

KAY VERNATTER: Good afternoon. My name is Kay Vernatter. I am the acting state director for USDA with rural development in Nevada. It is my pleasure to welcome you to here in person, to those of you viewing over the Internet and those of you on teleconference, to the second panel session of the American Recovery and Reinvestment Act of 2009 broadband initiative. It is my pleasure to introduce to you David Villano, who's the assistant administrator for telecommunications for USDA rural development.

DAVID VILLANO: Good evening everybody; it's actually nighttime back in Washington, D.C. but I'm very happy to be here and out of Washington to get comments from the public.

Just a few housekeeping things to begin with. If you have a cell

phone or pager, if you would please turn it off, we would appreciate that. For those of you that are on the Internet or on the -- teleconference, if you would like to send questions during this panel or any of the panels, please send them to BTOP at NTIA.DOC.GOV. That's BTOP at NTIA.

It's my privilege to introduce our next panel and our next discussion. It's a roundtable on the definition of broadband underserved and unserved areas. Our first -- our panelists include Mr. Geoffrey Blackwell. He is the chairman of the telecommunications subcommittee of the Chickasaw Nation Industries, Inc., Telecommunications Subcommittee, National Congress of American Indians, based in Washington, D.C. In this position that he's held for the past three years, Mr. Blackwell provides

analysis and counsel on new market strategies and business opportunities.

Raised to respect and advance tribal sovereignty and self-determination.

Mr. Blackwell is a recognized expert in the field of economic opportunity, infrastructure development, and federal communications policy. Prior to joining CNI, he was a senior attorney and liaison to tribal governments in the Federal Communications Commission. He was the first tribal member ever employed by the FCC --.

Our second panelist is Buddy Borden.

Buddy is a community economic development specialist with the [University](#) of Nevada at Reno. Buddy received his master's degree from the [University](#) of Wyoming in agricultural economics. He has been

a community economic development faculty member for Nevada Cooperative Extension for 13 years. He also has four years' experience as a state community economic development specialist at the University of Wyoming cooperative extension. His areas of research and teaching interest are in community economic development processes and analysis, economic base analysis, and regional economic impact modeling analysis.

Our third panelist -- unfortunately I don't -- he's a last minute substitution; I'll just ask that he give a little bit of background about himself -- is Jack Unger. He is the president of Ask Wi.com based in Chatsworth, California.

Our next panelist is William Sagel, the director of IT for the Las Vegas Metropolitan Police Department. And

no, I did not ask the cab to rush me through that changing light on the way here to this facility. But Bill has been with the Las Vegas Metropolitan Police Department for 12 years. He is responsible for the -- of technical serving and has oversight of technology projects for the police department including intelligence, mobile field reporting, detention control, room systems, law records management systems, and CAD dispatch to name you a few.

Our next panelist after bill is Emy Tseng, Emy is the project director of digital inclusion programs for the city and county of San Francisco, a citywide initiative to promote broadband adoption and digital literacy. She had had a career in public interest organizations including Consumers Union and New York City wireless,

and she conducted research on broadband policy, municipal networking and fiber to the home.

And our last panelist will be Dick **Mirgon**, he is the president elect for the Association of Public Safety Communication officials. He has over 30 years of local government experience, has been for 13 years the deputy sheriff in a large metropolitan department, 20 years as a senior manager in local government and 17 of those as director of technology service for Douglas County, Nevada. He has served on the FCC's commercial mobile services alert advisory committee and the FCC's **IBT** government advisory committee. Currently he is retired from local government and is the president-elect for APCO, the nation's oldest and largest public safety nonprofit with 15,000 U.S. members to work in the public safety

technology arena.

And with that I would like to turn to our first panelist to give us a discussion on our topic of the definitions of broadband underserved and unserved communities.

MR. BLACKWELL: My name is Geoffrey Blackwell and to currently I work as the director of strategic relations to the Chickasaw Nation Industries and it's my honor to serve as the chair of the telecommunications subcommittee of the National Congress of American Indians, and I am honored to bring you greetings on today's important joint field hearings on the new Recovery Act broadband stimulus programs.

I have some prepared remarks that I would like to read into the record. I have timed them appropriately and please, I don't want to give away

the end, but it is the most exciting part --.

Our important opportunity now is for defining broadband in community oriented terms. It is important to note that the manner in which agencies define broadband will have a ripple effect on both the type and scope of development on tribal lands inclusion those of American Indian tribes and Alaskan Natives.

Defining the market will provide to the consumers what types of projects grant recipients are able to create.

Thus, when technology or speed standards associated with grants are low, the projects will often -- tribal communities will only benefit from a definition of broadband that is inclusive on a myriad of responsibilities that they perform. the definition of broadband should allow -- standards -- residential

service but also primary and continuing education, telemedicine and distance diagnosis. Also modern media involve -- public safety and homeland security and of course the business oriented requirements of a primary critical backbone for sustainable economy.

It is also important to note that in tribal communities the provision of these myriad communication services have been largely assumed by tribal government entities. You've heard about this from previous speakers. Confronted by the lack of market conditions that would allow the -- Act to operate, time and again tribes have been unable to encourage meaningful service provision from outside entities and have been forced to become de facto carriers of last resort. This has been a costly effort for those tribes but necessary for the provision of basic

governmental services. Indian Country recognizes -- that we need adaptability and scale built within a broadband project to serve the dire needs of our communities. Any broadband project should be oriented to local control and be directly linked to local economic development. Accountability and transparency must be key components.

In the case of tribes we seek recognition of the tribal consultation previously mentioned and of -- to serve the needs of our own communities, for no one else is motivated to do what we must do for our own people. In the short time since the announcement of this hearing, I have been able to seek with tribal broadband providers some critical information about how their programs actually operate. Any true community-oriented definition of broadband should have

critical elements for speeds that are -- otherwise it is not a definition that will result in truly successful --

Some of the tribes, the communities that provide broadband operate on speeds that are well below those available throughout the United States. The need to -- redundancy is critical in other areas. In order to provide some form of services, certain of these providing free meg -- certain provide distance diagnosis service for the reading of high resolution x-rays at the rate of 10 meg.

I offer these and stress -- I stress -- to this panel not to utilize them as basic baseline definition, but as demonstrative of the demands of different applications and the dire needs not met elsewhere in Indian Country. I would ask at what speeds

are these critical missions delivered in other regions of the United States. We in Indian country should not expect anything lower, especially now, given the intent of Congress and the opportunities of a new broadband. That is not to minimize the challenges associated with delivering these services in Indian Country. We look forward to working with those who see the opportunities we see.

