

# THE STATE OF BROADBAND IN ARKANSAS

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## FIELD HEARING

BEFORE THE

### COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

\_\_\_\_\_  
AUGUST 28, 2007  
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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

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## THE STATE OF BROADBAND IN ARKANSAS

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TUESDAY, AUGUST 28, 2007

U.S. SENATE,  
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,  
*Little Rock, AR.*

The Committee met, pursuant to notice, at 10 a.m., in the Main Library of the President Clinton Presidential Library, 100 Rock Street, Little Rock, Arkansas, Hon. Mark Pryor, presiding.

### OPENING STATEMENT OF HON. MARK PRYOR, U.S. SENATOR FROM ARKANSAS

Senator PRYOR. Let me go ahead and, since I don't have a gavel, oh, wait—I'll use my BlackBerry. Let me thank everyone for being here. This is an official hearing of the Senate Commerce Committee. And I want to thank Chairman Inouye and Vice Chairman Stevens for allowing us to do this in Little Rock today. And let me just thank all of the participants.

You all notice that we have a very large panel of witnesses, and that really underscores the importance of broadband. When we start talking about this, maybe, you think, hey, we're going to have, you know, a few phone companies or a few of this or a few of that, but the truth is that broadband touches so many people in so many different ways that once we really got into this, we realized we needed a very broad spectrum of input. One of the goals today is just for—to allow the United States Senate through the Commerce Committee to hear about some of the challenges and some of the successes in trying to get broadband out to a rural state, some of the work that has been accomplished, and some of the work that is still left to do.

And also it's a great honor to have two FCC commissioners here with us today. It is unusual for any state or any city to be able to host two commissioners at the same time. These gentlemen are very, very busy. The FCC has a very, very full plate. The industries here that are represented, that have business before the FCC, they understand how many things are going on at the Federal Communications Commission. And to have two commissioners here to take time out of their schedule, I really appreciate that. And they've been bragging, just to let you know—they've been bragging on Arkansas and on Little Rock for really rolling out the red carpet for them. So I want to thank everyone for that and being very, very gracious hosts and hostesses for them.

I want to thank everyone here for helping us examine the state of broadband in Arkansas. In some ways, Arkansas is a microcosm of the country, because we have some areas that are urban, say

Little Rock and some of the more densely-populated areas. We have lots of small towns, as you all know. And then we have a big percentage of people in this state that actually live outside of city limits and live out in counties. And so we get the full range of challenges when it comes to broadband. But I will say, we've come a long way in a short time. Last night, we went to the Clinton Library, and one of the alcoves is devoted to technology. And you could see the progress that was made in the 1990s when it comes to technology, but we have made so much more progress since then. This is a very rapidly changing and rapidly moving development for our country. In little more than a decade, broadband technology has evolved really from just its roots for computer enthusiasts into a broadly-used platform that is now the foundation of communications and commerce in the Information Age. Today broadband technology is driving innovation in fields like telemedicine—we're going to hear that today, helping to provide quality health care in remote parts of our Nation. It's transforming education, allowing our children to access ideas and information far beyond what the shelves of any school or public library might be able to hold.

In fact, this morning, I went to a convenience store, and the store clerk knew we were having this hearing today. And she told me that she lives in rural Pulaski County, which is this county we're in right now, and that all they have is dial-up and that she home-schools. And it is very, very hard for her to access the information that they need and they want to home-school their children. And so the point of that is, there are just so many applications. It's really endless the applications that broadband can have in the way it impacts people. And it's transforming our workforce, increasing productivity, creating new economic opportunities for consumers and businesses. In fact, you all probably heard me tell this story before, because I've told it several times. But up in north Arkansas, there is a little mom and pop fishing resort that was teetering on having to go out of business, because it just didn't have enough volume to keep the doors open. And the local phone company, which is a small phone company up there, a few years ago said, "hey, let us design a website, we'll get you some high-speed Internet access, and let's see what happens." And it has totally transformed their business.

Now, you have to book them a year in advance, but it's because of the interconnectivity of all that. For people who like to trout fish and like to small mouth bass fish, they can now come to Arkansas. It's not—not only creating jobs, but showcasing our state.

