Get Connected Now: A Conversation with School Leaders and Policy Makers about Expanding Rural Broadband Access

At the most recent National Forum to Advance Rural Education in November of 2020, editor Devon Brenner led a panel discussion about current and future efforts to expand broadband access for rural schools and communities with Brandon Presley, Public Service Commissioner for the Northern District of Mississippi; John Conradi, executive director of Connect Americans Now; and two Mississippi school leaders, Wayne Rodolfich, superintendent of the Pascagoula-Gautier School District, and Tyler Hansford, superintendent of Union City School District and chair of the Mississippi Rural Education Association. Their conversation is excerpted here. Some portions have been edited for cohesiveness and clarity.

Brenner: Welcome. Will you please introduce yourself and your connection to rural broadband and education?

Presley: Hello. I am Brandon Presley. I am a public service commissioner of Mississippi for the northern district, and our agency is tasked with regulating telecommunications along with other utility services. We oversee the Universal Service Fund expenditures for broadband access, broadband expansion into rural areas, and we'll be playing a pivotal role in the Rural Digital Opportunity Fund, which is soon to release $16 billion nationwide [Editor’s Note: See https://www.fcc.gov/auction/904 for more about the Rural Digital Opportunity Fund.]

Rodolfich: I’m Wayne Rodolfich. I'm the superintendent of the Pascagoula-Gautier School District. I've been here for 16 years as superintendent, and I have been a huge advocate for expansion of bandwidth going all the way back to 2013. I have tried to express this to our legislators. I've tried to express this to our superintendents about the technology trend that's coming. It's here now, and so I'm trying to help to the best of my ability to facilitate growth in bandwidth expansion Mississippi.

Hansford: I'm Tyler Hansford. I'm superintendent in the Union City School District. We're a small K-12 in rural Mississippi, and I'm pretty new to the broadband internet discussion, but what we knew was a problem before COVID-19 has just been magnified, even worse now. We're just trying to look for equitable policy solutions to help us get all those kids connected now and going forward.

Conradi: Thank you for having me. I'm Jon Conradi. I'm the Outreach Director for Connect Americans Now. I've been a part of CAN since we founded the coalition in the fall of 2017 and since that time, we've grown from one member to more than 275 members around the country, including a really wide array of voices all committed to an all-of-the-above approach to eliminating the digital divide. We have members who are agriculture companies and associations; health care companies and trade associations; tech leaders and broadband advocates and spectrum advocates. We have veterans’ groups and of course, education groups and small business. A really broad array of voices all committed to using every tool of the nation's disposal to close the broadband gap.

Brenner: So, what are the challenges people are facing? What do we know about the access to broadband internet in rural places?

Conradi: There are a number of parts of the country where anchor institutions like schools don't have access to broadband. And this is tremendously important, not just getting the connectivity to school, but then at home. Seventy percent of teachers assign homework that requires a broadband connection, but then students at home can't complete it. The COVID-19 pandemic has made all of the challenges associated with the digital divide more severe.

Hansford: I was just thinking that cost, which is usually one of the foremost concerns, but the cost of internet here really is a secondary concern. Because once you get outside the city limits, the internet's not there. What we've tried to do is get through this is piecemeal it together. Most of our kids who live inside the city, which is actually a small percentage of our student population, they have internet, but once you get outside, we have tried to piecemeal together wireless coverage from three different
wireless providers, because one had service over in this part of county, the other had service over in this part.

Brenner: Wayne and Tyler, as district leaders, what are some of the band-aids that you are using that are helping to provide online learning opportunities for students who may not be able to come to school?

Rodolfich: We have brand new wireless access points that we purchased through some of the new legislation that's out there, so we've expanded those. For us, it's making sure that parking lots, stadiums, buses, everywhere we can provide access to bandwidth, that's what we're trying to accomplish right now.