To be sure, there is considerable data indexing the lack of broadband penetration in the rural communities. However -- and again, these do not accurately measure our situation on tribal lands. In Indian Country we have an anecdotal 5 to 8 percent broadband penetration rate. This is anecdotal so I'm very skeptical of the higher end. What I am confident about is our statistics for communications deployment is

that our statistics document -- in Indian country are deplorable. We have a 68 percent telephone penetration rate compared to the almost 97 percent national average. The 68 percent rate has been based on the census data that you've heard is somewhat spurious, from other panelists. Among other things we have only 33 community radio stations. And as you've heard before, only eight tribes have been able to create their own telecommunications companies.

There are a few additional important projects that are forced to operate an unregulated spectrum. On the definitions of unserved and underserved, the person sitting in my seat could justify that 5 percent broadband penetration rate is unserved at the lowest end of **unserved**. Tribal lands are unserved. That would be somewhat -

-- however because we believe that are -- oriented to meet. These are not best understood in the context of a speed or the presence of simplistic offering or the presence of artificial competition. There is a question as to whether or not competition should be used as a measurement for the underserved definition.

It is important to raise the awareness here of the special fiduciary relationship that is shared between the federal government and the tribes. Once a tribe is forced to become a carrier of last resort, it becomes an important trust asset in the community. The FCC itself recognizes the ability of tribes to determine their own communications future. Certain tribes have undertaken significant risk and the government should seek to analyze to

consult with tribal nations and analyze whether certain aspects of these actions would put tribes at risk.

Competition that would be artificially supported in certain instances -- those not anti competitive. It is explanatory of the challenges tribes face -- and the ineffectiveness of the competition as a goal in and of itself.

So in summary, furthermore recognizing the reality of tribal lands, the definitions of unserved and underserved should include criteria for analysis that recognizes the entire context of a community that can benefit from broadband. That means considerations of the joblessness of tribal lands, the frightening healthcare -- and the performance of

tribal students in national academic standards. Only the definitions in mind, significant broadband expansion in Indian country, will result in improved quality of life, healthcare, and education. Thank you.

MR. BORDEN: Thank you. My name is Buddy Borden. I'm with the University of Nevada, I actually work for Cooperative Extension which is part of the land grant. And we operate underneath a land grant mission. And that pretty much is to serve the needs of all communities and the outreach portion of the universities, taking the universities to the people in order to serve the needs. So this is where technology really comes into play for us. I'm by no means an area expert in the area of technology but it's vital in the University's mission as well as it is day-to-day

operations in connecting with all citizens here in Nevada.

I'm going to kind of wear two hats or talk about two different things here: number one, from my organizational standpoint, the University and how we have used technology and broadband to actually reach all citizens in Nevada, but also my dealings with mainly rural communities in the economic development arena and some of the challenges that they see or they have, and how broadband and technology actually plays into that.

But from the University's side, we have -- I guess I'm proud to say the **University** as well as cooperative extension has partnered with pretty much every county in this state and we do have compressed video available to -- in every county. It's not in every community, but it

is accessible in every county in the state. And it's a way for us to do both formal as well as nonformal type teaching classroom settings as well as to have meetings. It comes to the effectiveness and efficiencies where we don't have to travel so far to basically do the job that needs to be done.

We do teach classes that way.

From the cooperative extension standpoint, from across all arenas as well as some of our professors up in Reno as well I think here in -- at UNLV, all our institutions try to utilize that to reach some of those nontraditional students.

We also are getting to even more involved in the Internet kind of classroom setting. As maybe students, more formal students or registered students actually take some of their classes on the

Internet. So access to that Internet is very vital. They don't have to be right there on campus.

We also -- we're experimenting right now through University of Nevada Reno with what we -- it's kind of a web type class where we can actually have interaction. We can put on workshop seminars. It's very vital for -- to reach out to our rural communities where we don't have to travel distances or bring large groups together. We can actually do it all over the Internet. And interact, do PowerPoint presentations, pull up Internet for different things. It's a way for us to actually communicate as well as teach at the same time, and provide them some of the tools they need.

And then I was actually talking based here in Las Vegas talking to our technology person near Las

Vegas. And we're trying to drum up a good partnership with our cable TV right now, to use a couple channels to actually use to actually deliver a lot of our programs. And that's vital for us as they dedicate a couple channels and we actually now have ongoing community-based type PRAP programming and education going on so that's something that is hopefully in the works, and they're I can talking about it now, from the economic development side or that hat we wear.

And actually I just ran in from a community -- I thought I was going to be late-- from Nevada where I was out there working on some economic development. And actually sat and talked with the economic development director, which is southwest here of Las Vegas, and as well as the town manager there. And I brought up how is the broadband in this area. And

the comment was they walked to the mat is this little section here has none, this little corner here has -- we've got some dial-up here, we have we're a little better connection over here. It's very scattered.

And from a standpoint, from an economic development standpoint and the frustration for which they're encountered there, that's when it comes to trying to attract any kind of business. And one way I can verify that is a research project we've been working on for the last year and a half or so -- we're targeted industries in the rural communities. And I work mainly in rural communities -- is that we surveyed close to 3,000 businesses across all different types of industries. And to ask them questions of what do you look for in communities or what are some of the factors when you're making those

relocation or expansion decisions.

And the thing that rose to the top is one of the necessities that they need, 85 to 90 percent of those businesses actually responded that Internet access is essential for them to make that decision. And not just access but good access, reliable access.

So that's I think a very key component. And as I'm working with a lot of these rural communities, those are one of the first questions we're talking about, is what do we or how is that connected, what do we need to do in order to make that better. And try to develop that strategy. And I'm glad to see that this group is together and that we're hopefully can make the right choice. Here in Nevada it is very, very scattered. That's all I've got.

MR. SEIFERT: Thanks. If the panelists could try to limit their comments to about two or three minutes, I'm getting up to the law enforcement individuals here, but if you can limit your time since we have a lot of people that would like to ask questions and we're also getting questions from the web. Thank you.

JACK UNGER: Good day. I'm Jack Unger, I'm president of Ask Wi. Com. And I've been fortunate to have become radioactive, to start playing with wireless when I was 11. It's also been a blessing that I've been able to serve the broadband wireless industry since 1993. So this is year 17 for that. I serve on the **WISPA**, the Wireless ISP Association, board of directors. And also as secretary of the **WISPA** board and also as chair of the **WISPA's** FCC

committee. I also authored the book *Deploying License-Free Wireless Wide-Area Networks* which came out in 2003. It took 2,000 hours of work, I started it in 2001. It's been a handbook for the industry.

WISPA is trade organization serving between 300 and 400 wireless ISP's, providers, vendors in the U.S. and every state of the U.S. We estimate there are approximately 2 million residences and homes that obtain their broadband Internet access wirelessly today.

In terms of how is broadband defined, I'm sure we all have our own definitions. It's a definition that continually changes as the available speeds increase. Back when I published my *Bobbing* book or when **Cisco** Press published it in 2008, 128 kilobits a second or greater in that day DSL was just

emerging. We kind of take it for granted that DSL has always been around. But that was not the case. Back in 1993, when I started in this industry, broadband was really buying a T-1 line from the phone company for three or four or five, six, seven, eight hundred dollars. That was really the only affordable option back then.

