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Transportation and Telecommunications Committee  
October 24, 2013

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[LR343]

The Committee on Transportation and Telecommunications met at 9:00 a.m. on Thursday, October 24, 2013, in Scottsbluff, Nebraska, for the purpose of conducting a public hearing on LR343. Senators present: Annette Dubas, Chairperson; Jim Smith, Vice Chairperson; Lydia Brasch; Beau McCoy; and Dan Watermeier. Senators absent: Galen Hadley; Charlie Janssen; and Scott Price. Also present: John Harms.

SENATOR DUBAS: It's a little bit after 9:00. I know there's a couple of senators who haven't shown up and there's one of them. So we will get this hearing started out of respect for everyone's time. Well, I do want to thank everybody for coming this morning. My name is Senator Annette Dubas. I'm the Chair of the Transportation and Telecommunications Committee. I'm from Fullerton. I'll introduce the committee members who are with us this morning. To my far right, Senator Dan Watermeier came in early this morning to join us. So we thank you, Dan, for making the trip. Senator Jim Smith is the Vice Chair of the committee. To my immediate left is someone who probably doesn't need an introduction in this community anyway, is Senator John Harms. And we are in the facility that is named after Senator Harms. So thank you for hosting us today, Senator Harms; Senator Beau McCoy and Senator Lydia Brasch. I believe Senator Janssen may be joining us later. We haven't heard anything different from him so we'll introduce him as he comes in. At the far end of the table is Anne Hajek. She's the committee clerk. It's her job to keep a recording of everything that is said and transpires here this morning. So I'll be giving you a few instructions a little bit later to help her with her job. And at the far end of the table is Joselyn Luedtke. She is the legal counsel for the Transportation and Telecommunications Committee. We have two other members of our committee, Senator Galen Hadley and Senator Scott Price, who are not with us today. Let's see. Let's give you the housekeeping instructions. As you came in the door, there was a couple of sheets there. The green sheets, if you plan on testifying, coming forward and testifying this morning, if you would fill that out. And then when come forward, hand that sheet to Joselyn. And that again, helps Anne with

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her recording and making sure that we have an accurate record. If you don't plan on testifying but would like to be a part of the record, the pink sheet, you can sign in on the pink sheet with your name and information and then you can just check whether you support or oppose the legislative resolution. These interim hearings are a lot less formal than our regular hearings. We aren't necessarily testifying in support or opposition to something. These are hearings that we use as a committee to help educate us about a variety of issues. So there's a lot less formality with these types of hearings. If you have any handout sheets, we would ask that you have ten copies. And then again, you can hand those to Joselyn and she'll make sure that we all get them. If you don't have enough copies, we can make sure that there will be enough copies made for all of the committee. When you come forward to testify, if you would state and then spell your name, please, even if it's a very simple name. Again, that's just to help the clerk, making sure that she has an accurate record. My understanding is these microphones are very sensitive. So they're asking that you not move them around or handle them because it'll pick up a lot of noise which will be distracting for Anne as she's listening to the recordings. I guess I'll ask a quick question. How many people plan on testifying this morning? Okay. And please, if you didn't raise your hand but you feel at some point you want to come forward and speak, don't think that you can't. I just want to make sure...we're scheduled to be done with the hearing around noon. So I wanted to make sure that everybody had ample time to come forward and testify. So it looks like we'll have that time. Typically, we usually ask your testimony to be around five minutes, but again, this is a little less formal. And it doesn't appear there are a lot of people to testify. So if you have things that you feel you need to share with us, please do and then know that the committee will likely have questions for you. So if there's something that you didn't feel you were able to explain a lot, I'm sure a committee member will pick up and ask you questions and be able to go forward from there. And also, if you are here, you have written comments but that you don't really want to come forward to the table, if you want to hand those comments in to us, we'll make sure they get into the record as well. If I could ask everybody to silence their cell phones and other electronic devices. It interferes, again, with the recording. So if you could just put it on silence, we would

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appreciate that. I think that's about the end of my housekeeping...list of housekeeping duties so that we can move forward with the hearing. I'll do a brief introduction of the legislative resolution. And then as I said, typically in a hearing when we have a bill, it's those who support the bill come forward. Those who oppose the bill come forward after that. But since this is just a legislative resolution, it's kind of first come, first serve. Whoever wants to be the first one to get up and break the ice and come forward and testify, we would appreciate that. I'll begin with a quick introduction and then we'll go from there. Well, good morning, fellow committee members. My name is Senator Annette Dubas; that's A-n-n-e-t-t-e D-u-b-a-s. I represent Legislative District 34. And I want to thank my committee members for coming out for this hearing this morning and everybody in the audience and for Senator Harms for hosting us here. We really do appreciate that. As a committee Chair, when interim study resolutions are introduced, you know, we have a lot of latitude as to how those hearings will be conducted and where they'll be conducted. And I know the importance of making sure that citizens all across the state have an opportunity to participate in their government. So with the introduction of this particular resolution, I know how important telecommunications and communications are to our entire state. And I wanted to make sure that we came to Scottsbluff so that those people who live in the western part of the state feel that their government is responsive to them and we value their input. And so that's why we're here this morning, to give people an opportunity to tell us what's happening at the western end of the state. This is also an opportunity for us to further educate ourselves as a committee and also as the general public about what the Universal Service Fund really is. People know that they're paying it on their phone bills but don't always quite understand what it is that...where those dollars are going. And in my mind, those dollars are a very good investment for the citizens of Nebraska when it comes to telecommunications. So this a great way for us to highlight those benefits. Since the inception of the Universal Service Fund in 1997, it has ensured that all Nebraskans have comparable access to telecommunications services at affordable prices. But recent changes by the Federal Communications Commission to the structure of the federal USF will require states to make decisions on the future funding of

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telecommunications for high-cost users. Today, we'll hear from the telecommunications industry, from educators, and from customers who not only pay the Universal Service Fund fee but also benefit from access to advanced telecommunications services in their rural communities. It is my hope that we will all gain a better understanding of the Universal Service Fund, the benefits it has provided to rural citizens, and the ways in which it could be modified or made better to serve our citizens. In much the same way that the telephone helped connect rural residents to friends, relatives, businesses, and health services, advanced telecommunications services such as broadband Internet are connecting people in rural Nebraska with international markets, healthcare, and educational opportunities as well as information to aid their businesses and really, truly live a good life. According to a recent UNL survey, 81 percent of Nebraskans had Internet access in 2010. That number is likely closer to 96 percent now. The policy question for us as state legislators is whether or not it is in our best interest to connect that remaining 4 percent regardless of the cost or consider inaccessibility a cost of just living in a remote area. The obligation to telecommunications companies who accept the Universal Service Fund dollars as a carrier of last resort often referred to as COLR by the experts...there is a lot of alphabet soup when it comes to the telecommunications industry so at some point today if any of the testifiers are using those acronyms, I'll try very hard to ask them to define what the acronyms stand for, again, so that we can have a good understanding of the issues. That means that everyone in the company's territory requesting telephone service must be served. So if you're receiving those dollars, you have to make sure that everybody is receiving the services. Should this obligation extend to Internet providers? And if so, how do policymakers ensure the mandate is funded? Infrastructure needs for all citizens has long been a core function of state government. The infrastructure underlying Internet access is essential to protecting public safety, achieving economically competitive markets whether we're in the cornfield or in a boardroom. It's also very important to help educate the people. We use it for healthcare, diagnosing and treating healthcare issues. And it is our job as state legislators to understand the issues that are confronting our citizens statewide in regard to this service. LR343 starting out here today in Scottsbluff, next week we'll be in

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Aurora, and then conclude in Lincoln where we will be able to hear a variety of testifiers from all different walks of life talk to us about what the Universal Service Fund means, how it's working, what it's done in the past, and where we probably need to be looking at to see where it goes in the future. So I'm really looking forward to the testimony this morning. I think we'll have a lot of opportunities to ask questions of those people who are the experts in the field. And so with that, I'll close my comments. I'll tell you I'll answer questions, but I think there are people behind me who can probably do a much better job. And we'll go from there. Thank you. So if we could have the first brave person willing to come forward and open up this discussion about LR343, appreciate that. There we go. Thank you. [LR343]

BONI CARRELL: Good morning. [LR343]

SENATOR DUBAS: Good morning. [LR343]

BONI CARRELL: I'm Boni Carrell, B-o-n-i C-a-r-r-e-l-l, and I'm the executive director for the Rural Nebraska Healthcare Network which is the nine hospitals in western Nebraska and also the cochair of the Nebraska Statewide Telehealth Network. I'm here to testify today on the benefits of the Universal Service Fund both at the federal level and at the state level. The Rural Nebraska Healthcare Network has recently completed a dedicated broadband healthcare network that was funded through the Federal Communications Universal Service Funding. And that's a mix of dedicated buried fiber and leased service agreements with service providers in Nebraska. We serve a total of 21 hospitals in the state and their associated clinics. So that's a benefit from the federal Universal Service Fund. We are also members of the Nebraska Statewide Telehealth Network which covers the whole state. Membership is 80-plus hospitals, all the public health departments, mental health centers, some rural clinics, and then the Nebraska Hospital Association. That group provides services statewide and does clinical consults between physicians and patients. The focus of the Nebraska State Telehealth Network is to increase healthcare access, specifically in rural areas where it's not available or the

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specialists aren't available. And then we're also connected to the Nebraska Department of Health and Human Services and are part of the Health Alert Network. So if there's a health alert that goes out, that Nebraska telehealth video system can be activated and all the hospitals in the state can participate in a videoconference with the State Medical Officer which is a great benefit. I did want to tell you that over the last three and a half years we've been keeping statistics with the Statewide Telehealth Network and we've had over 12,000 clinical consults. Two-thirds of those have been for mental health conditions. And I don't know if you're aware, but mental health providers is a great shortage across Nebraska. Some areas are covered well and other areas are very lacking in mental health services which is, I think, why you see the usage of the telehealth network for mental health the majority of the time. Other uses of the telehealth network are administrative meetings and educational sessions. Sixty percent of the use is for clinical consults, thirty percent for the educational meetings, and then ten percent for administration-type meetings; saves everyone--healthcare providers, patients, and anyone who participates--a lot of time and money for travel. So it's a great resource and that resource is supported by the Nebraska Public Service Commission. And the other activity that the Public Service Commission has just agreed to support is upgrading the telehealth bridges on that system. And there are I believe five or six hospitals in the state that are getting upgraded bridges, and that allows us to connect with other hospitals and to use that bridge to connect multiple providers or patients together for whatever the necessary service is. Thank you for your time and... [LR343]

