioned some of that with the navigators. What I'm wondering is do those demand side tendencies, are they persisting post pandemic? Or is it more that we need to be doing on content side, government services, etc., to keep the level of demand high enough so that we get the adoption rates that you all were talking about, in addition to the service supply side?

HAROLD FELD:

Based on what we've seen in terms of demand for the Affordable Connectivity Program, the demand from rural areas and tribal governments, there's still a lot of demand out there. People are very anxious to be able to access the services. I'll add that part of the issue that has come up is when we did a bunch of this service before the pandemic, and you'd get an answer of "Don't see relevance to my life."

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Some of that, when you drill down in focus groups, was at this price point. Because there are tradeoffs that people make and I don't see why it's worth it for me at \$50 a month, might see that it's worth it for me at \$10 a month based on what I'm envisioning can be done. Which again, as you point out, one of the biggest issues is people realizing the scope of things for which they can use broadband, for which they need broadband, the number of businesses. It's impossible almost to apply for a minimum wage job in the United States at a major company without a broadband connection at this point, because everybody has moved their job applications online. Much as I'm a huge supporter of schools and libraries and other community institutions that help to provide public access, they cannot substitute for a personal broadband connection. So I do think that demand continues to be sustained and that people continue to be aware that even though we're shifting back to a more physical world that the need for a broadband connection is a critical need.

GRACE ABUHAMAD:

I had a point on this. Jonathan, to your point on metrics, one way that we can measure whether there's still demand is that we have a variety of programs, all of them are oversubscribed. So there is demand out there, at least for the federal programs. At NTIA sort of the Middle Mile program. It's a \$1 billion grant program. We received so many applications, it would have totaled \$5.5 billion. So that's a huge oversubscription. A number of other programs, the Affordable Connectivity Program currently has 18 million households signed up, and they're not done and they're running out of money. So there is a lot of interest, both at the consumer level and from companies in

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these programs. So if you're looking at that as a metric for demand, that's a good indication.

GREG SHATAN:

Marita?

MARITA MOLL:

I'm not on the ground working but Andrew is, and I know that the National Capital FreeNet is actually working to connect social housing projects and things. Let's ask him how the demand is there.

ANDREW MARTEY ASARE:

What the challenge is affordability. My connection is choosing to be unstable today. Just wonderful fiber connection. We are in locations in urban areas where we are told we have 100% connectivity. When we surveyed social housing, tenants, about 20% of them did not have Internet access. By and large, most of them say the reason why was because of cost. We surveyed them three times during COVID, the adoption rates went up. But like [inaudible] said already, people were making tradeoffs to be able to get on the Internet. So whether or not be able to stay connected is another question. And those tradeoffs were for other essentials like food. I'm not sure.

Service availability is one thing, tracking adoptions is another thing. But even being able to say, "Okay, are there some other essential services that people are losing or essential needs because they're having to do away with to be able to get online?" is yet another question that we need to answer.

GREG SHATAN:

Thank you, Andrew. I'm going to turn to the next question from the floor. But first, just to remark on metrics, I'm more in the for-profit private sector and there's huge emphasis on metrics in projects that are under development. There are milestones, there are KPIs, key performance indicators, service levels more when you get something up and running. But an appreciated part of designing a development project is to design the metrics that measure it while it's going. That doesn't necessarily tell you whether the program will be successful, but it does tell you whether the attempt to get to where you thought the program would be successful is itself successful. And I'll now turn to Amrita.

AMRITA CHOUDHURY:

Thank you so much, Greg. Amrita for the record. I am not from NARALO. My experiences are from India with 759 million active users. Active users is actually is a different story. If I look at these questions, the more approaches you have, the better it is. Because I think all countries are learning. There are different approaches to connect different people because of different terrains, different requirements of people, different adaptability rates, different things which are working. For example, gender based trolling, many women feel unsafe getting online. What we learned from the COVID is when people see, even at the bottom of pyramid, that they can earn money or if it helps them to be online, they will be online.

Having said that, I think when there are various projects which are on to bring people into the Internet and also giving subsidies, subsidies

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cannot be given forever. So there has to be some measures or some way in which it can be brought mainstream without subsidizing. Perhaps relooking at the price points could be something because it is expensive to use Internet in U.S. than, I would say, in India. It's very cheap for us. When we look at other countries, it's really concerning. Is the government looking at somewhat trying to relook at the rates? Yes. Rates do not stop people from coming online. But having done that work, they may not want to use it or look at other options.