Today **WISPA** believes that existing broadband providers should be eligible for grants if they have already deployed at a rate of 70068 kilobits per second in at least one direction. If you're an existing provider and you have deployed already, you should be eligible for grants with no further review.

Basically you paid your dues, you're in the game, you get credit.

In terms of grant evaluations for everyone, including those who have

not been in the game, we believe that 5 megabits down and 2 megabits up should be the proper definition for broadband. And very important, providers who provide more than five down and two up should receive no additional priority. The folks who have already deployed fiber networks don't need priority. It's the small companies, the thousands of small broadband providers that are struggling to survive that we believe should be attended to, paid attention to.

In terms of where does broadband exist today, I think many of us would agree that having one customer and one zip code in the nation does not count for being a serious broadband provider in that area. We believe that in terms of who -- pardon me, where broadband is available today, the government boundaries, census tract, census

block groups, or zip codes should be the way we evaluate whether broadband is available in an area. One customer in East Jefferson County, South Carolina, does not count as -- should not count as making broadband available in that entire county.

Finally, what is unserved? We believe that if speeds greater than dial-up are available to less than 10 percent of the residents and businesses in an area, that is sufficient to label that area completely unserved, completely unserved. If speeds greater than dial up are available to between 10 percent and 50 percent, we believe that qualifies to be called severely unserved. If only half the people in your city can do business from home and half cannot, that community is severely unserved.

If more than 50 percent but less than 90 percent of the residents and businesses in an area do not have access to broadband at speeds faster than dial-up, we submit that that community is moderately unserved. We have a lot of communities like this. We have more than 3,000 WISPS in this country, and by and large they serve communities where there is either no broadband or there is very little broadband or perhaps one resident of the county had broadband.

What about underserved? If a community has speeds greater than dial-up but no provider is able to provide speeds greater than two megabits per second, then we submit that that is the definition for underserved. Thank you.

EMY TSENG: Hello, thank you for having me this evening. My name is

EMY Tseng, and I am the director of Digital Inclusion programs for the city and county of San Francisco. Over the past three years, San Francisco has piloted numerous programs to bring technology access and digital literacy to our underserved communities. We have provided broadband services to low income housing, both public housing as well as nonprofit low income housing. And what I do is basically coordinate programs to promote adoption of Internet and increase computer usage by working with workforce development agencies to distribute and refurbish low cost computers.

We work on building the capacity of our computer centers and our digital literacy training programs. We run a number of "train the trainer" programs, we help furnish donations to these programs. We also engage

volunteers, we have a lot of tech-savvy residents in San Francisco who help us with tutoring and training, as well as technical support of computers, which actually it turns out to be a large barrier to adoption of technology, is the fear of where does one go when one doesn't have a computer.

My focus today, I'll touch a little bit on the definition of broadband in that we've been very flexible in defining broadband in our deployment. So we have anything from 500K through wireless mesh network in -- by facilitating of the deployment of these networks in some low income housing to providing 60 meg through fiber deployment to several public housing sites.

So we are very flexible on that.

But we are much more precise on the definition of underserved and

programs to reach underserved communities and how it define underserved communities through our programs.

So a recommendation in terms of a definition of underserved should refer to a community, i.e., a specific geographical area or demographic, that exhibits a significantly lower broadband adoption rate than the population at large in that region, state, or nationally. Note again that this definition refers not only to geographic area, but also to a population that shares certain common demographics such as income, ethnicity, language, or ability to speak English, disability, age.

For urban areas, especially to address the needs of low income communities in urban areas, there is a real need to define underserved in

this relative fashion, because major metropolitan areas such as San Francisco, New York, Minneapolis, Seattle have high broadband adoption rates compared to the national data but have also large underserved and low income populations. And in many of these communities, we actually see a larger broadband adoption gap. Similar to how one sees oftentimes a larger income gap, for example, in major metropolitan areas.

I would argue that the lack of access in an area of high adoption can put these communities at even greater disadvantage. For example, our school district is growing an all-on application citywide for teachers and parents to communicate, to get homework assignment and grades. And yet we've done very detailed demographic studies of broadband adoption, and certain neighborhoods that have high

concentrations of public housing, like the Bay View, have half the broadband adoption rate as Haight Ashbury, another neighborhood which -- another example is that factoring out certain characteristics like income and age, **Latinos** are four times less likely than whites to have Internet at home.

So we should be able to use this funding and other cities should be able to use this funding to serve the technology needs of these populations. Again, the definition of underserved focuses on adoption rather than necessarily physical access, speed, or cost, because while these are factors, the barriers to adoption go beyond access to infrastructure and affordability. The lack of digital literacy skills, the lack of technical support, particularly in

Languages other than English, accessible technology, lots of fears and concerns about security, privacy, online safety are major factors and the lack of adoption in urban underserved communities.

I would just like to say that San Francisco is not the only -- a number of major cities have undergone coordinated efforts to address both access and adoption needs in their low income and underserved communities. Cities such as Seattle, Minneapolis, San Francisco, Riverside, Boston, have really piloted programs over the past several years to address these issues in a systemic fashion. And I urge the NTIA to look to what these programs have done and these pilots to look for best practices on how to serve the needs of urban -- urban low income communities.

MR. SEGAL: Hi, my name is Bill Segal, and I'm speaking today as a consumer of broadband infrastructure for public safety. Whether the areas of discussion are rural or urban, a lack of broadband service can be a public safety issue. Law enforcement personnel need the ability to communicate and retrieve data quickly and efficiently in the field to best serve the needs of the community.

To adequately police southern Nevada, we have identified the need to be able to dispatch requests for service, retrieve supporting information, and enhance situational awareness, whether it be retrieving past history on a property or person, running criminal histories, retrieving DMV records or other public info, or accessing maps.

My definition of broadband is in

order to accomplish this, there needs to be a realistic minimum broadband capability of 400 K to 1.5 meg for what I'll call basic services and 1.5 meg and up for advanced broadband services. The basic broadband services bandwidth should be available in both rural and urban areas, and advanced broadband services would be more appropriately available in urban areas to support public safety needs.

Urban public safety needs stem from the more complex calls for service, a greater number of events, and respondents typically that occur. We also need to take the necessary steps to ensure that this information is properly protected and secure.

It is my belief that we should not limit our discussion to just rural

areas when we define underserved areas. We should expand the definition of underserved areas to include both rural and urban areas. For example, there are many places in the country today, even in places such as Las Vegas, where services aren't adequate. You can experience this today with your ability or inability as it were to make a digital cell phone call reliably. In fact, there is a cell phone provider uses that as their primary advertising campaign.

Now, imagine these limitations when we're trying to have viable broadband data services available for use by the public safety community. It's my belief that a broadband technology opportunities program should be used to build a broadband infrastructure that's necessary to include providing proper public safety to all areas of

the country including the state of Nevada.