Hansford: What we did we, like Wayne, we installed wireless access points, new ones throughout the school district. We're a small district, so we also put antennas outside the school buildings that could be accessed by the students, also the general public. Those will be permanent. We'll keep those going. Temporarily, there were some places that we couldn't get wireless help with. We have contracted with a satellite provider and placed some satellite internet at various volunteer fire departments out in the county. The students have been able to go and download the content into Canvas. The other thing we did, we have actually contracted with three different wireless carriers, and we have loaned out some hotspots based on what internet worked best where you were. I will say that at least as we speak, most of our students are back in school face to face. In the event that we have a student who's in quarantine, if they don't have internet, we're just choosing which of those wireless hotspots is the best option for them and just trying to get through it that way.

Rodolfich: Also, one thing that I did want to share, earlier in the summer, we trained over 2,200 teachers from 120 school districts in the state of Mississippi for free. It was 30 sessions over a 2-day time period. We used three people to execute this. And we have a super Saturday coming up in January. We already have 700 people signed up for this across Mississippi. If they have the ability to get online, they have the ability to be trained on distance learning and all that. One of the things that we're finding is, in order to be ready for distance learning, it takes years to prepare students and parents and teachers how to actually use this platform, and that's why we're providing the service statewide to our fellow educators in Mississippi.

Brenner: That seems like important work.

Presley: It is. School districts have done a great job of adapting and becoming creative, whether it be wireless hot spots, or school buses, but that's not sustainable. Because while we're here talking about distance education today, that same fiber line that educates that child can spur economic development, telehealth, telemedicine. The capacity is unlimited. What we've tried to do in Mississippi is make sure we don't throw good money after bad. Our focus has been not to just put a Band-Aid on this, we have a bridge plan of whether it be school buses, or wireless hot spots, that get us through this pandemic, but do not throw good money after bad and only focus on devices and hotspots. Because in the end of the day, that is not going to be sustainable.

In our state, the legislature, we worked very hard to get $75 million of the CARES Act funds for broadband access, fiber buildouts, fiber to the home. A minimum speed of 100 megabits upload and download fiber to the home to specific census blocks in the state. The dollars could only be spent in census blocks if the FCC showed lack service at all. Now that's not going to get to every census block, it's obviously not enough money, but by the end of next year we will connect somewhere around 46,000 homes with that $75 million. The Rural Digital Opportunity Fund I mentioned a minute ago will put an influx of around $940 million into the state. Those dollars are going to every state in the union, but we're seeing that targeted in Mississippi to areas that lack service. We're trying to make sure at the commission and working with the legislature that these dollars go into an investment that's going to be there, that is going to be future-proof. We hear a lot of talk about 5G, and 5G is going to be wonderful if you live in Houston, Texas, but not Houston, Mississippi.

Because of all the requirements related to 5G to really get that up to speed, whether it be line of sight, whether it be towers that have to be constructed. Guess what it all depends on? Fiber, and so we want to put the gold standard out there. To do this, we are working with rural electric cooperatives. We have been able to put together what I think is a true matrix.

When I worked so hard in 2019 to pass the Broadband Enabling Act to just legally to be able to move forward with cooperatives, we couldn't dream we would be where we are. I really am so proud of
the work that our school districts have done to adapt to get through this, but also we've got to make the smart investments going forward, because if we don't . . . guess what, we're still going to have kids sitting at McDonald's parking lots, going to libraries, trying to do homework. That's unacceptable, it is just unacceptable for rural America. I hope the Biden administration is hearing that message clearly, going into a new term because our country and our rural people need that big lift of a huge infrastructure package to try to get this done across America.