Just as one of the speakers said, everyone is not on fiber. They are on mobiles. Are the applications made that it is also mobile-friendly? You may have it, I'm not too sure. But in many countries like ours where mobile is the first option, it's more mobile-friendly so that people can use it at the go. So these were my questions. And have you learned any best practices from other countries?

GRACE ABUHAMAD:

I'll just start off but in terms of—I'll let the other colleagues come in on some of the points here. We do have in the program—one of the big key pieces here is affordability. In the state, the biggest program, the BEAD Program, one of the requirements is that there is an effort to make this a middle class affordable program. We're open to different ideas on how that may be proposed. We haven't seen the applications yet but there's some flexibility in how states will propose middle class affordable program.

The other piece on mobile. You're right in India, there's mobile first deployment. In our program here, what we're looking at is this is a once in a generation investment. Fiber is an expensive technology.

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Part of the logic here is to emphasize fiber. One, because it's reliable and more resilient to long-term investment here in climate changes and other things. But because it is expensive, this is the time to make that investment. We have this once-in-a-generation opportunity. So that's what we're pushing. But we are an all-of-the-above type program.

Depending on the topography of a region or the needs of a local community, other types of Internet access or other types of infrastructure proposed are accepted or can be considered as part of this program. We haven't seen any of those applications come through yet. We're early in the program. But part of the idea here is that there's going to be stages of evaluation. Initial proposals are made, they're evaluated, they're discussed, there's a community comment period as Eduardo has mentioned, and there'll be a final proposal eventually. So there's stages of development in which these things can be discussed and evaluated. And hopefully, lots of creative solutions come through.

SHANE TEWS:

I'd add to that. I think of that as the ground game. Is that we have a whole nother segment we haven't talked about which is spectrum. And that is the spectrum pipeline that we are looking at. Because these are fabulous, they eat up a lot of space and we're going to need more of it. That digital real estate that we have not completely thought through.

I actually want to give a shout out. [Derick], thanks for showing up. I was on another panel discussion up on Capitol Hill and he stood up and said the best question of anybody. He's like, "What are do you

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guys doing about spectrum pipeline and where's the workforce going to come in that's doing all this?" So while Grace and team NTIA are working with the states to work on getting that very valued fiber in, we need to be thinking about radiofrequency and getting the engineers engaged on that. There's a lot to be thinking through and we have to be really very solid future forecasting on this. I'm supposed to mention that NTIA is also doing that. Anything else? Okay.

GREG SHATAN:

Harold?

HAROLD FELD:

A couple of things. One is, unfortunately, in the United States, we tend to be very parochial. Particularly the further down, you get a lot of innovative programs around adoption and now the deployment for BEAD is going to be at the local and state level. While on the one hand, I think there's a lot of interest in bottom-up processes and local needs, there is not a lot of expertise in what is going on. Often very little expertise about what is going on in different areas of the United States, let alone in other countries, which is unfortunate.

I do think that I agree about spectrum. I'll point out unlicensed spectrum. Everybody here is using Wi-Fi and the need also for us to innovate around spectrum access regimes. Again, we like to talk about a whole of government approach where all of these elements of policy work together and contribute to the affordability. The more spectrum availability we have where people can deploy networks because they are unlicensed or shared access, that brings down the cost of

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deployment. The more they can use off-the-shelf technology like Wi-Fi chips, the more that brings down the cost of deployment, and to some degree, the cost of maintenance.

We have had in the past big problems with maintenance when subsidies go away where people have relied on voluntary efforts and then people have lives they have to get back to. I do think it is one of our biggest challenges here in the United States is figuring out our long range plans and how after the money that we secured in 2021 runs out, we're going to be able to continue to maintain affordability and maintain up-to-date networks that will meet the growing needs that we will have going forward. So I hope we solve this problem.

GREG SHATAN:

Thank you, Harold. I'd like to turn to our last question from the floor since we've now hit the last 15 minutes of the session and go to Claire Craig.

CLAIRE CRAIG:

Hello, everyone. I'm Claire Craig for the record. I'm not NARALO, I'm LACRALO. I've listened to the conversation this morning and it's really very informative. But as I look at Question 7, I'm thinking particularly about a lot of the underserved communities within North America, in particular, in which we in LACRALO and some of the other RALOs are faced with. I ask myself—I'm sure that there are end users who really don't know what have they need. So when we ask the question, "What should end users be doing to get more help? What can we be doing to engage some of these end users to find out what their needs are,

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especially for those who are underserved and who are disadvantaged?” I think that is an area that sometimes we neglect. So, more probably needs to be done in that area and I don’t know if work is being done there in NARALO at this point. That’s the question, what work are you doing to address some of these underserved and some of these disadvantaged groups to get them on the table to find out what their needs are? Thank you.