In summary a national broadband capability brings great value to public safety because as we saw on September 11, 2001, the reliance on commercial communication services or single agency solutions proved ineffective in -- I'm sorry, ineffective particularly in times of crisis. Additionally, this program can provide a critical backup capability in the event of failure of those commercial and public safety agency systems. Lastly, this capability provides the potential to improve all public safety agencies' abilities to provide effective services in their communities without fiscal concerns over funding issues of in-house and contracted systems. Thank you for your time.

MR. MORGON: Good evening; my name

is Dick **Mirgon**, I'm representing the association of Public Safety Communications Officials. First I would like to start off by thanking NTIA for being here. And I know that may seem kind of odd, but I do a lot of work in Washington, D.C. with the FCC, DHS and FEMA, and the people in Washington, D.C. seem to forget we're out here. They seem to not understand some of the issues we have out west and out in Nevada. Like I explained to one gentleman a number of years ago as they were talking about radio coverage, that the state of Missouri would fit inside of my county, one of 17 counties in this state. We have some very unique problems here so the fact that they are taking their time to come out and listen to Nevadans in Nevada, thank you very much and I appreciate it.

When it comes to defining what's

broadband, if you ask as a black and white question, I would go with what Bill says here. About 400, 1 to 1.5 on the high end, but I don't think it's that simple. I think you have to look at broadband more like you look at America's highways, because this is just as important as America's highways. This is the next great leap in technology that will allow America to grow economically, to grow as far as education, and to be a better nation.

What you need to look at is, some places have interstates, some other highways, some have paved roads, some have gravel roads. This is really about what does the user need to accomplish the task at hand. And in my mind, the way to accomplish that is through dynamic networks. That you have to provide sufficient bandwidth that those people running

emergency services can have that bandwidth when they need it.

And I'm not just talking about cops and firemen out there, I'm talking about the doctors in ER, the clinics on tribal lands, that they can go out and send an x-ray somewhere to be able to get a CAT scan read, to be able to videoconference a specialist in another city. But that bandwidth goes unused in off hours. So to be able to allocate that type of bandwidth is one of the key issues. Public safety has had a plan out there for the last couple of years to take a lot of the 700 megahertz spectrum, pair it up with the private sector, and take the public sector spectrum and use it dynamically. Unfortunately the estimated cost of deploying that nation-wide is about 15 billion dollars. But I think that's a classic example of how the private

sector and public sector can work together on available resources.

I think what becomes critical to this issue additionally is the ability to upgrade the service. Today that person on the end may need 512 kilobits because of where they serve. But tomorrow they may need a meg, meg and a half because of the services they need. The equipment that you provide to those users has to be upgradable. You have to be able to dynamically grow with it. And right now by using wireless, wireless is limited by spectrum and technology; fiber is even limited, but all those technologies do change. You can now run multiple colors of light down a fiber, you can now aggregate spectrum to get better uses of bandwidth within our RF; you can even bounce the signals to get better use.

So it's important that that spectrum be able to be used. And I think to accomplish that, a lot of private sector has got to change their business models. I did many battles working for Douglas County with the private sector on providing broadband within communities, and their business model becomes so locked into how much they have to make per mile per customer that it becomes extremely difficult for them to provide that service because of their corporate model.

When it comes to issues of underserved and unserved, I think NTIA has to look at the **unserved** first. Underserved in my mind means you have access, you have connectivity, but it's just how much. So I think there needs to be an evaluation of does that person need more. But more importantly we

need to reach out and touch those people who have never been connected to the Internet, because it's all about jobs of the future. We see public safety communication centers and answering points and 911 dispatchers as virtual call centers in the future where people will be sitting at their homes. I said in Washington, D.C., on occasion I look in all those office buildings and you've got people sitting behind a desk eight hours a day looking at a computer screen, occupying office space, driving cars, using transportation, using heat, and I go: why can't they do that from home?

That it would save America millions of dollars, it would save the environment, and it's all about changing that mind-set. So we need to look at how we do this and how we deploy it and what's needed at the

far end, because there are those that are going to need more than use others and there just needs to be a quality assessment of what that is. Thank you.

DAVID VILLANO: Thank you, panelists. I really appreciate you being here being with the Department of Agriculture and focusing primarily on rural areas. When I was reading your bio, it talked about serving unserved communities in San Francisco. And that just didn't connect with me initially, that there would be **unserved** communities within a major city. I'm trying to tie all these things together with served, unserved, underserved, and what is speed, is something that's challenging both USDA and NTIA back in Washington, D.C., and I've heard some of you speak about, you know, establishing speeds.

Do you think that we should establish a base threshold speed for eligibility for our programs back in Washington?

MR. MORGON: I think I'll quickly answer before I pass it down. I think that's dangerous, because the wireless carriers can only do so much. The fiber carriers can do more. When you set a speed, you may be excluding people who can provide a service better than others, and they're just waiting for that next technology advancement tomorrow.

That's why I think in certain cases -- you have to look at it case by case -- that the connectivity at times is more important than the speed.

UNKNOWN VOICE: I would agree that connectivity is more important than the speed. Connectivity above dial-up

speeds is more important than the absolute speed. But obviously we need definitions to effectively benefit from the ARRA, so we do have to draw some lines as to what is broadband.

Would we all agree that faster than dial-up would be considered broadband? Okay.

VOICE FROM AUDIENCE (Inaudible.)

UNKNOWN VOICE: okay. If not, voice your reasons.

VOICE FROM AUDIENCE: That's why we're here this evening is to hear all these comments about it.

MR. MIRGON: You know, one of the things I find fascinating about these government issues is all the corporate people that read stuff into the records to make the case. And I would just say that, you know,

I realize faster than dial-up is arbitrary, but there's a number of people out there that want that bandwidth to be higher, because they can provide it and their competitor can't.

And we just need to be very careful. Our goal here is to serve people. This is taxpayer money that we're distributing to the community or distributing to corporate America to provide service to a community. Let's look at accomplishing the task and not worry so much about definition, because there are people that will do what they can to make sure they get the money, the competitor doesn't; and that may not be in the best service to the taxpayers.

MR. SEIFERT: One of the topics I heard too from the panel was a discussion of whether serving the

community should be based on the penetration rates or the availability. And I'm wondering if there would be any consensus within the group if it's available in an area, but people are just not taking it, wouldn't that be a served community as opposed to an unserved community?

MS. TSENG: That's why we focused on the definition of underserved.

Again, a concern of the -- of cities is that we do have major populations who do not -- who are not connected.

And that is due to, you know, different factors: income, education, language, et cetera. And these populations represent a large proportion of the people who basically don't -- are not connected, don't have Internet, don't have computers, are not connected to the educational and work force opportunities that are

out there. And that any definition should be able to include this large portion of the population.

