

**Testimony of**

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**&**

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**Broadband Availability, Accessibility and Affordability**

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Thank you Chairman Yaw and The Center for Rural Pennsylvania for the opportunity to speak with you this morning about Broadband Services in Rural Pennsylvania. My name is David Tews, and I represent Indigo Wireless as their Executive Vice President and Xtreme Enterprises as the President.

Indigo Wireless has been serving Tioga, Potter and Clinton Counties as a cellular service provider since 1992 with an expansion into Bradford and Wyoming counties in 2001. Indigo, on our busier days, handles 60,000 calls and transmits 500 Gigabytes of data across our network. Even though many of you have never heard of Indigo we have been the leader in providing cellular service to our communities for the past 25 years. We were the first cellular provider in some areas 15 years before AT&T or Verizon found it profitable to expand into the small towns and communities we serve. It

is important to note that since our inception we have invested many millions into infrastructure and have never received any subsidies from a government agency or RUS. For a few years we were permitted by legislation to have our ever-increasing cost of providing 911 services reimbursed but even that has been eliminated with all funding now going directly to PSAPs, leaving us with the financial burden of providing for 911 services without reimbursement.

Combined Indigo and Xtreme locally employs 24 full time employees in professional and technical positions with our non-executive pay scale 6% higher than the median Tioga County Income. We also provide highly funded top tier medical benefits as well as a retirement plan that we have contributed to since 2001.

In 2013 Indigo Wireless began a Broadband experiment within our network to research what options may be available to serve the rural communities with Broadband services. Through that experiment we found we did have the ability to deliver reliable high speed Internet to remote locations using Terrestrial Fixed Broadband with speeds of 10 MB.

Terrestrial Fixed Broadband is not satellite or cellular. It is a point to multipoint technology using the latest developments in LTE-A (Long Term Evolution-Advanced) to deliver Broadband to a fixed location. The breakthrough in this technology in the past two years has been the affordable availability of MIMO (Massive In Massive Out) to achieve connections through and around obstacles using Multipath Signals. This is a stepping stone to 5G and we can tell you, It Works!

In July of 2016 we formed Xtreme Enterprises and moved from experimental to a commercial operation. Since that time Xtreme has invested over \$1,000,000 in infrastructure and we currently serve the communities of Blossburg, Mansfield, Wellsboro, Tioga, Galeton, Morris, Elkland, Osceola, Knoxville, Westfield and even smaller areas in between. Again, without any subsidies!

Since beginning Xtreme we have been able to take advantage of newer technology along with unlicensed and licensed spectrum to bring a high level of Internet Service to the towns we serve. Currently we are delivering speeds of 80MB down and 5MB up to some of our communities and we have the ability to go faster. As an example of our success and uptake we serve the small town of Knoxville which, based on the 2010 census, has a population of 623. Currently we serve 62% of the households in that community as Internet customers and last month we delivered 6.7 Terabytes of data to that one small town. Additionally, a small business in the community was considering relocating due to Internet reliability. As a result of Xtreme bringing Hi Speed Internet to the town they were able continue to operate which resulted in saving about 20 jobs.

I was asked to share our success stories, our challenges and our needs. The above is one of our success stories, I would now like to address our challenges.

One item that the legislators in the room can do to help is to pass new legislation that designates Broadband as an “Essential Service”. It almost seems impossible to me that this has not been done but I am not aware of the designation. Recently we wanted to install new antennas on an existing tower to enhance the speed and coverage in Elkland, PA. Currently, because Broadband is not designated as an essential service the zoning code requires certain documentation and permits before proceeding. If Broadband were designated as an “Essential Service”, we would be allowed to proceed and notify permitting after the work was completed. I’m not referring to building towers, this is to simply add new antennas to an existing tower structure. This delay for permitting may not sound like a large burden but the requirement added both time and expense to our expansion.