SHANE TEWS:

I’d say the first thing is finding out why they’re underserved. Financial is usually people go to that, but sometimes it’s just that they’re in an older neighborhood that is hard to serve for different reasons. I was just talking to someone at Stanford Labs about lasers. Literally figuring out how to go from one spot to the other and get around some of the physical configuration challenges. That means that certain areas just aren’t served because people don’t want to take the expense to go the old school way of digging in. So if there’s another way to round that. And I think the technology these guys are doing, it could be a service point. But that, again, is making sure the question is the adoption is because they just don’t have the physical capacity in front of them and it’s not a financial issue. And sometimes it’s a combination of the two.

GREG SHATAN:

I’ll get Marita and then Harold, and then I’ve got my own two cents on this as well.

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MARITA MOLL:

I think that we really need to turn to people like Andrew and the like-minded groups that are out there working with communities and knowing what they need. Years ago, there were many, many more such groups. There were many community networks, there were many public advocacy organizations. Now we have far fewer, and with fewer resources and fewer people behind them. But there are some people who are really working on this in actual locations. Those people's voices need to get into the government aura. I guess what we can all do, what I feel like is help bring those voices as far forward as I can to amplify those voices, because they're the people who know what's really happening.

HAROLD FELD:

This is one of the things that particularly my colleagues who are outside of Washington, D.C. in the field who work in these communities have talked about and lobbied Washington and state capitals to pay attention to for well over a decade now. That is starting to actually bear some fruit. One of the important elements of the programs that were adopted that was mentioned at the beginning is NTIA's Digital Equity program. The FCC also has a grant program for digital navigators on the ground. This is the first time we are seeing significant amounts of federal money going into this idea of yes, we need to be engaging people on the ground, yes, we need to actively be helping people to understand the capacity and not simply assume that once it's deployed, they'll figure it out or that companies that want to sell these services to them will be in the best position to advise them. It is something that I am very grateful to see work happening.

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That said, obviously, there's a lot more that needs to be done. We can point to work with community institution—anchor institutions, as we call them here in the United States—we are seeing some of that. But we have a program called E-Rate which is about connecting schools and libraries and rural hospitals. There has been talk about wanting to expand this sort of funding to include digital training and digital equity and not just access to digital subscription and digital services in these areas. So yes, people are very aware of it. We are now starting to see some official notice and response to this need. And hopefully, we will continue to see more.

GREG SHATAN: I'll let Grace slip in before me.

GRACE ABUHAMAD: I'm going to say it was an excellent question, Claire. I guess I would love nothing more than to have the NARALO or the RALOs generally engage in this program and engage in this process. This is a multistakeholder process. We just don't call it that because the term is not very familiar to a lot of people. Maybe we will make it more popular if you get engaged. But it is not a term that is familiar to the world outside of ICANN or Internet standards development. But this is a multistakeholder effort. And in fact, a lot of things that we're doing have been, as already pointed out, mirror the model.

Operationally at NTIA, we built a huge team in the past year and a half, modeled somewhat similarly on the Global Stakeholder Engagement team at ICANN, but this is a stakeholder engagement team within the

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United States. We have representatives of NTIA in every state and territory in the United States meant to help engage with the local state broadband offices, help them develop their plans, etc. Each one of those individuals... Historically, NTIA would have been an agency that had people in government, in Washington, D.C. and perhaps at a research lab in Boulder, we haven't traditionally had employees located all across the United States to help with coordination and engagement. So this is huge change operationally for a government agency, but also an opportunity to get more people involved and engaged in Internet access and deployments and involvement, digital capacity building, etc. So I would love to get the RALOs engaged, and wouldn't it be fun to merge both worlds? Please join me. We could use your help. Give us the best practices. Come work with us. We'd love it. Thank you.

GREG SHATAN:

This is Greg Shatan. I will, with my chair of NARALO hat on, mention that many of our At-Large Structures, our members, are also Internet Society chapters. And this falls squarely into the remit of the Internet Society. And our local chapter in New York has provided several programs over the years regarding the digital divide and programs and the like. We've also sponsored the early development of a community broadband network called NYC Mesh which is privately funded. But now that we have more of a public model that we can work with, certainly, we'll look to publicize that.