SENATOR DUBAS: Okay. Thank you. [LR343]

BONI CARRELL: ...the opportunity to testify. [LR343]

SENATOR DUBAS: ...for coming forward. I'm sure we'll have some questions so if you'll stay there we'll be... [LR343]

BONI CARRELL: Sure. I'd be happy to. [LR343]

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SENATOR DUBAS: ...ask some questions of you. Yes. [LR343]

BONI CARRELL: Certainly. [LR343]

SENATOR DUBAS: Are there questions from the committee? Well, I do. You mentioned that...what was the time period where you've served 12,000 people? [LR343]

BONI CARRELL: The last three and a half years. [LR343]

SENATOR DUBAS: The last three and a half years. And you said two-thirds of those were for mental health conditions. [LR343]

BONI CARRELL: Mental health conditions. [LR343]

SENATOR DUBAS: So you're able to access like psychologists. What types of mental health providers are you accessing through telehealth? [LR343]

BONI CARRELL: Psychiatrists and psychologists and they do direct-patient consults. So there's only the two. You know, patient on one end and the provider on the other, private consults. [LR343]

SENATOR DUBAS: Okay. So most of the time with mental health needs those are ongoing. [LR343]

BONI CARRELL: Right. [LR343]

SENATOR DUBAS: You know, you need to continue to meet with that professional. So does that happen then on an ongoing basis, that they have regular...? [LR343]

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BONI CARRELL: Yes, a lot of those would probably be multiple sessions with a single patient. So it's not two-thirds of, you know...it's not 8,000 separate patients. [LR343]

SENATOR DUBAS: Right. Right, right. If you didn't have access to these Universal Service Fund dollars, how much of an impact would it have on your ability to provide these services? [LR343]

BONI CARRELL: I'm not sure we would be able to provide those services statewide or even in individual hospitals without the Universal Service Fund support. [LR343]

SENATOR DUBAS: And then you mentioned the bridges, and you said, was it...there are six hospitals that are going to be receiving those upgrades? [LR343]

BONI CARRELL: I don't...it's either five or six. [LR343]

SENATOR DUBAS: Okay. And those are some of the larger hospitals, and that allows... [LR343]

BONI CARRELL: Right. [LR343]

SENATOR DUBAS: ...different hospitals to connect with them. [LR343]

BONI CARRELL: Yes. And I could have explained the Nebraska Telehealth Network is a hub and spoke network. So there's eight hospitals across the state that are the service hubs. And then there are additional spokes. Like in western Nebraska, Regional West Medical Center is the hub, and then the eight hospitals around us--Chadron, Alliance, Gordon, Oshkosh--are all connected to Regional West Medical Center as the hub. And that bridge is much like a phone bridge...it's very similar technology to a phone bridge, allows multiple entities to be connected at the same time to a meeting or a one-on-one connection. [LR343]

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SENATOR DUBAS: I'm going to imagine that your professionals, your doctors and those people who use these services, will be quick to say how important it is to them. Do you get any feedback from your patients about...? [LR343]

BONI CARRELL: We do, and specifically we see evaluations from the patients. And they're very much in favor of not having to make the travel which takes them away from their jobs and their families in this area for almost a day or half a day. And they're very pleased with the system and they use it repeatedly. So it is of great benefit. And it gives people in rural western Nebraska access to specialists. There's some at Regional West, but even in Omaha or Colorado, those types of things, that they wouldn't have access to otherwise. [LR343]

SENATOR DUBAS: Very good. Are there other questions? Senator Brasch. [LR343]

SENATOR BRASCH: Thank you, Madam Chairman, and thank you for your important testimony today. I'm curious. The patients, are they traveling to a clinic or an institution, a hospital for services that are provided telehealth-wise, or are they doing it from their homes? [LR343]

BONI CARRELL: Currently, they travel to an institution, either a clinic or a hospital. And that's based on the payer, rules and regulations. A provider cannot bill for telehealth services provided to a patient in their home. [LR343]

SENATOR BRASCH: And would home access be affordable, or would that be the next step? Or is that something that's not...? [LR343]

BONI CARRELL: I think that's the next step and one that the industry worldwide is looking at with telehealth services is actually allowing the patient to access their physician from their home. [LR343]

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SENATOR BRASCH: Good. And the reason I do ask that is what we're looking at today is the fact that there are areas that are not being reached by reliable, high-speed broadband or services in our community. So these dollars would be valuable if spent reaching remote areas at their homes, correct? [LR343]

BONI CARRELL: Exactly. [LR343]

SENATOR BRASCH: Okay. Thank you. [LR343]

SENATOR DUBAS: Any other questions? Thank you again for coming forward. [LR343]

BONI CARRELL: You bet. [LR343]

SENATOR DUBAS: We really appreciate your information. [LR343]

BONI CARRELL: Thank you. [LR343]

SENATOR DUBAS: Next testifier. Welcome. [LR343]

RICK DERR: Thank you. Thank you for allowing us to communicate directly in this part of the state. It's a pleasure to not have to travel to Lincoln. My name is Rick Derr, R-i-c-k D-e-r-r. I'm the president of Action Communications, and I possibly have a unique perspective because I am a contractor and equipment provider for much of the technology that Boni was talking about. And the six bridges that she addressed, we won that business this year. We were recently awarded all of those bridges across the state. So that's kind of a unique point to look at. But in addition to that, I'm a wireless Internet provider in the Panhandle of Nebraska. And the third area, we're a CLEC which is a competitive phone company. And so we have a lot of firsthand knowledge of the steps it takes to remit to both the federal and the Nebraska Universal Service Funds. And then

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obviously I'm a user of the phones and things like that. So I think that I probably have battle scars from all four areas. But the first thing that I probably feel is one of the most important areas is the benefit of the telehealth network. And our company is...I mean, we're salesmen. We're out trying to solicit the hospitals to buy the products that we sell. And I'm really certain that without the Universal Service Fund that very few hospitals would invest in this technology. It would be a tremendous hit on their cost of doing business and it would take them multiple years I think to put that expense in their budgets. And you know, I see every hospital tightening their belts, tightening their belts, you know, especially with the healthcare proposals that are out there right now. And so I think without both the federal and the Nebraska Universal Service Funds, I think it would be a tremendous challenge to keep the network that we've invested maybe...I think I've been providing these services for about seven years. And so it would be a waste to see that go away, I think. So perhaps we could stop now and I'd entertain questions about us as a provider to the telehealth network. And then I'll testify about being a broadband provider. [LR343]

SENATOR DUBAS: Certainly. Are there questions? I would ask a question about...you said you received the contract to provide the equipment for the telehealth services...or for those bridges, is that correct? [LR343]

RICK DERR: Yes, that's correct. [LR343]

SENATOR DUBAS: Is that a highly competitive market? Do you have a lot of competition out there or within the state or outside of the state? [LR343]

RICK DERR: Well, it's regulated by the Nebraska Public Service Commission. And so you have to be an authorized provider within the state. And so for the most part we competed against CenturyLink or perhaps Qwest, before they merged, was in the mix. And so it was some very large telecommunications providers. [LR343]

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SENATOR DUBAS: Okay, I think the rest of my questions are probably going to go where you're going to go with the additional testimony. But let's make sure there...Senator Brasch. [LR343]

SENATOR BRASCH: (Inaudible)...when you had mentioned competition, are you a Nebraska-based company in all aspects? [LR343]

RICK DERR: Well, we're based... [LR343]

SENATOR BRASCH: You're (inaudible). [LR343]

RICK DERR: ...our home office is in Scottsbluff. I mean, this is where our office is. We do, because the Panhandle is relatively small, we do a fair amount of work in Torrington, Wyoming, and actually in South Dakota and Colorado. You know, we service about a 100-mile radius of Scottsbluff. But the focus of our work is in the Panhandle. [LR343]

SENATOR BRASCH: And then you have the contract for statewide hospitals, correct? That's what you said. [LR343]

RICK DERR: We provided all of the bridges to all of the bridge hospitals in the state. [LR343]

SENATOR BRASCH: And do...manufacture those bridges here or are they something that...? [LR343]

RICK DERR: No, we sold them to them. [LR343]

SENATOR BRASCH: Okay. [LR343]

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RICK DERR: Actually, the appropriate wording would be that we leased them to those hospitals. And the lease payment is reimbursed to the hospitals from the Nebraska Public Service Commission which is ultimately from the Universal Service Fund. [LR343]

SENATOR BRASCH: And you're helping to get me better informed. Now are these bridges, are we talking hardware or software or a combination of? [LR343]

RICK DERR: It would be hardware. It's...each hospital specified the type of hardware that they desired. I think the bulk of them, it's a product made by Polycom. So it just collects. Like Boni said, the whole state is made of multiple hub locations. So you know, I'm very familiar with the Panhandle, Scottsbluff being a hub. Regional West Hospital, that's where this piece of equipment would be located. And then each hospital, say Kimball as an example, if Kimball needed to talk to Gordon, Kimball would come to the hub and then it would be relayed out to Gordon. But if they needed to talk to North Platte, then Kimball would go Regional West and then to North Platte. But perhaps, let's say Benkelman--I have no idea--has a small clinic. Kimball could go to Scottsbluff to North Platte and then over to Benkelman. It possibly sounds very complicated. But the University of Nebraska Medical Center...Rick Golden is actually...who I think is a chairman of the technology group that designs it, and it's actually fairly simple to use and very, very reliable. [LR343]

SENATOR BRASCH: Very good. Very interesting. Thank you. [LR343]

RICK DERR: You bet. [LR343]

SENATOR DUBAS: Other questions along this line? If you want to give us a little more information then from the broadband aspect, that would be great. [LR343]