JACK UNGER: Last I recalled our nation was based on equality. I think that's what we are addressing here. Equal access to the Internet these days is a vital component of enjoying equality in our country.

DAVID VILLANO: We have some questions that are coming in from the public. We have one from Jeff in Medical Lake, Washington who asks if we're doing a roundtable on the definitions of broadband, why is there no one from the FCC on the panel. The FCC is the main agency that provides the actual definition of broadband. The reason being we didn't have somebody from the FCC on the panel is this is a public meeting. We wanted to hear from the public as to what they felt the

definition of broadband is. But from Washington we do have staff members, we have Christie Sherwood here from the FCC who has been an integral part of this whole process. Both USDA, Commerce, NTIA, and FCC are all working together, because we do have a very limited amount of funds that are available to us and a tremendous task in front of us.

I just want to go back to the panel since we're talking about that. And I know we're going to be talking about this in the next panel. But one of the challenges that we're having back in Washington is there is a tremendous need to get into those unserved communities in some of the major areas. And how do we balance -- where do we get the best bang for the buck. That's been talked about. And how do we balance communities that have no broadband service versus a community that may

have an industrial park that could use Internet service, and by putting Internet service in an industrial park, can bring 20 or 30 new jobs to that community. I wonder if the panel had any comments on that.

JACK UNGER: Just briefly I would advocate that we serve those who have no broadband first and then fill in.

MR. MORGON: I would go back to the last panel, talking about working with local officials. The local people, the local officials know where the underserved or unserved people are. There's another significant value, too, and that's the partnership. Not only do you need that local government entity to help talk about it, get people to use it, but those people also know who can help leverage those dollars, what facilities can be used; if it's

wireless, do they have existing tower sites that you can use? If it's cable in the ground, what rights of ways do they have that may be more accessible than others by working through it.

So I believe it's critical to work with those local governmental entities because they understand where a lot of those resources of.

MS. TSENG: I think there's a danger in framing -- framing this as a rural versus urban issue. I have worked in a foundation, statewide foundation that addressed the digital divide. I'm on the advisory panel of the California Emerging Technology Fund. Both populations, rural, who don't have access to infrastructure, but also low income urban communities, again represent large portions of the communities that are still unconnected. So I

caution against sort of setting these communities against each other.

I would say that, you know, there might be different criteria, there might be ratings and definitions of, for example, underserved that are more relevant to one than the other, but that really in order to deal with this issue in a systematic way and bring -- in the end if what you want to do is bring a large number of people online, you really have to address the needs of both communities, types of communities.

MR. BLACKWELL: I would echo what some of my fellow panelists have said about working at the local level. I believe The Goshute tribe is here in Nevada on the Nevada/Utah border. Over seven years ago they declared a telecommunications state of emergency on their reservation

and have been unsuccessful to my knowledge to date in encouraging some sort of service provision.

There are opportunities for creative solutions. I think that the discussion that happened earlier on scalability and certainly oversight are critical. I don't envy you the decisions you have to make. But in Indian country we look at this opportunity, this may very well be -- these opportunities don't come around often in Indian country.

DAVID VILLANO: We'll turn it over to questions from the audience if you want to start lining up. I'm going to mix things up. I'm going to have line A and B, as opposed to one and two.

Line A?

KIM KELL: My name is Kim -

DAVID VILLANO: And please identify yourself and let us know if you have a comment or a question and try and limit yourself to one minute, please.

KIM KELL: Good evening. My name is Kim Kell, and I head up a company where we provide 500 computer stations and business centers to hotels throughout country. Hearing the issues today, there's a number of issues mentioned by the panel range from social, economic, and technical issues. But it seems to me that we need to stick with the broadest definition, because at the end of the day, we want to foster the best ideas and best innovation and really the best business models that are going to come out of this.

So for me, an underserved definition would be something along the lines of a population experiencing hurdles

or bottlenecks in having efficient point to point, and when I say point to point, I'm talking about the broadest sense, from the end use to the actual provide of broadband internet access.

And really the emphasis is on the hurdles and the bottlenecks. And that's really where I think the proposals need to come in to address, how to solve each and every one of these. And as I mentioned, it's a wide range. What I've heard is language, income, actual user friendliness, ease of use, and ultimately trustworthiness which I didn't quite hear. But using the Internet these days, there's got to be a sense of trustworthiness for all of the underserved population that's using it.

DAVID VILLANO: thank you.

FORBES MERCY: My name is Forbes Mercy, I'm a member of WISPA and I own a wireless Internet provider in Yakima, Washington. I did the math on the way down here and first I thought half a million would be able to deploy over our entire county of 4,200 square miles. The Indian reservation incidentally that is barely served is 1,500 square miles. That's 500 more than Rhode Island. The way I figured that out, by the time we did 39 counties to get service to every single person, we were over \$1.4 billion for Washington. There's not that much money.

Now, in listening to the audience and listening to the special interests and listening to how about getting people in the city, any time I hear somebody say let's get something to the city, I want to ask them to turn around and look at the

sign, which says this is a rural act. And the President asked us to make sure that everybody in the rural areas had the opportunity to have high speed Internet.

The state of Washington is passing a legislation right now that will say – House Bill 1516 – I'm sorry, House Bill 1701, Senate Bill 5916 -- which already sets guidelines for the minimum amount.

I think by this group getting tied up in the minutiae of establishing regulatory terminology, and I know it's from the Beltway, so you're going to have a lot of people who just want to have the terminology defined. I think what you are **doing** is slowing down deployment of an opportunity to -- and a deadline that was set by the President -- to make sure that we have access to all of our rural people and that

everybody can get it.

Now, I know I'm not going to get my whole area because we have people that are one person per three square miles. And that person is going to have to go to satellite or something which, if they work in telemedicine, won't work, because the uploads speed on satellite are too slow. So that's not going to help there either.

So the fine line for you is to maybe not to have to define everything, let the states define it; let the FCC define it; and you guys find a method that sticks more and adheres more to what the President's request is and therefore we can make the decisions to say okay, you can have 60 percent of your project, because obviously 100 percent to you means the East Coast gets none. And we're bigger and more sprawled out here

with a lot more rural, you can look at any cell phone map and you can see that. But we're not asking for it all, we just think it needs to be fair and we need to stick to the intent of the original request.

DAVID VILLANO: Thank you. Do any of the panel members have any comment? We'll go back to line A.

ROB IRVING: Hi, I'm from line A. My name is Rob Irving and I'm the general counsel of Cricket Communications. We provide wireless service in approximately 30 states and have recently been rolling out wireless broadband in urban communities. We would like to strongly urge the government entities when they look at the definition of underserved to consider a definition that's broad enough to encompass lots of the underserved in the United States.

We certainly have heard and understand that there are many people who are underserved because there are inadequate networks in their areas or too few networks in their areas. But as some of the panelists have also talked about, there's an enormous number of people in urban areas that are underserved because of their financial resources. A recent Pew Internet survey indicated that 75 percent of low income Americans do not have broadband in their home. And one of the primary reasons for not having broadband is because of affordability.