Another challenge is the size of not only Xtreme’s operation but the numerous other Wireless Service Providers in PA. I do not have the exact numbers for Pennsylvania but the Wireless Internet Service Providers Association (WISPA) organization estimates there are 2500 small wireless internet providers in the US. In our section of Northern Pennsylvania there is a WISP covering at least portions of Tioga, Potter, Bradford,

Lycoming and Clinton Counties. These small providers like Xtreme are providing a solution today, not 10 years from now. The challenge for us is, should we continue to fund growth and serve small communities if the big players are all coming soon and with a pocket full of subsidies? We need to work together to figure out how the small WISP, who is already out there doesn't get hurt when the funding becomes available. The threat of CAF II and other government subsidies is very concerning to these small operators who do not have the resources to apply for federal funding or comply with the regulatory requirements after receiving Rural Utility grants or loans.

What is missed in the equation of delivering broadband to rural towns in Pennsylvania is the small operators who are delivering service today. Maybe we can work together to tackle the formidable obstacle of rural broadband in steps. I believe the best use of subsidies and other funding is to fund something that has the potential to address the long term needs of the communities. The problem with that approach is time. The people living in these towns don't want to hear that money has been awarded to a provider with a big name that is committed to bring Gigabit service to them within 10 years. They need their children to be able to do their schoolwork and get online tomorrow. The fastest solution is Terrestrial Wireless Broadband.

Everyone believes the answer to the lack of Broadband is funding and I do agree funding can help bridge the gap. However, there are some things to keep in mind.

1. We've been talking about the "digital divide" for years and there is no amount of funding that will keep rural America equal to its urban counterparts. We should aim to bring our rural communities up to par but by the time we deploy, the urban areas will have once again leaped forward to a newer and faster threshold. I'm not suggesting we don't try, our goal however must be realistic and within reach.
2. We should be discussing two types of speed. Speed of the Internet packages being delivered to our rural communities. And more importantly, the speed in which we deliver something usable to the area.

I'd like to make my final points and suggestions in this area. Currently there are a number of existing and potential funding opportunities available to providers of rural broadband. We, as an industry and the residents of our communities are of course grateful and hopeful they will provide a solution. The concern with these programs is there is too much focus on speed of Internet. These funding mechanisms are designed for and will be used primarily by larger telcos, cable companies and other utilities. What is forgotten is we need to deliver Internet now, not within 10 years. 10 years from now these communities will be so far behind the only residents still living in these areas will be those who do not use or feel they need high speed Internet. If you need the Internet to conduct business or simply to be a part of the world, you can't wait 10 more years. The CAF II auctions and most likely, the latest 600 Million promised from our federal government are being distributed based on a 10 year promise. In Pennsylvania, we have a chance to do better! Pennsylvania's recent announcement of rural broadband funding, as far as I am aware, has not been designated to supplement the existing programs and is not tied to RUS or Department of Agriculture guidelines. Let's do this differently and allow funding for smaller agile operators that are leading the way today in providing real and usable Internet service. I made the statement earlier in my testimony there are 2500 Wireless Providers in the US today. Give those small operators an opportunity to share in the funding and you will see speeds and packages of 25 to 100 Mb in months not years. To some it may not make sense to fund speeds less than the Gigabits most of us are now able to get, but when your best internet speed is under 1Mb, 25 Mb is the difference between being a part of today's world or not.

I'd like to close with an additional success story. This is about a family in Westfield, PA who are grandparents raising their grandson because of the other topic we all are sorely aware of, the opioid infiltration. When we delivered 25Mb Internet to their home and they connected, the grandmother cried and hugged our Installer. Her young grandson, who had his entire life turned upside down, at least now had one of the things he enjoyed returned to his life. We have many of these stories including people thanking and cheering our employees as they work on homes in rural Tioga County.

These people and many more like them can't wait 10 years or even 3, they need Internet today. If we want to deliver usable Internet now, we can do this at a much lower cost and with much faster speed of deployment by using Terrestrial Fixed Wireless. With comparatively small amounts of funding we can deliver service in months not years.

Thank you for the opportunity to provide my company's insight and opinions on this important issue.