RICK DERR: Absolutely. Action Communications has been an Internet provider since

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dialup times. We started providing dialup lines. I guess my background is in the two-way industry. And because of that, I had access and I owned quite a number of tower locations throughout this area that I described earlier. And so as wireless communications evolved, we've placed equipment on those towers and tried to serve a majority of the customers in our area. The challenge is as a businessman: Where do I go? I'm going to go where I make a profit because I'm an unregulated entity. And so I'm regulated by my pocketbook in essence. And so we built in the Scottsbluff...in the dense populations. And we were one of the very, very first people that provided that service even before the phone company had DSL and Charter had Internet or the cable TVs had Internet. And prior to, in Scottsbluff we have a fiber carrier named ALLO. So we were well before all of those. And we enjoyed a very nice success in our area because there wasn't much competition. The challenge came...is as competition came in and we split the pie and it got split smaller and smaller and smaller. Well, wireless doesn't do as well as fiber. I mean, it has a finite amount of ability to deliver Internet speeds. And in essence, fiber kind of has an infinite ability. As technology changes, there's not a lot that they have to do to give you more speeds. So we saw our customer base in the towns where the competition was begin to erode. So our business plan was to push out past the city limits. And so we would go to a housing area that didn't have...you know, where we could provide the majority of the service. And you know, then we just kept growing and growing and growing. Currently, we don't supply 100 percent of the city of Scottsbluff. Because of trees, we have challenges. But you know, I would say the city of Scottsbluff 100 percent can have broadband access from somebody. And you know, if ALLO or Charter or the phone company didn't have service there, my company or certainly one of my other wireless competitors would have access in that area. And so then we would reach out to the communities, the smaller communities. In Scotts Bluff County, there is Mitchell and Morrill and Minatare. But that still leaves the guys that are ranchers where there's one or two people per square...or one or two homes per square mile. And I think, you know, the phone companies have enjoyed the bulk of the Universal Service Fund money for 25-plus years probably, ever since I've been in the business which is almost 40 years now. And I think recently there's been some funding

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go to the wireless cell phone carriers. But there hasn't been a tremendous mechanism to put funding toward an individual wireless carrier...or an individual Internet carrier such as myself. And I think the challenge that as you come up with unique and new rules is many times we could go pursue an amount of money--I'll make up some numbers--perhaps a \$50,000 grant that might service the northeast corner of Dawes County. And yet it might cost me \$30,000 in attorney fees or in grant-writer fees to get a \$50,000 grant. And our company has never saw the benefit to go after these types of fundings. You know, anytime you get a grant or you're a recipient of Universal Service Fund fees, that comes with a certain amount of responsibility. When I testified in the first half of my testimony as a provider to the telehealth network, we have many audits that the Nebraska Public Service Commission requires of us. We have outside auditors, inside auditors. And so that business comes at a cost. And I would assume that if you were to fund Internet providers, that would also come as a cost. I would just encourage you to not make that cost so great that a provider doesn't see the benefit and we just back away and keep going where the population can fund it. So I guess that's the conclusion of my testimony. [LR343]

SENATOR DUBAS: Questions? Senator Brasch. [LR343]

SENATOR BRASCH: Thank you, Madam Chairman, and thank you, Mr. Derr, for your testimony today. I believe you're bringing up a very important factor when you talk about the Internet services needing additional foundation or funds even though it's a private industry. Our federal government and government in general has spent millions of dollars wiring schools with fiber optics and our hospitals, our health community. And then when it comes to children, for example, doing on-line homework, the students that are living closest to the wireless towers or in town or something, they have high-speed Internet. But when you get into a community where it's not economical for private industry or government dollars to reach people, then the health benefits, the education benefits, they tend to diminish. And what would it take to help bring that industry, I guess, on a level playing field of someone who say lives where it's economical to

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run...have broadband versus wireless? [LR343]

RICK DERR: You know, that's a tremendous challenge because I noticed there's at least one of our competitors in the room. And it has to be a level playing field for all providers. But I also think that there has to be a certain amount of accountability for those dollars. And I think that there needs to be...the phone companies have kind of set the bar very high. And when we build a system, carrier class is a term. And that's the very highest level that can be attained. But we usually don't build carrier class service to an area that services maybe five or ten people. Carrier class means that everything is backed up, redundant. If you have a transmitter that fails, there's a second one ready to take over. And that more than doubles and possibly triples your cost of doing business. But I'm not suggesting that you make providers do carrier class-type of service, but certainly something, a click above what you might go on eBay and buy equipment for, which I buy a lot of equipment on eBay. But it's a great challenge. I'm not sure I'm comfortable telling you what it would provide or what the answer to that is but I think that some accountability and fairness for multiple providers. And you know, what happens if one provider goes out of business? What happened to all that money that was spent in that community? Or perhaps it just financially doesn't work and you take your equipment. We've recently shut down an operation in Alliance, Nebraska. Well, because I didn't build Alliance with any public money or anything, I had the freedom to do that. I just went and picked up my toys and left. But if Alliance would have been built by Universal Service Fund money, I mean, I assume that there would be strings that I wouldn't be able to do that with. [LR343]

SENATOR BRASCH: Very good. Thank you. [LR343]

RICK DERR: Yep, absolutely. [LR343]

SENATOR DUBAS: Other questions? Thank you so much for coming forward and sharing your information. [LR343]

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RICK DERR: Absolutely. [LR343]

SENATOR DUBAS: We really appreciate that. [LR343]

RICK DERR: Thank you. [LR343]

SENATOR DUBAS: Next testifier. [LR343]

MATT LARSEN: I didn't realize I was supposed to bring ten copies, so I only have five. You'll have to share. [LR343]

SENATOR DUBAS: That's fine. We'll make sure that every committee member gets...welcome. [LR343]

MATT LARSEN: Thank you. Good morning. My name is Matt Larsen. I own and operate... [LR343]

SENATOR DUBAS: Matt, could you spell your name, please? [LR343]

MATT LARSEN: M-a-t-t L-a-r-s-e-n. [LR343]

SENATOR DUBAS: Thank you. [LR343]

MATT LARSEN: (Exhibit 1) I own and operate a company called Vistabeam. We're a fixed-wireless broadband provider that services parts of Wyoming, Colorado, and Nebraska. I'm also currently serving as a member of BITAG, the Broadband Infrastructure Technical Advisory Group, the FCC's open Internet access committee. I've also served as the FCC chairman for the Wireless Internet Service Providers Association. I'm not a lawyer. I'm not super familiar with all of the mechanisms in the

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Nebraska Legislature for Universal Service Fund. But as the owner of a telecommunications business and my interactions with policymakers, I do have some familiarity with it. It's my strong belief the Universal Service programs have become obsolete for their intended purpose of providing service to unserved and underserved populations and have instead become a giant giveaway program to mobile wireless carriers and wire line local exchange carriers. The policy mechanisms in place are structured so alternative telecommunication providers such as fixed wireless, cable providers, and municipal networks are denied access to USF funding even though these networks are often able to provide comparable and even superior service at a fraction of the cost. I have a couple examples I'd like to use to illustrate this point, but first I thought I'd give a little background on how my business operates. Now similar to Mr. Derr who just testified, I run a fixed-wireless operation. That's what we use to deliver service. The way that works is we basically put an antenna on somebody's house and point it back to an access point nearby. The equipment we use is inexpensive and powerful. The radio that goes on a customer rooftop is generally around \$100. That radio is capable of receiving up to 50 megabit speeds. That's typically not what we deploy, but it is capable of going up to those speeds. The typical cost for a fixed wireless operator to deliver broadband to a customer in our service area is under \$300 per customer and that includes the cost of hardware, backbone, and labor to install the service. Our radios use unlicensed spectrum which has no licensing or permitting fees and has far more capacity than all of the licensed mobile spectrum allocations combined. Since we use fixed, high-gain antennas, we can deliver faster, more reliable, and more consistent connection than mobile wireless or satellite providers at a fraction of the cost. We also deploy our own voice over IP service and provide the ability for our customers to use one of the many voice over IP services that are available. In Nebraska, there are over 40 fixed-wireless providers delivering broadband to tens of thousands of customers in every corner of the state. Fixed-wireless is a reliable, inexpensive, and rapidly evolving technology that has easily surpassed DSL capabilities, costs far less than fiber to deploy especially in rural areas, and will always hold a strong performance advantage compared to mobile wireless and satellite. This brings me to my first example. I'd like to

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call your attention to the River Road project that took place this summer in Sioux County. That project used a \$498,000 grant from the Nebraska Public Service Commission to build a fiber-to-the-home network to 35 potential customers. That works out to \$14,228 per customer so that they would have comparable speeds to people in urban areas. To provide a point of comparison in my handout, I have an invoice here from August of 2008 for the installation of four meg service to Agate Fossil Beds National Monument at the far end of River Road; total cost, \$2,698 for the installation of a repeater and the first month of service. Four meg might not sound like a lot today, but in 2008, that was actually a pretty good connection. That connection has been upgraded since the original installation to be able to provide 20 meg speeds and will soon be able to deliver 50 meg. For us to extend the same level of connectivity down River Road, it would have taken about five more repeater sites for a total cost of about \$20,000, a relative bargain at only \$571 per customer, 26 times cheaper than fiber. The point of this exercise is to not only show that fixed wireless is less expensive, but also that if USF funds were directed to alternative providers, the residents of River Road could have had broadband five years ago for a fraction of the cost. This project is not directly related to the Nebraska Universal Service Fund because it was a Public Service Commission grant but serves as a good illustration of the program and lets me point out...it serves as a good illustration of the problem, lets me point out Mobius Communication's parent company, Hemingford Telephone which did the River Run project, which receives over \$120,000 a month in Universal Service Fund revenue to service 771 landline customers. That's \$155 a month per customer. Hemingford Telephone then used this guaranteed income to obtain a USDA Broadband Infrastructure Loan for \$10,280,000, a rate of \$13,333 per subscriber in their service area. That must be a truly amazing network up there. However, according to their Web site, the top speed that they offer their customers is 5 megabit for \$60 a month; comparable, 3 meg for \$50 a month according to their Web site. To contrast this, in my handout I have an article that details a tower that Vistabeam recently deployed near Alliance to pick up customers that could not get any other mobile or landline broadband service. Using a small portable tower, solar power, and fixed-wireless technology, we

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put up an access point with multiple redundant back haul paths, almost infinite power backup delivering up to 50 meg speeds and serving up to 50 customers for under \$7,500. The setup was deployed over a two-day period. And the first customer, a 12 meg business customer running a nationwide consulting business, was installed within a week. Let's put it simply: \$120,000 in USF funding to an ILEC, you get 3 meg for \$50 a month; \$0 in Universal Service Funding to a wireless ISP, 4 meg for \$50 a month. I think that summarizes the problem with USF. For my second example, I'd like to turn to the Nebraska Dedicated Wireless Program. The purpose of this program is to provide access to wireless service in rural areas. Judging by the grants that have been given under the terms of this program, this is only going to mobile wireless carriers and not fixed. And it's been heavily tilted in the direction of Viaero Wireless. In 2012, the commission granted Viaero \$3.7 million for 4G system upgrades. U.S. Cellular received \$1.2 million for upgrades. In contrast, Verizon Wireless has deployed 4G across almost the entire state and does not appear to have received any grants. There's more. Just this year, Viaero proposed a \$3.9 million upgrade program with a cost to the Nebraska Broadband Pilot Program of only \$2.9 million. Over just the last 2 years, Viaero has milked the state of Nebraska for \$6.8 million dollars in grant money. Unfortunately, the details on people served and project costs are hidden behind confidentiality requests so it's impossible for the public to see where that money is going. This is a common theme with Viaero which is currently trying to pass a Universal Service Funding bill in Colorado that is tailor-made for their projects and specifically excludes fixed wireless and small telephone companies. Viaero claims that 4G meets the broadband needs of Nebraskans. But 4G fails the test of scalability. Substantial signaling overhead, high tower oversubscription ratios, the physical characteristics of mobile networks, and the limited amount of available licensed spectrum means that 4G networks are a broadband time bomb. They're fast now, but just like EDGE and 3G before it, 4G will soon be overwhelmed by the increasing number of smartphones and data-hungry applications. And dropped packets will soon join dropped calls as an everyday part of the mobile wireless experience. 4G subscribers are also typically locked into long-term contracts and must plan their data usage carefully to avoid getting charged for going over the data