The Act talks about serving low income people and unemployed people in vulnerable populations. And we would like to urge the decision-makers as they're creating the definition of underserved to make

sure the definition is broad enough so that when innovative proposals come in to serve people in increased broadband Internet usage, those proposal can be considered whether they're looking at a rural population or an urban underserved population who don't have access to the Internet because of financial resources. Thank you.

DAVID VILLANO: Thank you.

To Line B?

JIM STEWART: Thank you. From Line B. My name is Jim Stewart and I'm with the Utah Education Network, the technical services director. Where do we start on this? I've been building wide area networks for over 20 years. And I can tell you that no matter how big you build them, you still need more. In Utah, in rural areas, we put in gigabit ethernet connections to Vernal, Utah

and to Delta, Utah with rural telecommunications providers seven years ago. And when we did that, we did that as an anchor tenant for those areas. And by doing that we allowed them to build ethernet into their customer base and provided a good economic engine for them. In fact, we told the folks out at Ubet in Vernal that they ought to consider themselves potentially having 10 gigabit out to there and one gigabit out to their customers, and they could be like New York City, except for they could have a better lifestyle because Vernal's a lot nicer place than New York City.

And all I would suggest is that we need to -- I know we only have \$8 billion. But if you think of what we've given AIG over the last four or five months, if you took that much money, you could hook every home in America no matter where it

was up with fiber. So maybe we ought to be directing dollars that way. And I really think that if you had -- see, at UEN we hook up urban community centers, rural community centers, libraries, and they're abuzz. People go there, they're using those and making good use of those things; along with every secondary school and most elementary schools throughout the state. And most of these have at least 10 gig.

Anyway I would like to see us have a definition that's more holistic, that has not just what the end user gets, but how do you hook them up to the national backbone. What does that mean? So should every community have at least 100 meg to the Internet? Because it doesn't matter if you have 5 meg to every user if you don't have a good pipe to the backbone. And I would like to see us have something that says

gigabit ethernet or 100 meg Ethernet, and it ought to be an Ethernet standard. So instead of looking maybe at a meg and a half or five megs, shouldn't we be looking at something bigger?

Thank you.

JACK UNGER: May I just make a comment in response to that?

JIM STEWART: Sure.

JACK UNGER: First of all I agree with your comments. Secondly we need not just a big pipe, a big fiber pipe to every community, but that fiber has to be accessible to more than just one incumbent telephone company in that community who controls that access to that infrastructure. We need I believe open access to that big pipe so that small local companies and

governmental agencies and schools can enjoy equal access to that big pipe fiber.

AUDIENCE MEMBER: I completely agree. We should not be competing on building the roads. We should be competing on once the roads are in place, how you move traffic across there. So you don't build one road for UPS and one road for DHL, you let them all use the same road.

JACK UNGER: Good analogy. Thank you.

DAVID VILLANO: We'll go back to line A, here?

SUSAN ESTRANA: Susan Estrana from the nonprofit group smile.us. I wanted to underscore some of the earlier points left open -- I think that's sort of the Holy Grail of broadband in this country and will

fundamentally change the system.

We have actually spent a lot of time looking at how to determine unserved and underserved areas and have come up with a series of facts to look at which sort of come into five different areas. One is the number of service providers or the availability of an open network to an area. One looks at price because the price, either a comparison to an urban area or many WISPS in some of the more rural areas are forced to pay extraordinary backhoe costs. And those costs come back to the usual users. So price is a real critical thing in rural areas.

Coverage in many rural areas is in town but you live, you know, five minutes outside of town and you don't have anything. It's a big deal for a lot of folks, where the FCC's data today is really

misleading, and I think we really need to take a serious look at that.

The upload and download speeds, I really love Jeffrey's idea about really looking at the grant challenge application and really determining what the upload and download minimums feeds for those particular areas would be and looking at that as a serious criteria for judging whether or not it's a viable upload and download.

And then obviously back haul or the availability of middle mile, for many usual areas, is the number one most significant issue of getting out of the area. You can build all the first mile or last mile depending on your perspective, but until you have a way to get the heck out of there to the nearest ISP aggregation point, you're kind of screwed.

DAVID VILLANO: Thank you.

ED ANDERSON: Hello, my name is Ed Anderson with the Benefits of Higher Education Act. Two real quick questions here. We talked a little bit again about this served versus underserved, and some of the previous panelists of the previous panel were talking about how effective communal centers are rather than having -- so that the definition of having access is maybe going to a communal center rather than having it actually delivered to your home. I'm wondering how credit for that kind of thing would be counted. Are they served or unserved if they have a communal access? So it's not just a numbers game of how many people signed up for it, there are these other factors that need to be considered. So that's just one thing.

The second thing, when we're talking about speed, we're at all times talking about a whole new paradigm here. Everybody talks about up speed and down speed when the evolution to interactive have -- and everything is going to demand symmetrical. Why are we not talking about that? We're clinging to this asymmetric standard that's basically a holdover from equipment limitations. Why are we not considering true symmetric bandwidth? because that's the future. The requirements are going to be interactive.

MS. TSENG: I would actually like to address the role of commuter computer centers. I think there needs to be both a drive towards getting computers and Internet access into people's homes as well as computer centers. What we've

really seen is that computer centers are successful when they're linked to other social service, educational, housing, work force programs. And really the role of the successful computer centers is to increase the digital literacy, exam comfort with computers. But in the end it's that a lot of them see their purpose in getting people comfortable enough to get -- motivate people to get at.

MR. SAGEL: And David, I think that this goes back to your discussion about if there are services available but not available into the individual's home. Do you consider that an unserved or underserved community? And communal center is a way to address that issue and negate some of the income issues that come into play.

MR. MORGON: I just wanted to make a

comment on bandwidth. One of things we tend to forget is bandwidth you have at your device in front of you is not necessarily because that's the bandwidth that's everywhere available. That's what your provider has given you because you're paying for it. They don't want Johnnie after school sucking down 600 movies from some European site. I mean there are so many things involved in bandwidth and the side of the pipe. This really has to be dynamic and we have to understand that all those things come into play, that when you say how much of the bandwidth is going to be available, is this grant going to be allocated because they can provide fiber? Well, they can provide it but they've got to provision it. It's a tough nut.

DAVID VILLANO: Thank you. I just want to remind everybody too that

this is a forum to provide comments. But you still have an opportunity to provide comments in writing as was mentioned through the NTIA web site. And that is an intake point for comments for anybody at FCC, NTIA, and for rural development.

AUDIENCE MEMBER: Hi. -- with PCIA the wireless infrastructure association. PCIA is a national trade association representing providers who enable the delivery of services, among other things broadband. It's important to reiterate I feel that the availability of wireless broadband is critical for ensuring broadband access to unserved and underserved areas as we've heard many of our previous panelists talk about that.