**Conradi:** Commissioner Presley made some great points about needing to future-proof things, and certainly fiber is absolutely the gold standard. If we could wave a magic wand and get fiber the home for every family across the country, I think everyone would agree that we should do that, but there are additional solutions and certainly regulatory policy at the federal level that can help technology and innovation fill in the gap, that can help speed up the pace of rural deployments, and also increase the cost effectiveness, while also increasing that future-proof piece. Increasing the bandwidth that certain technologies can provide to ensure that down the road if you're connected by CBRS [Citizens Broadband Radio Service] or TV white space or a satellite, that that's actually a reliable broadband connection that can support a modern use and can support telehealth applications and streaming video. There's innovation happening and investment in 12 gigahertz low orbit satellites that in the next several years will be deployed to help dramatically change what people think of when they think of satellite internet, which has been dogged by bandwidth and speeds so far. The FCC also just recently voted unanimously to clear regulatory barriers to TV white space technology. That's a last mile solution and for certain areas where there's very, very low population density or very, very challenging topographies in that last mile. These are some of the small steps being taken at the federal level from a regulatory standpoint that will help the technology and innovation solve the problem as well and bring down the cost of deployments to further stretch both public dollars and to further incentivize private investment.

**Rodolfich:** One of the big issues with this current administration that's about to take over is they're wanting to reduce the reliance on fossil fuels. I can't think of a better way to do that than by reducing the amount of in-person commerce and just like Brandon was saying earlier, telemedicine, commerce, education, that takes people off of the roads. It reduces the stress of your current infrastructure. There's a way to actually market this where everybody wins because whether or not we want to become part of this evolution that's occurring in this country as it relates to technology. It's all about us pulling together and having a synergy because I think if everybody wins, then everybody's going to want to participate.

**Presley:** Wayne is helping us, he was appointed to our Connect Mississippi Committee, and he's representing education interests from the Southern district. One of the reasons we're seeing a lot of buy-in, when you look at telehealth for just an example, we could save $130 million in Medicaid expense in Mississippi if we fully got to critical mass on use of telehealth and telemedicine. That's not pocket change, and those are dollars can be redirected for other things.

**Conradi:** Yeah, it's a really great point. Part of how telehealth can dramatically bring down costs for health care is not just in the treatment of chronic conditions, but is in helping people more proactively manage their health care and things like remote monitoring solutions, things that University of Mississippi has pioneered through their telehealth work, working with companies that are doing things like having a foot pad to monitor diabetic foot ulcers, which just that one condition alone brings a massive price tag to the entire health care system. Helping folks then to not have to potentially get in a car and drive an hour, 90 minutes to see their doctor, be able to instead have a telehealth visit, have remote monitoring equipment, IoT [internet of things] devices that can communicate to their doctor if they need to be seen. But all of those things really need to be able to communicate with the cloud. To do that, you really have to have broadband internet.

**Brenner:** I think in K-12, when we think about school-community relationships, we are often thinking about how we can work together around student learning, but we don't often talk about how we might work with our communities to pull together toward a policy solution to address a need in our schools. This is an opportunity to pull together to advocate for what we all need.
Presley: This is something we need Jon's and other groups’ help on honestly. I think what states like Mississippi and others that are traditionally rural areas that are trying to embrace this future, we don't know what we don't know. By that, I mean we understand that once we get this fiber infrastructure built out we understand that keeps that family from going to McDonald's or the volunteer fire department for online learning. But how do states like Mississippi and Maine and Nebraska, how do we stand on the precipice of this type of revolution, so that once we have the infrastructure in place, how do we take advantage of that? How do we use that asset to leapfrog from where we normally would have been? I think that's what we've got to be thinking about because truthfully, we are cracking the code on getting access built out. We truly are. We have the largest expansion of fiber to the home internet service in America going on right now in the state of Mississippi. How does the poorest state in the union take that great asset and leverage it on economic development and education? I don't know that we're having enough of a national discussion on that, that I hope maybe we can see come forward in the future of really how to anticipate applications, technology development, and those sort of things.

Conradi: Yeah, it's a really excellent point. I wouldn't want to take anything away from the urgency for access, because that is just such an urgent need, but we do also need to be thinking about what comes up after that and things like digital skilling and affordability, and ensuring that those pieces are in place, so that students and seniors are able to take advantage of technology once they have access to it, so that economic development can take place once access has gone there.