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caps. In their comments to the Nebraska PSC about the Broadband Pilot Program, Viaero did get one thing right. They stated, "Any artificial or noneconomic allocation methodology which does not heavily weight costs of deployment on a per-subscriber basis will not satisfy the Commission's funding responsibility to prudently marshal the scarce public resources managed by the Commission in the two funds." I agree wholeheartedly with this statement. However, 4G mobile wireless networks are several times more expensive to deploy than fixed-wireless networks and cannot match the speed of fixed wireless. When I started deploying fixed-wireless networks in 1999, the top speed available was about one meg. Today, we're using fixed wireless to deliver up to 300 meg speeds to business customers and up 12 meg to residential users. I've had to upgrade my network through several generations of wireless equipment and have increased the speeds offered to my customers every time. The cost to do these upgrades has come out of my business cash flow. In almost ten years of business, we have not raised our prices. How many businesses can say that? In conclusion, my ultimate solution to the Universal Service Fund would be to do away with it. It's turned into a giveaway program for the companies that hone their expertise at gaming the system and hurt the fixed-wireless and cable providers by funding their competitors. As I've shown in my examples, the money spent is not producing a substantial benefit, and inferior broadband technologies like DSL and mobile broadband are getting the majority of the attention of the program. However, I know that doing away with USF is probably not going to happen, and I do recognize the benefit of USF to rural health and lifeline-type programs. If we're going to continue USF, I would like to suggest three things: number one, the establishment of a broadband infrastructure bank that would make low-interest loans available to broadband providers; number two, reevaluation of the eligible telecommunications carrier status to include fixed wireless and other alternative providers; and three, elimination of the state USF charges to telephone customers. This would reduce the tax burden on Nebraska citizens, open up the program to additional providers and more competition, and using loans instead of grants would make the program self-sustaining. The playing field in broadband is already tilted towards the big operators to the detriment of smaller independent operators,

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fixed-wireless providers, and cable operators. The state of Nebraska has no business granting millions of dollars in subsidies to a Colorado company like Viaero Wireless or USF-dependent company like Hemingford Telephone when there are local fixed-wireless providers in Nebraska that could deliver better service for lower prices with little or no subsidy. Thank you. [LR343]

SENATOR DUBAS: Thank you for your testimony. Are there questions? I think the one that I would have is just boiled down in a very, very simple nutshell of, the purpose of the Universal Service Fund is to make sure that we have carriers of last resort so that everybody has access. Your...are you able to reach those people in those most remote areas? Are you always going to be willing to continue service to those people in those most remote areas or people in the high-cost areas, I should say, rather than just remote? [LR343]

MATT LARSEN: I would say that if I was put in a position where I was able to accept money from the program and that was one of the conditions, I don't think there would be any problem doing that because what we do is maybe unregulated. But if you look at just the technology side of it, wireless is far more inexpensive to deploy, the cost of maintenance is far less expensive than wire line networks. So the ability to put together a sustainable economic model is way more likely to happen with fixed wireless than it is anything else and at a lower cost. So I would have no problem providing that kind of service assuming that we were going to have access to the money to deploy it. [LR343]

SENATOR DUBAS: You touched on this in your testimony, but I'm a total novice in this area. So explain to me again the difference between the fixed wireless and what we have in place now. [LR343]

MATT LARSEN: As far as... [LR343]

SENATOR DUBAS: You're a fixed-wireless provider, right? [LR343]

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MATT LARSEN: Yes. [LR343]

SENATOR DUBAS: Okay, what's the difference between your business and like the fiber, the fiber optics? Just kind of give me an overview again of the different ways of delivering service. [LR343]

MATT LARSEN: Okay. The main difference is we put up towers. It's a terrestrial deployment. So we put equipment on a tower and then we point a high-gain antenna back to that tower. In doing so, it enables us to maintain a higher signal-to-noise ratio which lets us provide a faster, more reliable connection. The technology has evolved very quickly, so fixed wireless is now capable of much higher speeds than DSL. It's not as fast as fiber. However, it can serve as an excellent complement to fiber in many areas because it's so much less expensive to deploy, you know, like the River Road example, \$15,000 per home compared to under \$600 per home. And that was assuming that we were going to have to build out a bunch of repeaters to do it. So it's...basically, the way to look at it, I think, is that for right now and to do especially unserved and underserved areas, fixed wireless is the best technology that could be used to do that. It's cheaper. It's capable of better speeds. Compared to fiber, you know, fiber is always going to be the fastest thing available. But fiber networks also take upgrades as well. So you can put the fiber in now, and typically within five to seven years, the end point and the other pieces of the fiber network are going to need to be replaced or upgraded. So there is an ongoing cost with those, so that's the biggest difference. [LR343]

SENATOR DUBAS: And there's not as many requirements for upgrades and improvements with the fixed wireless? [LR343]

MATT LARSEN: We typically go out and upgrade our network every five years. If you take it, I've got some customers who have been using the same radio for seven or eight

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years now. I've got other customers that as they move up to higher speeds that they request, that they want to do, that they want to purchase, then we go ahead and upgrade them to a system that has more capacity. [LR343]

SENATOR DUBAS: Are most of your customers individuals, or do you have businesses or a combination of? [LR343]

MATT LARSEN: I'd say we have about a 75-25 split; about 75 percent residential, 25 percent business. [LR343]

SENATOR DUBAS: And then going back to that carrier of last resort, so because you're a private company, you know, you're going to be focused on making sure that you maintain profits and can keep your doors open. I guess I just want to make sure that I'm understanding that you feel if you had access to some of the Universal Service Funds or something else like that, you would be much more willing to make sure you provide services for those high-cost areas than you would be right now. [LR343]

MATT LARSEN: Yes. I mean, ultimately the most expensive part of deploying a fixed-wireless network is up front. So if the up-front cost of putting in a repeater and then installing the customer equipment was covered, then the ongoing...there would be no need for any ongoing support after the initial installation because it cash flows after that point, to be able to replace the network without requiring any further funding. That's been my experience with it. [LR343]

SENATOR DUBAS: Thank you. Questions? Senator Smith. [LR343]

SENATOR SMITH: Thank you, Madam Chair. Mr. Larsen, talk to us a little bit about the ongoing servicing for these facilities. So let's say you install it. And you're going to be the...provide carrier of last resort, service of last resort for those consumers, what kind of redundancy are you going to have with the snowfall on the rooftop, collection of

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snow? What are you going to do to ensure that they have reliable service? Do you have technicians that will be able to go into the field and perform repairs? That's all part of that ongoing service as well. [LR343]

MATT LARSEN: Yeah, I don't feel like I would have any problem meeting a lot of the same kind of requirements that telephone companies have to meet. We build in battery backup and redundant connections into almost all of our tower sites to keep them operational. A lot of the issues that we deal with that cause service outages are the same things that telephone company and fiber providers have to deal with. If lightning hits and blows up a modem or a wireless antenna, then there's going to be a service outage. So we have a policy of trying to get a customer serviced within 24 hours...24 to 48 hours with 72 hours as the far end of that window. We don't always make it, but if we're talking about something where we're getting Universal Service Fund and I could support having, you know, maybe one additional tech then that would enable me to meet those deadlines. It's a matter of...look at the power companies. For the most part, a power company linesman, and no offense to any power company people that are here, but for the most part they sit in the office and drink coffee. But when there's an emergency and everything goes down, they scramble and they go out and deal with the problem. In our business, I can't really afford to have a lot of people sitting around. So it would make sense to...if we had some Universal Service Fund support, I could probably maintain more people in reserve so that we could go out and deal with these situations in a more timely manner. But there are trade-offs in there. So I don't think there would be any problem trying to meet the same kind of deadlines that current providers have to meet. [LR343]

SENATOR SMITH: All right. Thank you. [LR343]

SENATOR DUBAS: Senator Brasch. [LR343]

SENATOR BRASCH: Thank you, Madam Chairman, and thank you for your testimony.

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Now is fixed wireless different than other wireless (inaudible)...? [LR343]

MATT LARSEN: Very much so. [LR343]

SENATOR BRASCH: And how many fixed-wireless providers are in Nebraska and say, across the country? [LR343]

MATT LARSEN: In Nebraska, there are at least 40 fixed-wireless providers. [LR343]

SENATOR BRASCH: Okay. [LR343]

MATT LARSEN: That number kind of goes back and forth because there are some consolidations and then new ones spring up all the time. So it's kind of hard to tell. Across the U.S., there are over 2,000 fixed-wireless providers. Around the world, there are tens of thousands. Fixed wireless is being used by...I was just at a conference last week, and one of the leading manufacturers said that they've shipped 16 million radios of their...the model that they use to...the latest model of what they use to deliver. So the number is probably somewhere around 25 to 30 million fixed-wireless users around the world. In some places like the Czech Republic, fixed wireless is actually more common than any other type of broadband deployment. [LR343]

SENATOR BRASCH: Yet it's the minority when it comes to wireless providers. [LR343]

MATT LARSEN: Well, there's different...the biggest difference between fixed wireless and mobile wireless is the fact that fixed wireless uses an antenna with high gain. What that really means is you can get more capacity through that connection and it's going to be more reliable. When you have a mobile phone like this, it's got a small antenna. So I don't know. You ever had a dropped call? [LR343]

SENATOR BRASCH: Yes. [LR343]

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MATT LARSEN: You drive over certain hills, I know. Everywhere around here, I know where all the dead spots are. That's because this has a very low-gain antenna and it can't always maintain a reliable connection. So the biggest difference between mobile and fixed wireless is when fixed wireless is installed, we can make much more...we can put together a much more reliable connection that's going to be more consistent without high latency or overloading and it's going to be able to deliver faster speeds than a mobile wireless network will. [LR343]