And to refer to the same Internet and American Life report that the gentleman from -- referenced, they

predict that the mobile device will be the primary device for accessing the Internet by 2020. Wireless is often the most efficient and cost-effective method for providing broadband services in many unserved and underserved areas. Wireless would be the only practical choice as has already been noted on the last panel.

We would strongly urge that any BTOP definitions including the definition of broadband must not disadvantage wireless or pit wireless versus wired service against each other. The conference report expresses Congress's intent that grants be made available to as many entities as possible, including wireless carriers, back haul providers, and tower companies. As such, Congress purposefully included wireless in its description of broadband services. Ensuring availability of

stimulus grants to wireless broadband wireless providers will significantly increase broadband penetration and consumer choice.

And then finally we believe that the NTIA should not define service fees as a condition for grant eligibility. Speeds evolve very quickly through evolution, it's a very case by case business or situation. To reiterate Mr. Region's points on not establishing a threshold, it's impossible to get it right for all in many situations. Thank you very much.

DAVID VILLANO: thank you.

JACK UNGER: May I just briefly respond?

MR. MORGON: May I.

JACK UNGER: There's a very

important distinction. When we say wireless broadband, that means on two very distinctly different things. Surf the Internet on your cell phone, that's wireless broadband. Connect to the Internet from your home, that's wireless broadband. It's fixed wireless broadband. The cell phone is mobile wireless broadband. They're very, very different in how you deploy them and how you provide them. So let's if possible try and be a little more specific when we say wireless broadband. What are we referring to? which? or maybe some other definition.

DAVID VILLANO: Go to line B.

VALERIE FAST HORSE: Valerie Fast Horse, and you guys heard me speak earlier. I think that we maybe were afraid to define this because we defined the word broadband, because

we're afraid of being obsolete coming out of the gate when other countries are touting 10 megabits up and down or 50 megabits in Japan or in some cases -- you know, maybe we're just a little bit afraid that we don't want to lock ourselves into this box. But I think we need to define it. I think we need to establish a baseline for residential customers separate from realizing that critical facilities like hospitals and schools and anchor institutions do need higher speeds.

But if we don't establish a baseline at the residential area, then people who are applying for grants to deliver broadband might deliver dial-up speeds, and then this money will be a waste.

You know, I'm really excited about it. I think we need to take a very serious look. We have to take a

risk, we need to define it at some point. And I think that -- I love this highway analogy because I'm thinking of all these things: do I want them to build me a four lane, do we need a four lane now or do we just need a two lane? Do we need it paved, or is a dirt road going to do? You know, it definitely needs to be scalable.

I don't want you to buy me the car; I was just joking earlier, I just want the road. But we need to talk about building. And I'm thinking we're talking about -- I'm just going to put a number out, one and a half meg, full duplex. up and down sustained rate.

I think it needs to be neutral, we can't discriminate against the traffic that goes on the network. Who cares if it's bit torrents, who cares if it's voiceover IP. It's

all 0s and 1s. But we need to develop a standard and set that as the rate of what people are going to deliver to assure accountability when people are going out and building their networks, so that we can assure that people are going to get what they're paying for.

And we talked again about the most bang for the buck. I still think there is extreme value in fiber. Fiber has very, very, very long shelf life. So there has to be a distinction between infrastructure that has very long shelf life like fiber and infrastructure that becomes obsolete in five or ten years. So I think that there should be priority given to people who are developing new infrastructure -- not existing, but brand-new infrastructure. And if they're going to do that and go to the trouble of building a middle mile to those

remote communities, I think they need to be considered very highly.

MR. MORGON: Can I add a comment to that, please?

DAVID VILLANO: Sure.

MR. MORGON: I don't have a problem with a meg and a half, I think just about everybody out there can do it. But I think we need to be careful when we look at the European and Japanese model. The government owns all the spectrum. They own the phone companies. It's very easy for Europe to say I'm going to push 10 megs at you because they just tell the companies, you're not going to use 400 to 450 megahertz. where in this country we've got a lot of people that have paid for that spectrum. So it's really difficult for us as a great capitalist nation with all these capitalist

enterprises we have, to replicate what these other countries have done, because they own the phone companies, they own the wireless industry, they are regulated entirely differently than we regulate ours.

MS. FAST HORSE: Okay, can I just add a couple of more comments?

These are comments that were submitted by my network engineers and it has to do with wireless so I'm just going to go through it very quickly. I probably will submit it --

DAVID VILLANO: Just try make it quick, because we only have 10 minutes left.

MS. FAST HORSE: Okay. We want to be able to use additional channels on the unlicensed spectrum in the 2.4 gigahertz spectrum and we want

those channels to be exclusive for the communities that are developing these wireless technologies on unlicensed spectrum, and they need to be non-overlapping. And we'll submit them in writing. I have 11 pages.

DAVID VILLANO: Okay. Thank you. Going back to line A.

AUDIENCE MEMBER: I'm Mark Fest, CC Communications. I do have a question for Ms. Tseng regarding her definition of underserved. I have to admit, coming from an industry standpoint, I think we've kind of been thinking about it from a bandwidth standpoint. How much bandwidth, under this amount bandwidth whether it's underserved, whether or not there's backhaul capability even if you have bandwidth in your network that might be underserved or unserved,

And when I look at the Recovery and Reinvestment Act, I guess two goals of one, creating jobs, and then sustaining jobs. And I see how that works when you're investing in infrastructure. There are jobs for putting in the infrastructure and then – with that capital investment you have a business model in place where **there are** customers that can afford to cover the recurring costs.

But in the case of providing a grant for outreach or technical services, education, those type of things, what happens in year two? When the grant money is gone?

MS. TSENG: We have a couple strategies in terms of sustainability. One thing that we integrate in our programs, we really regard it as an investment in human capital. We work very closely with

our workforce development programs who, for example, Goodwill and another program, Relia-Tech who, actually their trainees, our local residents are trained to refurbish the computers and become computer technicians. And they get practice to do technical support and fix other residents' computers. That has -- that gives them the skills to basically get great paying jobs. Relia-Tech has an 80 percent workforce placement rate. That's extremely high for anybody who has worked with a workforce development program.

So again there's the investment in the capital, but there's also the investment in the people. And when I'm really talking about is really investing in people's skills, developing a local workforce, developing people's skills to really participate in society today.

Also another investment is, like I mentioned, we're rolling out, the school district is rolling out an online application to connect teachers and parents. Again the whole idea of really leveraging technology to increase educational opportunity really I think should be part of this. So we -- we work very closely and we leverage existing social service and human service programs. So that in the end, the end goal that I see, or at least my personal end goal, is that technology is not a separate thing. It's actually really integrated into the types of services and programs that we have for this population. But we need to actually get there.

DAVID VILLANO: And sustainability is one of the subjects of some of the panels that are in the upcoming public meetings.