I also want to mention that in New York, and I'm speaking as a New Yorker, we have what's called Big Apple Connect. I happen to have an

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Apple here to demonstrate that. That deals with one of the underserved populations in urban areas which is public housing, which is often essentially a broadband desert. Big Apple Connect is aimed specifically at New York City public housing. There are over 300,000 people living in New York City public housing, officially. Unofficially, it's probably more like 600,000. But in any case, the Big Apple Connect program brings in up to 300 megabyte Internet connection, also a free wireless router and a free modem and free basic cable TV along with a free cable box—we're one of those places where cable box is of use—and a free remote control along with that. The Office of Technology and Innovation of the City of New York is footing the bill.

The only problem with the program—I wouldn't say the only problem—but the biggest problem with the program is it's a three-year program. And what's going to happen in year four, will New York City continue to subsidize the program to free or to something better? And if not, what will the spectrum of participants—one of whom is literally spectrum and the other one is optimum—what will they do in year four? Will they you show some public initiative or will they just go back to their normal market pricing? But it's been a successful program. It's been expanded. I'm glad to see that it includes the public housing that I grew up a block away from. And it's including many, if not most, of public housing now. But that is an issue, as they often are, underserved for both older infrastructure, economic issues, political poll, and the like.

I thank you, Claire, for bringing up the question of end user activism because I think, especially coming from the At-Large room here, that is

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important. I close the queue. Apologies to Siva. Let's see if you have a question that can be asked briefly.

SIVASUBRAMANIAN MUTHUSAMY: To cause a breakthrough in the connectivity problem, isn't it possible to work around the Wi-Fi 6E technologies and the community network model? Not just building community networks, but building community networks that provide high bandwidth Wi-Fi connectivity and interconnecting community networks which would take care of a whole range of problems, not just connectivity problems. Thank you.

HAROLD FELD: I want to answer that because we are big believers in community networks. And yes, they are. Especially community based networks which are embedded within the community can serve. Not just providing a connection but providing trusted resources. And there are a number of successful examples of this in communities in the United States. These have faced a number of difficulties, some of which come from the incumbent providers. The Big Apple Program, in fact, replaced a program which was about fostering individual community-based networks within public housing units. And when the administration changed in New York City, the incumbents took the opportunity to lobby to replace that program with a program that subsidized the incumbents.

There are a bunch of issues that we have seen, some of these are about resourcing these community networks, especially with their volunteer networks and resourcing them longer term. Some of them

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have to do with incumbent lobbying resistance. But I will say that we also have a number of examples of successful community-based network and then there's certainly a model that we should see more of here in the United States.

GREG SHATAN: I'm going to give the last word from our panel to Andrew Martey Asare in Canada, and then I'll wind us up very quickly since we're almost out of time.

ANDREW MARTEY ASARE: Thank you so much. I'll try to be quick. First, I'll mention that in Canada, the CRTC has a process currently open for comments. It's the CRTC 2023 ... and it closes on June 22<sup>nd</sup>. So anybody who is in Canada and wants to comment on how the Internet should be regulated in Canada can engage in that. I also say that when you talk about the billions of dollars that we've referred to information today, I wish I could get a sliver of that to build networks in the communities that we care about where we are located. What I will say is that when this money has been spent, there's opportunity to build up capacity in communities. And part of what's happening is that over time, if 10 years from now, we haven't been able to solve a problem, the question should be where do we choose to invest and build up capacity?

So in Canada now, with so many mid-sized players as well as small-sized player has been acquired, we are [inaudible] to be the choices that we made about a decade ago in terms of where investments were placed. And that's going to be exactly where we'll be 10 years from

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now if lots of the funding and moneys available go to traditional players who are not vested in the communities that they're serving and are able to go from that 95% adoption to 100%. Because we care to be in those homes, in high rise buildings, in those affordable housing buildings. If you're not investing in those networks, then 10 years from now, we'll be just be asking for more money to do it again a different way.

GREG SHATAN:

Thank you, Andrew. I'd like to thank our entire panel, Harold, Marita, Shane, Grace, Andrew. I'd like to thank the audience and participants from the floor. I think this is an important discussion. It's important to hear it within the four walls of ICANN because the DNS isn't worth anything if it's not being connected to by the end users. And this is where we're at. I think we have a lot to chew on here. But it's also lunchtime. Literally, we have to go to on things now. I like to call this meeting officially adjourned and thank you all.

**[END OF TRANSCRIPTION]**