SENATOR BRASCH: So fixed wireless would solve the dropped call situation. [LR343]

MATT LARSEN: It's...you can't...the dropped call situation would be if somebody had voice over...you could run voice over IP at your house. [LR343]

SENATOR BRASCH: Okay. [LR343]

MATT LARSEN: But fixed wireless, you can't take that same high-gain antenna and put it on your car and drive around. It's meant to be put on a house and aimed at a tower. [LR343]

SENATOR BRASCH: And are the fixed wireless, the industry, they're ineligible for the funds? [LR343]

MATT LARSEN: Fixed-wireless providers are not eligible. You have to be certified as an eligible telecommunication carrier in order to be able to receive funding through Universal Service. That's a federal mandate. [LR343]

SENATOR BRASCH: Is there...it's a federal... [LR343]

MATT LARSEN: And it's something that...the states control the eligibility. [LR343]

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SENATOR BRASCH: Okay. And is this a picture of what your units look like? [LR343]

MATT LARSEN: That's a picture of a prototype unit that we put up in the last couple of months. [LR343]

SENATOR BRASCH: And it looks like it uses solar energy as well. [LR343]

MATT LARSEN: Yep. [LR343]

SENATOR BRASCH: And a solar panel. My question that I would have is when we have public power and there are storms and the power goes down and quickly--hopefully quickly--we have power because a grid, a commonly owned grid... [LR343]

MATT LARSEN: Right. [LR343]

SENATOR BRASCH: ...that runs and connects to the nation and our state. Well, when it comes to communications, one example very recent on our farm, our tower was struck by lightning...of our provider. And I was without Internet for almost two days because of high winds. And do I drive to town ten miles, get to the library to get back on-line and connect if where two miles away from me, because they have another provider that was not struck by lightning, they're up and running? And you would think that as we get more and more progressive in our culture, society, the way to do business, virtual schools, virtual healthcare, that we wouldn't have that luck of the draw. Oops, too bad. We have severe weather in Nebraska, period. We shouldn't have an "oops" situation. You know, there should be some redundancy or networking, something to keep people up and running, in communications, just like a phone line. You know, for the most part, those are reliable. Do you see that evolving at any point? Or is that...? [LR343]

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MATT LARSEN: Well, it's kind of the luck of the draw to a certain degree. Other networks are not immune to any of these issues either. I can tell you that this summer we had nearly an all-day outage on Charter's business fiber network because gophers ate through the cable. And part of their network is redundant and part of it's not. This happened about four years ago. They had an outage in eastern Nebraska that took out pretty much every Charter Internet customer pretty much from Grand Island to the west. So there's going to be some outages here and there. You can't predict the future. You can try to build around it and provide as much redundancy as you can. The towers that we put up there, I've got multiple redundant ways to get backbone into those towers. I put in, you know...we either have solar power or we have battery backup that's sufficient to run it for 24 hours, and the in solar and some wind power cases indefinitely. You know, I've got sites that we haven't visited in three years that have been running just fine. If they get hit by lightning, it's going to take out everything on the tower. But if a tower gets hit and you have a redundant network, everything can turn around and it can only...it can be set up so it only affects that tower and the customers off that tower. So I mean, it's kind of luck of the draw how easy it is to fix. And I would say of everything, fixed wireless has got to be the easiest to fix and get repaired quickly compared to any of the other technologies because it took a long time to fix...it takes a really long time to fix fiber cuts and getting people dispatched to go out and deal with that. Same thing when there's a cut in a copper line that goes out to feed a ranch, it takes a long time to troubleshoot those things. So out of all these things, I think fixed wireless is probably better suited for dealing with those problems than anything else. [LR343]

SENATOR BRASCH: Very good. Thank you. [LR343]

SENATOR DUBAS: Other questions? Seeing none, thank you so much for coming forward. [LR343]

MATT LARSEN: Thank you. [LR343]

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SENATOR DUBAS: We really appreciate your information. Next testifier. Anyone else?  
[LR343]

ALAN LUBECK: Good morning. My name is Alan Lubeck, A-l-a-n L-u-b-e-c-k. I'm representing CenturyLink. Good morning, Madam Chairman. [LR343]

SENATOR DUBAS: Good morning. Thank you for coming. [LR343]

ALAN LUBECK: (Exhibit 2) Vice Chair Smith and committee members, thank you so much for allowing me to speak and for having a workshop on...a hearing on this important matter for Nebraska. I'll give you just a brief background for me. I've been in the telecommunications business for more than 25 years, started off with United Telephone, provide service here and have gone through all the changes through Sprint to Embarq and now to CenturyLink. And I've worked in many different areas, but I've been in public policy for the last five years. And for CenturyLink I work on Universal Service issues. And so primarily what I've been doing the last year or so is helping states to understand the issues through Patrick as well as directly understanding the issues that the FCC changes have on different states. And so I wanted to take just a few minutes to talk about that today. First I want to tell you a little bit about CenturyLink. As I said, we've evolved from being the telephone company here. We provide telephone service in 37 states, and we also do many other things. And listed on the second slide tells you some of our primary growth drivers. We have more than 13 million voice customers, 6 million broadband customers, and we just...we've been offering TV service. We announced for Omaha. And that will be one of our new markets this year and next year. And we have about 135,000 Prism TV customers. It's like cable TV. And that was at the end of second quarter. We also do fiber to the tower. And these are not to the towers that the previous testifiers were talking about. These would be to mobile wireless towers. We've connected about 16,000 towers across our footprint. And the...what we do, I don't know if you're aware that...I think you went to a tower. Some of you went to a tower yesterday. We provide the connection from the tower back to the

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wireless company's switch. So the call is wireless from the handset to the tower. And then we provide services to the wireless companies to get back to their switch so they can connect calls. So we fiber...we put fiber out to the tower. They buy services from us and they connect the calls and the data stream. And then last year, we bought a company that does managed hosting and cloud services. I'm not sure if you or your kids have ever used an iTunes account. If they have, they use cloud. So cloud services are becoming much more...they're used much more often. We can provide hosting for companies. Disaster recovery is a great place that we provide services for. Our company is headquartered in Louisiana. We learned a lot from Katrina, that you need off-site storage for data backup. And so we provide that service to companies. You can see on the next slide that we provide service across Nebraska. And our largest collection of customers as far as land mass is right here in the Panhandle. We also provide service across the northern and throughout the state. You can see that we have over 800 employees here in Nebraska. But what I'm here to talk to you about today is the reforms that Universal...that the FCC has done. The FCC studied this issue for over a decade before they made these changes. And they've changed intercarrier comp as well as Universal Service. And it's all as a result of the 1996 Telecom Act, it's just progressions from that. Competition came up. You've listened to some of our competitors here in this area. And we have competitors like that across the country. We've lost voice customers to them as well as to mobile wireless and competitive...CLECs and nationwide. I put in a Web site that you can go to and see the USTelecom's paper. But USTelecom has a graph there that shows the wireless-only households are 38 to 39 percent of the market now. They don't receive any voice service from the landline company. While the ILECs like us, incumbent telephone companies have about 32 percent of the market and VoIP providers, 29 percent. Now, the VoIP provider share looks higher than it probably should because AT&T and Verizon both provide VoIP service, which is a different way of providing telephone service. And they have about 5 percent of the market. So if you moved that...and that's included in the 29 percent. So it's really competitive VoIP providers provide about 24 percent of the market. For price cap companies, that's the larger

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companies--Windstream, CenturyLink, AT&T, and Verizon and several others--federal USF is being repurposed. It's going...over the last 15 years, it's provided service throughout our service areas for rural service to help offset the high cost there. Now it's changing to be very...it's going to be very granular where the service areas...where we get money from the federal Universal Service Fund in order to provide service to customers. And it's down to the census block level. And you'll see a little bit later...I'll explain a little bit more about which census blocks might be eligible for funding. The FCC model created big swings in support. Like I said, we're in 37 states. In 20 of our states, we're going to see increased funding or could see increased funding from the Universal Service. Nebraska is one of the states where we are likely to see decreased funding. And the reason for that is we will only receive support where there is no unsubsidized competitor. Fixed wireless is an unsubsidized competitor in most cases. So we will not...where they can provide four megabit service to customers then we won't get any money from the federal Universal Service Fund in that census block. So where a census block is covered by Universal Service, we're going to compete against those wireless providers without any funding. We will only receive funding where there's no other competitors. The FCC is currently supposed to finish by the end of 2013. They haven't...their modeling is nearly done. With the shutdown in the government, it'll probably roll into 2014 a little bit. After that point, it'll take...we have 120 days once everything is done. The rest of the rules related to the funding, the obligations that we have to take on have not been finalized yet. So we're not sure whether we'll take the money. We're hopeful. We're working with the FCC every day trying to make the rules workable so that we can accept the money and be able to continue to provide service and build out broadband services in rural areas. There's a...I think Patrick had shared a Balhoff and Williams white paper and I believe Mr. Balhoff is coming next week to testify in Lincoln. And I don't want to steal any of his thunder. But the FCC changes really put an onus on the states to figure out how to provide affordable, comparable services in rural areas. And the reason for that is the intercarrier compensation changes that I mentioned earlier, intercarrier compensation is being greatly reduced intrastate. The FCC took on intrastate compensation and took it away from the Nebraska Public

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Service Commission and reduced the rates on terminating compensation. And over the period of five, six years we're going to...we'll be down to no compensation for other parties that want to terminate calls to our customers. With that, the states are left to figure out how to...if they want to replace that funding, work with the carriers, work with different technologies in some areas to replace, either to make it more competitive, to work with the customers or the companies to get more...to get additional funding out to rural areas. Nebraska is in a much better position than half the states because there's currently a fund available to incumbent phone companies. The other half of the states are really in a bind right now. And several of them are looking at adopting new funds because they don't have a fund today. Mr. Bahloff came up with this, the five kind of concentric circles. What these circles really tell you is in the dark blue in town and the next suburb areas, there's already competition throughout those areas. In Scottsbluff, there's competition. You've heard from two other providers for landline services as well as wireless services and they compete mainly in these two circles. They sometimes go out into the little higher cost areas. Those higher cost areas, again, we will not get any funding in those. The FCC looked at these outer three circles and to provide broadband four megabits down, one megabit up broadband to all of these three circles was about \$6 billion a year for ten years. And they didn't have...due to funding they chose the middle circle, the green circle. And they're putting \$1.8 billion a year to fund broadband in this green circle. We have to continue...if we take the money, we have to continue providing voice services as well as providing broadband to these customers. The outer circle would be farms and ranches that are way away from town. I saw a lot of those as I was flying in yesterday where you have one farmhouse, one ranch per square mile. The FCC has determined that the highest cost 1 percent households in the country will only be able to get satellite service. So there will be no federal Universal Service Fund money going to those highest 1 percent households. I would assume that Nebraska being a very rural state would have...more than 1 percent of the households in Nebraska would fall into that category where Rhode Island probably has none. The next slide is Scottsbluff and Gering local service area. And it will kind of give you an idea. The red areas are where cable is covered. I would assume that those are economic