Over to side B.

MARIAM AURANG: My name is Mariam Aurang. I was with Nextel's broadband in San Diego, California up until last week. I'm an engineer with entrepreneur spirits. And I have to advertise for myself here as well.

But basically the comment I wanted to add was defining broadband is one thing. Adding a reliability factor is something that's probably-- it's, if NTIA or the government wants to plan something, that reliability factor is really important. If you want to define, you can say, okay, these are the limits that we want to have on the bandwidth, but you need to add a reliability factor to it.

I like to use the analogy of highways. If you want to have a

business, you want to know that that road will be there for you for you to deliver your service. For wireless or sorry -- for broadband or Internet access, it's the same way. If you want to be in a rural area but you want to get your information or your orders through the Internet, you want to have a backbone that's reliable and I think it's very important to add that to that definition.

DAVID VILLANO: Good point. Thank go.

JONATHAN SNYDER: My name is Jonathan Snyder. I'm the CEO of KeyOn Communications. We consider ourselves one of the largest wireless companies serving rural markets. We currently operate in 11 states and we cover 50,000 square miles of network footprint. I guess we are -- we focus often about

definitions, and creating caps. And I can tell you as an operator and on the private side, getting a service that is faster than dial-up to these communities that we're in -- and we locate our equipment on water towers and grain elevators -- getting service, some kind of speed and I can't speak to underserved in the urban areas, but I can tell that you any kind of broadband that is faster than dial-up is coveted, is desired.

So focusing on the minutiae of definitions, we have a situation where we have a finite amount of money that is being allocated towards this. And we should view it as such, so that means that business cases have to be strong, that we have to assume that maybe money will not come after this and these business cases have to continue on.

I think another thing is when we

Look to define the speed, and we get locked in that, we have to also recognize that technology is an evolutionary thing and not a revolutionary thing. We can't gold-plate our country with a broadband infrastructure that looks like South Korea or Japan. It's just not going to happen.

I think the goal of the program and the BTOP and the NTIA and -- is that we want to bring broadband to the most people as fast as we can with the lowest cost. We recognize we only have 7 point -- and I say **only** because the path math that was done earlier, I thought that was a good example. We don't have enough money to gold-plate everything and provide 10-meg synchronous type speeds.

But I can tell you just from our experience, broadband at any level that's better and faster than

dial-up is highly coveted in the exact areas that this plan is designed to target. And I think on the tribal lands, I think that would definitely resonate. And I think that the applications that can go on that need to be considered in terms of what that user experience is going to be. Because we can't assume that everyone needs to download megs and megs and megs of information, when the first thing they need do is just get onto a faster service than broadband.

And I think there is another element I want to tie in. The broadband discussions have not included information sharing and communication. And just -- we actually operate from Nevada. And we have a fairly large network there. So a lot of this is, we don't have a good information sharing to the FCC, back from the

FCC, to the various constituent groups that all have different agendas. And it will be hard to break those barriers down, and that's more of a comment.

But I think underlying this is communication and getting the word out about that broadband even being available, once it is. That speaks to the business case part of it.

Thank.

DAVID VILLON: Thank you.

DAVID UNGER: Excuse me. May I make a brief comment in response? I salute you for your large scale deployment efforts. As far as communicating with the FCC, I didn't quite hear your company name. I don't know if you are in WISPA or not, but I assure you that **WISPA** is very actively engaged with the FCC.

JONATHAN SNYDER: Yes.

DAVID UNGER: Most specifically in getting access to the TV white space spectrum, which we desperately need in order to expand coverage.

JONATHAN SNEIDER: It's Keon Communications. We are not part of **WISPA** currently.

DAVID VILLON: We have two commenters left and two minutes.

BEN HEWLETT: My name is Ben Hewlett, I'm the owner of the Mother Lode Internet. We're a rural internet provider in the Sierra foothills of California. One of the things that I've noticed here is that I've just worked with CETF, California Emerging Technology Fund. I think they have a fairly exemplary definition of unserved and then underserved, above which is -- they define as three down and one up. But one of the things I think we

need to address is unserved, which they kind of address in the CETF standards, is unserved is any area that cannot -- that can only get dial-up or satellite.

I think one of the things we haven't addressed here in this discussion is the importance of latency, that perhaps we should address latency in some sort of our upgrade definition here of projects that we want to fund.

In our area, an example of that is if we just move our clients from dial-up to ISDN which is a very low latency digital signal, that has huge impact on the Internet experience and we have people paying over \$100 a month for that type of service just because of the latency benefits. So it's just paving that gravel road, so to speak, that has a huge impact. If we could just get

AT&T to change their price structure on it, it would have a huge impact on the availability of Internet experience in our area.

The other thing I just wanted to mention is I really want to support the fact that there's trim tabs out there for your program such as making public bandwidth available for more community use. For example, in our area we have a scenic fiber trunk coming into our school network that has tons of bandwidth, but it can only be used for schools. If we could just make that available to a wider sector of our community, we could make it available at the students' homes. So I encourage us to look at all the trim tabs too.

DAVID VILLANO: Thank you. And the last commenter?

TERRY PARISH: My name is Terry Parish and I work with 16 municipalities called Utopia in Utah. We have got about 250 miles of fiber running down I-15. I thought a definition of broadband, I ought to look in Webster's dictionary, so I pulled out my old Webster. And you notice I said, my old Webster? Between broad and broadcast there was no word. And it was less than a 20-year-old dictionary. And so I did go to "broad" just to see what it said. And one of the key things it said is "without limits." And I would really encourage is that in terms of defining broadcast today, in the first nine years of the 21st century, I think it needs to be without limits. I think you do need to set some numbers that you can use during this grant process to figure out how you roll these things out, because you can't start off without

limits. But it's going to get here; it's going to come and it's going to come over a period of time.

I went to a fiber provider – I live on a ranch up in Colorado back in the mountains away. And we talked about it and he said, “do you know what the model is to get fiber out to you, Terry?” And I said about the same as it was, the model to get electricity out to me. REA did it. In 1956 I believe we got electricity. About the same kind of model as it takes to get one telephone line out to my ranch. But they did it with telephones.

This is a change in our whole national direction. Broadband infrastructure is going to be out there for a long time to come. And I'm not saying -- and I'm not trying to discourage approving applications getting the best thing we can out

there today. But don't limit what broadband is by a definition that puts limits on it. Because broadband is without limits. That's all I have.

DAVID VILLANO: Thank you. Any final comments from our panelists? No. Okay, with that I'll end the session. I'd like to give a round of applause to our panelists and thank them for being here. and thank them for being here.

(Applause.)

DAVID VILLANO: Just remember we're still taking comments through the Web, and there is a one hour break and we'll start with our third panel in one hour. Thank you.

Please stand by. The meeting will reconvene momentarily.

And now we're getting ready to

reconvene.