We also need to be thinking about competition. Once we get access to an area, that's a really critical component of affordability, is ensuring that there's competition. That's where having a wide variety of technology can come into play to help bring down the cost by having different options for folks in a given market, rather than just one that's barely been able to get to that last mile.

Brenner: Brandon, will you talk a little bit more about the cooperatives, what are those, and how are they working?

Presley: Sure. If you rewind with me back to 1930, the issue back then of the haves and the have-nots when it came to technology was electricity. In populated centers, they had electricity and rural areas did not. Mississippi gave birth to the idea of rural electric cooperatives, a little d, democratically owned organization. In Alcorn County, in 1935, a group of rural citizens and farmers said they'd had enough begging, at that time, Mississippi Power and Light, to come bring electricity to their rural communities, so they formed the Alcorn County Electric Power Association which became the first rural electric cooperative in America.

Since their formation Mississippi had the first five or six cooperatives in the country. That history is worth noting here because we're living through that same transformation again. For-profit companies, by and large, are not going to make the capital investments to go and bring high-quality fiber to the home internet service to the most rural people. It ain't going to happen. If it does happen, they're going to be heavily subsidized to do it, and we know how sometimes that ends up working out. Our idea in Mississippi was why if it could work for electricity in the 1930s, that model, that vehicle of electric cooperatives, it can work again in 2020.

We have 15 co-ops right now who are providing broadband and have taken money as part of the CARES Act funding from the legislature. They form subsidiaries, wholly owned subsidiaries of the co-op. The broadband provider is owned by the very people that they serve. Of course, they've got to be able to pay their loan, they've got to be able to pay their debt and meet their operating costs, but because they are owned by the people with no push to shareholder revenues or stock prices, they're able to use long-term debt to be able to build these projects out. Using that same model has guaranteed access to areas in Mississippi right now.

I'm not trying to take away anything from a for-profit company, but they've had decades to get service to people in rural areas, and they've been incentivized four ways from Sunday to do that, and they've not done it. My granddaddy had a bumper sticker and said lead, follow or get out of the way. Well, in my opinion that we have seen rural America totally dry up and become more and more disconnected. We've removed the biggest roadblock. It's not a silver bullet, but it is a solution that we know is working. For example, one of our co-ops up in Lafayette County, the North East Mississippi Electric Power Association, their broadband subsidiary announced yesterday, they've signed up their 1,000th customer, and that's been in just a
period of a few months, just had a lady text me yesterday. Her county school district went back to distance learning, and her child was able to participate because she was hooked up through her electric co-op now to not have to go back into town and sit outside McDonald's and do homework.

You can't really blame for-profit companies for saying, "If we're going to serve rural Alcorn County and it's going to cost us $10 million to go and serve them and it's going to take us 30 years to get that return and we're a for-profit with shareholders." They expect to return more than that, it's not going to happen. We're not trying to up-end the model. We're just trying to say, "We've got to have an alternate path for rural communities." Under our law in Mississippi, once a co-op begins, they must have a program to serve all of their members. We have a chance here to get so much of our land mass covered through our co-ops, and they're working with for-profit energy providers, like Entergy, to actually go into areas where Entergy sells electricity, but the co-op will come in and sell broadband as part of their agreements to upgrade the electric service delivery. This has been a vehicle that has helped us sidestep the biggest problem, and that is always profitability and money.

**Brenner:** What else should we know about advocating for rural broadband expansion?

**Conradi:** Well, just talking very broadly at a high level on the federal level, Mr. Presley referenced the RDOF, the Rural Digital Opportunity Fund. That's going to be a substantial investment in broadband infrastructure deployment. I think getting Congress to provide the additional dollars on top of that are going to be necessary to get near to universal access in rural areas for at least the current FCC definition of true broadband. That is something that can't wait five years. That needs to be gotten done in three years maximum, and if dollars are appropriated by Congress, it needs to be tied to conditions that incentivize rapid deployment, and not deployment where a company gets the dollars and then can sit on it for years.