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areas because cable doesn't get any Universal Service Funding. So those red areas is where it's economic to provide service to customers. The tan or the beige areas, the rest of the areas, those are the areas where we would be looking, where the federal Universal Service Fund may provide funding. So if you think of the concentric circles, as you get further away from town, you'll go out from areas in three, four, and then five, the fifth circle. And the fifth circle would be the outer areas and they will not receive any federal Universal Service Funding. And those customers over time, unless the Nebraska commission complements the federal funding, will be left to satellite service. So that's why it's important to Nebraskans that as you change, update the Nebraska Universal Service Fund, that you take into account the federal fund. And my suggestion is to complement the federal fund by providing support where the federal fund doesn't. We want to help. Our history as a company...CenturyLink started as a very rural one-exchange company in north Louisiana and has grown over time. But the roots are still rural. And we want to provide service to all of our customers in all 37 states. We just need...we're willing to compete without funding in areas where there's competitors. But in areas where it's too costly for competitors to be, we just need your help. And we would like to continue working with you to make that...to help additional Nebraskans get broadband service and reliable voice service. [LR343]

SENATOR DUBAS: Thank you. Questions? You reference several times for areas that are especially remote in Nebraska, probably the only way they would be able to receive services is by satellite. [LR343]

ALAN LUBECK: Yes. [LR343]

SENATOR DUBAS: And my understanding is we're at capacity with satellite. [LR343]

ALAN LUBECK: One of the issues. [LR343]

SENATOR DUBAS: What would it take to increase that capacity through satellite?

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[LR343]

ALAN LUBECK: I'm not a satellite expert and I don't claim to be. I was in a workshop similar to this in New Mexico a couple of weeks ago. And one of the small phone companies did the satellite service as well. And they said that it was going to be two years before they could get any additional customers on the satellite and that they quit providing voice service over the satellite because it wasn't reliable enough. [LR343]

SENATOR DUBAS: So if people are being told, well, you have access through satellite, but yet there's no more capacity in satellite, is that being taken into consideration when we're looking at this issue? [LR343]

ALAN LUBECK: I think that...now this is just my view personally. The FCC found that they didn't have enough money to provide service everywhere so they tried to put the money where they could get the most customers broadband. And they assumed that the states were going to pick up the rest. [LR343]

SENATOR DUBAS: So they're not concerned that there is no more satellite capacity. They're just saying, well, that's the state's...the state needs to take care of that issue. [LR343]

ALAN LUBECK: I don't know that they're not concerned. I wouldn't say that. [LR343]

SENATOR DUBAS: Okay. [LR343]

ALAN LUBECK: I would say that most of them live in Washington, D.C., area and some of them have never even visited an area that would be affected by this. [LR343]

SENATOR DUBAS: And in your closing comment you talked about where you especially need access to Universal Service Funds, and it's in those areas where there

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is no competition, correct? Did I get that straight? Right? [LR343]

ALAN LUBECK: Um-hum, um-hum. [LR343]

SENATOR DUBAS: Okay. I just wanted to clarify, make sure that I was understanding that correctly. Are there other questions? Thank you very much for coming forward. Next testifier. Anyone else? Good morning. [LR343]

CONNIE HANCOCK: Good morning. I'm Connie Hancock, C-o-n-n-i-e H-a-n-c-o-c-k. I'm a UNL Extension educator, office out of Cheyenne, Kimball, Banner Counties. And I'm colead of the Broadband Planning Initiative which is a subcontract with the Nebraska Public Service Commission and the Nebraska broadband mapping project. For the past four years, we have had targeted conversations across the state around adoption and utilization of broadband. For the past 20 years, myself and other extension educators have provided technology education to county government, communities, ag producers, and small business owners to enhance their tele-literacy skills clear across the state. And first off, we had access to the Nebraska BIT Mobile. And due to lack of a lot public computer facility labs in communities, we were able to bring a lab to those communities and provide education. In today's world, participants are bringing their own devices. And so we have computer labs readily with our mobility. But through those travels, we worked closely with the Internet service providers who have benefited from NUSF. As communities look to the future and attract and retain young people, families look on-line for information about those communities first off. Those communities not only need to have an on-line presence to market themselves, but need to have broadband availability as connectivity is one of the key factors in deciding where people are going to live, work, and play. The whole concept in a broadband adoption, we have to think about the literacy skills as well because it's really important that those folks know how to use the connections that are available to them in terms of productivity and efficiency and management. In today's world, also being mobile and being connected is 24/7. And so we have provided some on-line marketing classes to help our business owners across

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the state learn the importance of using those on-line applications and having an on-line presence. Since March of this year, we've conducted workshops in 13 different communities plus provided some technical assistance to over 150 employees and business owners in our small communities. Education is important in helping those business owners understand what the applications can do for their business management, marketing, and reaching a new customer base. Thus then the importance of understanding helps them with the confidence to create the demand. Many times it's an issue of we don't know what we don't know. And this last winter we had a webinar series that we just completed on using the cloud, security issues, and becoming much more mobile in our society today. Through the Broadband Planning Initiative, we've also identified some best practices. And we have 35 best practice videos on our [broadband.nebraska.gov](http://broadband.nebraska.gov) site from east to west and north to south. Our small business owners as well as larger businesses are utilizing broadband to reach a larger market base, be more efficient, work from home, and provide internal communications to remote sites. And just a few of those examples are, one is the nursing home in Mullen, Nebraska. It provides not only healthcare services to the residents of the nursing home but is also a provider to area residents to remote healthcare to UNMC. And so from a travel perspective, the folks that have had healthcare issues, gone to the Med Center, can actually do follow-up conversations with our physicians at the nursing home. The other factor is the nursing home residents themselves have learned literacy skills to communicate with family and friends. And they provide a unique training opportunity for those residents in using FaceTime and Facebook and Skype to stay connected with family because they are so location-based. Another example is a young woman in Cambridge, Nebraska. The young mother that wanted to stay at home and had a passion for eco-friendly baby products. She totally uses technology with her business. And keeping her business on-line, she started in the basement of her home. She is now...she moved into a physical location and now has a storefront on main street of Cambridge, employs two people part time and has some volunteers. But her goal was to go paperless. And so she and her employees use the cloud to store data. They use their mobile devices to scan inventory, take credit cards, check on work schedules and

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calendars. And by using social media, she has been able to reach customers in all 50 states plus international. And that's a young woman in a small rural Nebraska community. 21st Century is one of the larger companies that we have a best practice video of. They have 11 stores in eastern Colorado, western Kansas, and western Nebraska and their corporate office is in Bridgeport. Broadband is critical to their operation due to time and distance. Their closest office is an hour away and the furthest one is six and a half hours away. In order to reach new and younger producers, they need everything to be on-line whether that's from a transaction perspective, reaching those producers' diagnostics in the field. The repair shops can actually talk to the producer in the field and get repair equipment fixed remotely. The other part of that is all the transactions operate out of Bridgeport. And so those 11 stores communicate on a regular basis to the Bridgeport office. Videoconferencing means real-time meetings for these folks. And if you think about productivity and time on the road, that's a huge factor in having that kind of connectivity. Fred Lockwood and associates out of Chadron is another one of our best practice videos. And those folks have multiple offices in western Nebraska: Chadron, Alliance, Scottsbluff, and Mullen, plus they have folks that are actually working from home. And if they didn't have the broadband connectivity to do that, they would have loss of production as well. They use cloud services for all their information so that their employees and their clients have real-time access. One thing that we are doing this spring--in March of 2014...March and April of 2014--is we will be having some technology fairs. They'll be entitled The Power of Business, What's Next. And we asked those locations that we needed at least seven meg of connectivity because we're going to be video streaming segments of those workshops so that other folks across the state can have access to the information being shared. And there were some locations that couldn't...didn't have access to that and so we chose these seven locations: Valentine, North Platte, McCook, Sidney, Chadron, Norfolk, Seward, Kearney, and Omaha. I thank you for your time today. And are there any questions? [LR343]

SENATOR DUBAS: Well, thank you very much, Connie. Questions? I would have a couple for you. Please tell us what the BIT Mobile is. [LR343]

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CONNIE HANCOCK: The BIT Mobile, it's kind of gone into an evolution process. But it was a 29-foot trailer. It had 14 laptops inside, and so we could remotely take that to any location, work with the providers, Internet providers to get us the connectivity so that we could hook up and do trainings inside the BIT Mobile. [LR343]

SENATOR DUBAS: Interesting. [LR343]

CONNIE HANCOCK: And we had great support from telecommunications providers to do that. [LR343]

SENATOR DUBAS: You spoke a lot about literacy, technology literacy. Where do you feel you're at as far as...or where do you feel the general public is at as far as that, the literacy? [LR343]

CONNIE HANCOCK: We're currently doing a business survey across the state to identify that from a business perspective of what their skills are. It continually amazes me when we do a workshop, the varying levels of literacy. I think we've gone above and beyond. And the preliminary results of at least our business survey show that Nebraska is above the national level. So I don't know if that's because...hopefully it's because of all the education that we have provided whether that comes from the community college or the university system. I think there's still work to be done to get our businesses in particular to a spot where they're actually truly utilizing the connectivity that they have to the fullest. [LR343]

SENATOR DUBAS: Is this something that just your area extension is working on or is this statewide, that extension? [LR343]

CONNIE HANCOCK: This is statewide. [LR343]

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SENATOR DUBAS: Statewide. Okay. [LR343]

CONNIE HANCOCK: This is statewide. And this is part of...the business survey that I mentioned is part of the Broadband Planning Initiative. [LR343]

SENATOR DUBAS: Okay. And you referenced the best practice videos. And those are on the Web site? [LR343]

CONNIE HANCOCK: Correct. [Broadband.nebraska.gov](http://Broadband.nebraska.gov). [LR343]

SENATOR DUBAS: [Broadband.nebraska.gov](http://Broadband.nebraska.gov). [LR343]

CONNIE HANCOCK: [Broadband.nebraska.gov](http://Broadband.nebraska.gov). [LR343]

SENATOR DUBAS: Very good. Thank you. [LR343]

CONNIE HANCOCK: We do have other partners with the Broadband Planning Initiative: the Department of Economic Development; NITC, Nebraska Information Technology Commission; the AIM Institute; the Nebraska Public Service Commission, obviously; and the University of Nebraska. [LR343]

SENATOR DUBAS: You've referenced several instances about individuals who live in communities who are starting businesses, etcetera. Do you have any examples or stories about people who live in more remote areas and what you're able to do to help them, or what are they looking for? [LR343]

CONNIE HANCOCK: More than likely, they're still looking for the same things that the folks in communities are looking for. It becomes more of a challenge when you're totally in a remote location to get some of the connection. But I don't know that I have a good example at this point. The Bassett livestock auction is still in a community, but they're

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doing some awesome things with live auctions in their community. I mean we've got small business owners that are living in the country in a remote spot that have Web sites and they do transactions on-line and they market their product on-line. I don't know that they're utilizing it, again, to the fullest. [LR343]

SENATOR DUBAS: How about just for an individual who's not necessarily connected with a business. Do you have any focus with...? [LR343]

CONNIE HANCOCK: We have challenges in parts of our state. [LR343]

SENATOR DUBAS: Other questions? Well, thank you so much for coming forward and sharing this information with us. Appreciate it. [LR343]

CONNIE HANCOCK: Thank you. [LR343]

SENATOR DUBAS: Further testifiers. [LR343]

TONYA MAYER: Good morning. [LR343]

SENATOR DUBAS: Welcome. Good morning. [LR343]

TONYA MAYER: Thanks for coming out here. This is nice to not have to drive to Lincoln today. [LR343]

SENATOR DUBAS: We're happy to be here. [LR343]

TONYA MAYER: I am Tonya Mayer, T-o-n-y-a, last name M-a-y-e-r. I'm the manager of the Hemingford Telephone Company and Mobius Communications. We are a member-owned cooperative that was formed back in the 1930s. We cover approximately 750 miles. And because of the fundings that we have received, we've

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been able to assist customers in owning, operating their farms and their ranches and their small businesses. We have a lot of young moms that are stay-at-home moms that do medical transcription. We have farmers that can make timely decisions and access current weather, markets, and information. Our local newspaper can transmit the entire paper to their printer here in Scottsbluff in a matter of minutes due to the broadband capabilities that we have. Our subsidiary company was blessed to receive the NEBP grant funding last year. As mentioned earlier, it's called the River Road project. It roughly covered about 50 miles of plowed fiber, 35 customers. We visited those customers this summer during the construction. And there's a rancher in that area that has his children come out as the fiber project ends. They're from Lincoln and Omaha. They're able to stay connected to their businesses in Lincoln and Omaha and they can stay longer at his farm and ranch. And so he's very pleased that he can do that. He can buy and sell cattle in a timely manner. There's also a flight nurse that will benefit from the broadband that we'll be putting in there. She does a lot of webinars, a lot of educational videos. And she's not able to do that because she's 35 miles from town. And so right now she's limited to satellite Internet that's intermittent. There's a lot of delay and so she's not able to do that. But now with the fiber project, she will be able to do those things. There's also a very small rural school that has about 12 students. They'll be able to access on-line classes, long-distance learning. And I was speaking with the teacher just yesterday, and she's excited because she won't have to take all of her stuff home to use the Internet at home. She'll be able to do it right from the school; administering grades, watching videos. They do a lot of educational videos but they have to do those off site because of the lack of broadband in their area. Connectivity and timing is making all the difference in marketing the commodities and livestock. It's invaluable for our younger generations to have facilities similar to those in bigger schools. These types of fundings have allowed the most rural customers to be able to equalize with their urban counterparts. It has been pointed out that fiber is expensive. But with that expense, comes higher costs. Being a carrier of last resort, we do the necessary regulatory work to be able to serve those customers in the hard-to-reach places and we feel..as we feel we are obligated to do so. I'm a member of the Box Butte

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County Development Corporation. And a lot of companies that want to come and relocate in our area or build facilities in our area, one of the first questions they ask is, is there fiber available to them? And so in order to keep our area viable and attractive for those things, we believe that fiber is necessary to do that. And then not to take anything away from what Mr. Larsen had stated, but the customer that he referred to in Agate Fossil Beds that he serves actually contacted us to plow fiber to them. But we didn't feel it was feasible at the time due to some federal regulations. And so those are just some things that I wanted to share with you today. We believe that our company is committed to economic development and to keep the rural areas in Nebraska viable and growing. [LR343]

SENATOR DUBAS: Thank you. Questions? You spoke about companies, that when they come and visit with you they're asking you about the availability of fiber. [LR343]

TONYA MAYER: Yes. [LR343]

SENATOR DUBAS: And as you referenced, previous testimony talked about fixed wireless and how it's efficient. It can provide all of the same things that fiber can...pretty close to all of the same things that fiber can. Are companies asking about fixed wireless; why are they asking you for fiber? [LR343]

TONYA MAYER: I think that's an education thing. I think people know that really we've not seen an end to what fiber can do. The limitations come more with the electronics. But right now, we've not seen the end of how fast fiber can be. And so I think that's why they're asking for those things. [LR343]

SENATOR DUBAS: But this is something specific, that when they come into your community or they come to visit with your economic development, they're looking at fiber. [LR343]

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TONYA MAYER: A lot of them ask, is fiber available? [LR343]

SENATOR DUBAS: Other questions? Thank you, Tonya, for coming forward.  
Appreciate it. [LR343]

TONYA MAYER: Thank you. [LR343]

SENATOR DUBAS: Good morning. [LR343]

PAIGE PROCHAZKA: Hello. Good morning. My name is Paige Prochazka, P-a-i-g-e P-r-o-c-h-a-z-k-a, and I come to you to testify as a customer of the Hemingford Cooperative Telephone Company who is benefiting from the fiber installation that's going on. I am a perfect example of a young businesswoman who gets to work from home in rural Nebraska doing the work that I originally started off doing in Chicago. I work for a small consulting firm. We implement marketing technology to companies all across the U.S. and even internationally. And some of our clients are as big as Walmart, Boston Scientific, and I am able to do all of that work from a farm outside of Hemingford. What we do is we implement marketing software to these companies. So it's key for us to be on-line every day, all day. All of my coworkers are remote. They are in Dallas and Kansas City and Atlanta, all across the U.S. And so every day, we are in constant communications via the Web whether it's on Skype, video or audio conferences, e-mail. We rely on the Internet, and it has to be fast and it has to be consistent because our business is structured around technology. We can't deal with outages. And when we do have service down, it has to be up as quickly as possible. Our livelihood depends on it. And that's one of the huge benefits that I've personally seen from the Hemingford Telephone Company is their fast response when there is outages. I can call and I'll immediately get a tech support. They'll assess my situation and a lot of times it's fixed within an hour or two. If it's an issue that's bigger than that, they'll send a tech out same day. I've never gone more than a few hours without Internet service which is key to my livelihood. And then in addition, as I said, I live on a farm. I will occasionally help out

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with the farm work that my dad does. And he will watch livestock auctions, as Tonya mentioned earlier, on the Web. And without fast, reliable Internet service, they buffer. You're not able to make purchases. So reliable service is key. [LR343]

SENATOR DUBAS: Very good. Thank you. Questions? Senator Brasch. [LR343]

SENATOR BRASCH: Thank you, and I want to commend you for sharing with others your occupation as a farmer and also in technology. We do have a lot of opportunities like that across the state. I, too, can drive a grain cart and also conduct WebExes in three time zones when I need to and I'm a legislator and live on a farm. But what I'm finding as well is when you talk about reliability...now are you on...how far are you from...are you fiber optics? How many miles from a...? [LR343]

PAIGE PROCHAZKA: We're 13 miles from Hemingford. [LR343]

SENATOR BRASCH: And they ran fiber optics? [LR343]

PAIGE PROCHAZKA: Yes, it's been installed. I don't believe that we've been turned on just yet, but we will be. [LR343]

SENATOR BRASCH: Otherwise, you've been wireless. [LR343]

PAIGE PROCHAZKA: No, no. We get DSL. [LR343]

SENATOR BRASCH: Oh, DSL. Okay. Interesting because in the eastern part of the state it's harder to get fiber optics 10 miles out let alone 13. [LR343]

PAIGE PROCHAZKA: Right, and that's definitely why we're very excited to have it. [LR343]

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SENATOR BRASCH: And it was Hemingford, the community itself did that investment? It's privately invested, it's not...? Or is it through the service funds, NUSF? [LR343]

PAIGE PROCHAZKA: I believe it's through the Universal Service Funds. That's more of a question for Tonya. [LR343]

SENATOR BRASCH: Okay. [LR343]

PAIGE PROCHAZKA: But yes, I believe that through those projects they've been able to plow the fiber which (inaudible). [LR343]

SENATOR BRASCH: And are you able to work 100 percent virtually, or do you need to get to an airport as well? [LR343]

PAIGE PROCHAZKA: I do, I do. I actually just got back from Philadelphia last night. With our client work, it is all dependent on where we are in the phase of the project. Usually at the beginning, we start going on site with the client, meet them. And then from there, our work is remote. With marketing software, we can do all of the configuration off site which is very convenient, less travel costs. And it's just a better work-life balance where we're not traveling every week. And then when we get to the end of a phase of a project, we usually train the users on how to use the system. And that can be remote via WebEx or live conferences or we can also travel. [LR343]

SENATOR BRASCH: And may I ask how long it takes you to travel to an airport? [LR343]

PAIGE PROCHAZKA: (Laugh) Oh, I fly out of Alliance... [LR343]

SENATOR BRASCH: Alliance, okay. [LR343]

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PAIGE PROCHAZKA: ...so 30 minutes. I'm able to fly from Alliance to Denver. That was the concern my boss had when I moved to rural Nebraska was, how are you going to be able to fly? And I'm able to fly from... [LR343]

SENATOR BRASCH: I do see where we can increase the population in our rural communities if we have the technology to support that. [LR343]

PAIGE PROCHAZKA: I think that's a really good point, is my generation definitely flocks outside of rural communities because we're seeking bigger-city life and bigger opportunities where I did that. I moved to Chicago. I had the fast-paced life. And after five years, I missed home. I missed the farm. And so I'm able to come out here, keep doing the same work I've been doing but yet start a family back in the community that I was raised in. [LR343]

SENATOR BRASCH: Thank you for doing that. [LR343]

PAIGE PROCHAZKA: Yeah. [LR343]