Also, if anyone wants to get involved with CAN, by all means, reach out me [email below]. We are always looking for folks to send in letters to members of Congress, to the FCC on these issues, encouraging them to act, encouraging them to pursue policies that will expand broadband connectivity. We're always looking for more signers. We'd be happy to help. If a school district has a unique story to tell about either struggles or successes with broadband connectivity, we are always happy to help with things like our media materials and pitching local stories, or helping to draft op-eds for folks to get those stories out there, because those stories are also important to moving the needle.

**Presley:** One thing I would point out, I think that we've got to make sure as we're talking to policy makers, legislators, commissioners, advocates, is that I hear very often, "Oh well, we have wired all of our schools for internet service." Well, that's all great and wonderful, but it isn't worth a hoot if you live in a rural area, and the kids are sent home. We've got to shift the paradigm and the talking outside of just what we have on campus. We've done a great job in Mississippi getting schools connected. We've done an absolutely awful job here on rural access. We've got to talk about the classroom at home being the campus of the future, and I think that sometimes we muddle that.

Also, one question we have is about e-rate. We need some clarity to that issue, because affordability is going to be an issue across the nation. I know right now access is what we're all trying to get fixed, but we also really need to keep our pencil sharp on some of these issues of e-rate reform, how those funds are going to come out in the future because they are the lifeline of much of our education funding when it comes to this type of development. Right now, I don't think we have any clear guidance from anybody that I know of as to really the full potential how those funds can in fact be used.

**Conradi:** One more thing: right now, we know that at least 42 million Americans who do not have access to true broadband speeds but that is probably an underestimate. One of the most urgent challenges, particularly at a federal level, is fixing the way that as a country we measure the digital divide. Congress passed, on a bipartisan basis, and the president signed into law, legislation that would do just that earlier this year, the Broadband DATA Act. But that legislation has not been funded. It must be a top priority for Congress to fund that legislation, to implement those solutions because in order to tackle the challenge, we have to know the scale of the challenge and where the challenge exists.

**Rodolfich:** Here's the other deficit in Mississippi that you have to consider. Hurricane Katrina hit here and
we had to rebuild. We didn't have the electrical infrastructure within our school buildings in order to have the electrical capacity in order to deal with all the equipment that we were bringing in. On top of that, the electrical infrastructure we had was paper wrapped, insulated, stuff like that. Then even with the evolution that occurred after that, we had these huge rolls of blue fiber that we had put together with zip ties going down the hallway. And we're a very well-funded district. But many of Mississippi schools don't have the electrical infrastructure in place to manage the amount of hardware that they're going to put into those schools, to go along with the level of fiber that they need, or the advanced access points that they need within the schools. We need to work on that, too.

**Brenner:** Any final thoughts?

**Conradi:** Yeah, one thing is it can sound a little doom and gloom talking about lack of connectivity and the impact of that, but there has been positive progress. On the federal level, there really is bipartisan agreement on this issue. There have been numerous unanimous votes from both Republican and Democratic commissioners on the FCC to do things like maximizing spectrum resources to help tackle this challenge. Going forward, a big piece of this is just continuing to have everyone and particularly educators lend their voice to the urgency to tackle the problem, because so much of this issue is not so much that folks disagree, everyone agrees that this is an urgent challenge that needs to be tackled. It's making sure it gets to the top of the list of urgent priorities, especially because there is a dollar figure attached to that.

**Presley:** We also have got to keep in mind that once the pandemic is gone and things snap back to normal, even though kids go back into a classroom, this need isn't going to go away. I think we've got to understand we could be right back here, God forbid, two years, three years, five years. The challenges of digital education, the challenges of telehealth and the modern economy are not going away. We've got to take these lessons learned and put them to use in good public policy, because kids are going to go into a world that they need to learn online, maybe not K-12, but they're darn sure going to do it at a community college in the university. We have a real chance here to do some good and have a generational transformation in education.

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