SENATOR BRASCH: Thank you, no other questions. [LR343]

SENATOR DUBAS: Other questions? Well, we're glad to have you home as well. So welcome back. [LR343]

PAIGE PROCHAZKA: Well, thank you. [LR343]

SENATOR DUBAS: Do you feel you are a representative of a lot of people from your generation who do want to go back home maybe after they've been out and seen the bright lights? [LR343]

PAIGE PROCHAZKA: Yes, I do. I think that like my business in essence is a bit of a

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jealousy factor just because I can move around. As long as I'm connected to the Internet, I can be anywhere. But so many of my friends or even people just I've met along the way say how much they wish they could work from home and they could be home like where they grew up as well. So I'm very fortunate when it comes to that. But it's through companies like Hemingford Telephone Company and Mobius that make that all possible. [LR343]

SENATOR DUBAS: Very good. Thank you. [LR343]

PAIGE PROCHAZKA: Thank you. [LR343]

SENATOR DUBAS: Any other testifiers? [LR343]

ANDREW NEWELL: Good morning, Senators. My name is Andrew Newell, A-n-d-r-e-w N-e-w-e-l-l. I must confess I don't know how to milk a cow or a goat. And I certainly don't know how to milk a state as I've been accused of doing today I suppose. But I felt it necessary to make a few comments with respect to this discussion which has been very good today. I think you've heard some great information about the benefits of broadband connectivity in extremely rural areas from a healthcare standpoint, from education standpoint, from folks working at home. I thought that last story was really an important point because in order to keep the population of these areas of rural Nebraska going and not going the wrong direction, I think you really do need that infrastructure in place. And that's what the Universal Service Fund should do. But I think it's important that...most companies will come up and tell you, our technology is the best. It's better than this technology. And this technology is terrible. And you should hate these guys. And that's really not our approach. I think there is no one magic technology that solves all of these problems. Every technology has its strengths and weaknesses, and they all have their place in the market. That's why they all exist. And I think it would be narrow-minded...it would certainly be bad policy to exclude any type of provider. You want to keep as level of a playing field as you can. And you want to keep rural networks,

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as to the extent you can, looking like urban networks because urban networks are going to drive the next wave of innovation. So if you end up with a network that in the short run is cheaper, in the short run appears to be more efficient but it looks very different than urban telecommunications networks and that ecosystem, you could face a huge problem down the road because those urban areas are going to drive the next wave of innovation. And you may end up with obsolete, dead-end technology, which is not something that you want to do, which is another reason why you don't want to put all of your eggs in one basket with any specific technology whether it's wireless, whether it's fiber, whether it's anything else. I think you do need to be mindful of the cost of different technology and its strengths and weaknesses and be realistic about that. Fiber is a great technology for high-capacity, densely populated areas--businesses, large businesses. It's not cost-effective in less densely populated areas, but there's no question that the capacity is the best. Mobile wireless has its weaknesses too. It's cheap. It's cost-effective, I should say, more so than cheap. But in densely populated areas, it does get oversubscribed, but Universal Service Fund is not about densely populated areas. It's not about areas where mobile wireless can get oversubscribed; at least it shouldn't be. So I would encourage you in any reforms that you make to be very mindful of the strengths and weaknesses of these different technologies versus, this technology is good and this technology is bad. All technologies have a place in the market. And you can look in urban areas and sort of see what that place is. You see the place of the smartphone and the wireless network. You see the place of the cable operators and the Ethernet fiber optic facilities. So I do want to make a point about coverage and also reliability. The coverage that we provide in this state is focused on rural areas and is incredibly more robust than any other provider. There was some mention of Verizon providing service without Universal Service Funding in this state. And a lot of the facilities that they operate in this state were paid for with Universal Service dollars I believe back in the day. But we've drive tested a lot of that network, and their coverage is very, very overstated. And realistically, it's less than half of what they claim to be covered in the state in terms of any sort of data product. So I think that's important in considering which areas of the state deserve funding and to really

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look at critically at the coverage and not just rely on carrier maps. And along with that, our network, we take great pride in its reliability. And there are cheaper ways to build networks than how we build ours, although we think that we're very efficient. But we build towers to withstand F3 tornados. We build towers to operate through ice storms. And there have been several instances in this state, especially in the western part of this state, where there have been fires, where there have been ice storms, where there have been tornados, where the public safety folks end up using our phones because they're the only thing that works. Their radio system is down. They're using Viaero phones because we're the only carrier that's still on the air. We're the only carrier that has coverage because we have a self-contained network that can communicate internally without relying on other carriers, without relying on the public power company. During this snowstorm, this latest snowstorm, we had one tower that was down for a couple hours because the backup power generator...the snow was falling so fast and blew into the generator and blocked the air intake to the generator. The nearest road that was open was 12 miles away. So we had to take a snowcat and drive it 12 miles to this tower to get the snow out of the generator so it could be back up because the power was out, commercial power was out. And so we did that, and we left the snowcat with the fire department so they could...apparently they had rescued a woman who was trapped in her house that went in to labor. And we got a call that the snowcat was over at the fire department and the fire chief was washing it for us. So I think it's still back up in Chadron. But that level of dependability is incredibly important to our company. When there is a disaster, when the network needs to work, that's when it needs to work. That's not the time to make excuses that, well, you know, we don't have power. Or well, the wind blew our equipment down, or we got struck by lightning. It's...you need to be prepared for those situations and be able to stay on the air. I've been working around the Universal Service Fund in the telecommunications industry for about 11 years specific to these policy issues so...and certainly am close to the technology as well. So I look forward to any of your questions. And thank you for indulging me speaking off the cuff today. [LR343]

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SENATOR DUBAS: Thank you very much, Mr. Newell, for coming forward. Senator Brasch. [LR343]

SENATOR BRASCH: I think it was...if you initially told us you were with Viaero, I had missed it. [LR343]

ANDREW NEWELL: Yes. [LR343]

SENATOR BRASCH: That's the company you represent. [LR343]

ANDREW NEWELL: Yes, it is. [LR343]

SENATOR BRASCH: And your role with that company is? [LR343]

ANDREW NEWELL: What's that? [LR343]

SENATOR BRASCH: Your role, are you...? [LR343]

ANDREW NEWELL: I'm the general counsel. [LR343]

SENATOR BRASCH: General counsel, very good. And what type of wireless technology is it? Is it...I'm learning about different...and about a year ago I heard about...are microwave towers now also delivering? You're not a microwave tower provider or something that was brought out. Are those now in use? [LR343]

ANDREW NEWELL: Those are all great questions. And I'll try to tie it all together. We...the technology we use from the tower to the customer is known as GSM, or global system for mobile. It's the same protocol that's used by 90-plus percent of the world. AT&T, T-Mobile are the major carriers in the United States that use our technology. So anyone who roams, anyone that's an AT&T and T-Mobile customer, for instance, or an

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international customer that drives through Nebraska will be roaming on our network because we're the only ones who provide that coverage here. You also have Verizon which is a different technology that serves a good part of the state too. Between our towers and back to our switch we use microwave. So we have high-capacity, high-reliability microwave connections that are all redundant. So that carries...it aggregates and carries a lot of our traffic back to our switch. We also have partnerships with carriers that have fiber in the ground. And we will drop off Internet traffic along the way to fiber carriers like ALLO Communications who's here in Scottsbluff who our president really thinks very highly of. I don't know if that's a USF business or not. I know ALLO doesn't take any Universal Service Funds, but it's...we do certainly do business with them as well. But we own the largest microwave network in the world, Viaero Wireless does. It's an underappreciated technology primarily because it's very difficult to engineer. There aren't too many good microwave engineers left in the world, and we have one. [LR343]

SENATOR BRASCH: So I was correct in guessing you were microwave-related. [LR343]

ANDREW NEWELL: Yep. [LR343]

SENATOR BRASCH: Okay. Now the other question I have is the cloud. I'm guessing the cloud is some type of a server that stores multiple...who owns the cloud? [LR343]

ANDREW NEWELL: Well... [LR343]

SENATOR BRASCH: It is becoming more increasingly powerful I believe. And I'm not really familiar with if that's a product of one carrier or is it a conglomerate or is it government owned? [LR343]

ANDREW NEWELL: I think the concept of the cloud is about as easy to get your arms

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around as a real cloud. But in essence, you're talking about all of the servers connected to the Internet, all of the storage capabilities that are available via the Internet. And when specific companies talk about storing your information in the cloud, they have one or more servers that are somewhere in the world that they're storing your information and then you can access it from the Internet. [LR343]

SENATOR BRASCH: So it's basically just another server they own that they just use for storage, a backup server, redundancy server or something like that. [LR343]

ANDREW NEWELL: Well, it's... [LR343]

SENATOR BRASCH: It is a piece of hardware. [LR343]

ANDREW NEWELL: Well, the cloud conceptually is everything that's connected to the Internet, every storage capability that's connected to the Internet. [LR343]

SENATOR BRASCH: Okay. [LR343]

ANDREW NEWELL: So it's... [LR343]

SENATOR BRASCH: And there's more clouds in rural areas I observed, so why are we lacking in...no, that's just in fun. But okay. So there is no ownership of the cloud. There's not a person sitting in this room that has a business card that says "cloud" on it. Or is there? [LR343]

ANDREW NEWELL: No, it is sort of the collection of... [LR343]

SENATOR BRASCH: Of data. [LR343]

ANDREW NEWELL: ...all of those network facilities and servers that are out there that

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are all connected together. It's the beauty of the Internet. No one really owns it. [LR343]

SENATOR BRASCH: Very good. Thank you. [LR343]

SENATOR DUBAS: Other questions? Thank you very much for coming forward, Mr. Newell. [LR343]

ANDREW NEWELL: Thank you. [LR343]

SENATOR DUBAS: Any other testifiers? It's your last chance. Well, again I would like to thank everybody for taking time out of their day to come and share your views and your thoughts with us. This is a great opportunity for the committee to ask questions and be educated on this and other issues. We're very happy to be out in Scottsbluff. We've had some opportunities to tour...you know, we were in Paxton yesterday and saw some things that are going on there. So sometimes it's hard to pick those things up and bring them to Lincoln. And so when we can bring the committee members out into the state so that we can actually see what's going on, then when we have hearings in Lincoln on any particular piece of legislation we have the ability to make some connections. So again, we really appreciate you taking time to share your information with us today. And should you have other things that you want to make sure that the committee knows, please feel free to contact my office. Send an e-mail, anything that you would like to make sure that I get to the rest of the committee members and I'll make sure that that happens. So again, thanks for showing up and sharing your morning with us. [LR343]