But with all this promise that we're talking about here, and all the upside, over the past seven years, the U.S. as a nation has dropped from number four to number fifteen in the world broadband rankings. Closer to home here in Arkansas, even though it's very, very difficult to know exactly where Arkansas stands because of the way statistics are kept, but under the current method of keeping statistics, Arkansas is 47th out of 50 states in broadband penetration. So I know that there is a serious commitment with the governor, with the legislature, with all the elected officials, and the business community to try to move Arkansas forward. And that's what we are trying to do. Arkansas like many other parts of the Nation—we need to go further, we need to go

faster, and we need to ensure that all Americans can reap the benefits of a robust and also affordable broadband technology.

So there are a lot of people in this room who have been working on this, some for a short time, some for a long time. Hopefully, today's hearing will help us clarify issues that are important, and we will keep in mind that common goal of making Arkansas the leader in broadband deployment, and the spreading of the benefits of this technology to all of our citizens.

So now, let me introduce our two Federal Communications Commissioners, that's Michael Copps and Jonathan Adelstein. Let me start with Commissioner Copps. He's a leader in seeking deployment of affordable broadband throughout America. He was one of the first to call for a national broadband strategy. In addition, most of you know him as a champion for consumers, because he's been working on those issues for a long, long time. He has a very impressive public service career. He's served at the FCC since 2001. Under the Clinton Administration, Commissioner Copps served as Assistant Secretary of Commerce for Trade Development at the U.S. Department of Commerce, and Deputy Assistant Secretary of Commerce for Basic Industries. The Commissioner came to Washington in 1970, joining the staff of Senator Ernest "Fritz" Hollings of South Carolina, and serving for over a dozen years as his Chief of Staff.

Commissioner Adelstein is an old friend of the Pryor family. He worked for my father on the Senate Aging Committee. And he was born in South Dakota, and he is very—that makes him very, very aware of some of the challenges that rural providers face when trying to deploy broadband out in remote areas. And also there is a closely-guarded secret about him that I'll let you in on. He was a roommate at one point of our Lieutenant Governor, Bill Halter. So if we need the scoop on Bill Halter, we have the resource right here—and it may go both ways, though. But he was sworn in as a member of the FCC on December 3, 2002, and he was sworn in for a new five-year term on December 6, 2004. Before joining the FCC, he was in the Senate in terms of staff, and maybe committee staff or personal staff, in the Senate for about 15 years. He used to work with Senator Daschle, and my father, Senator Reid, and Senator Don Riegle, so he has a long experience in Washington, so—Commissioner Copps, if you want to lead off—well, what we're going to do here is we're going to give them five to ten minutes each, and then we'll introduce the panel.

**STATEMENT OF HON. MICHAEL J. COPPS, COMMISSIONER,  
FEDERAL COMMUNICATIONS COMMISSION**

Commissioner COPPS. Well, thank you, Senator, for that nice introduction, I don't get to be on this side of the table of the Senate hearings very often. It's not bad. I think I like it. But I am happy to be here for many reasons. First, as the Senator said, I worked in the Senate for many years, and getting to spend some quality time with the leaders of the Senate office, something I jump at doing, especially with someone like Senator Pryor who epitomizes the best of the Senate in terms of understanding the issues that confront Arkansas, the issues that confront the country, and then

in knowing the Pryor family tradition, how to work with his colleagues and to cross the aisle to get good things done.

So I'm happy to be here for that reason. We had a wonderful evening, and thanks to the hospitality of a lot of folks in this audience last night at the Clinton Library, and having worked in the Clinton Administration, and that brought back a lot of memories for me, and meant a lot to me, so I am very grateful for that.

Last night, I was thinking about that "don't stop thinking about tomorrow" that we were all singing about back in 1993. And really, that's what this hearing is all about. It's about tomorrow. Where are we heading in this still new 21st century, and what role are telecommunications going to play in charting our future? And my answer to that is that they are going to play an absolutely huge role, and that the future is going to belong to those who learn best how to deploy these new technologies and services, and my answer is also that we have to get this right for America. And part of my answer unfortunately is that right now, we're not quite where we need to be. And I know we've got a lot of new gizmos and gadgets, and advanced telecommunications like broadband have already brought us some pretty fundamental changes right here in Arkansas, too, thanks to the efforts of a lot of you folks in this room.

But I also know as the Senator has said that other countries are eating our lunch in getting high-speed telecommunications out to their citizens and building their communications infrastructure. And I believe that our country at the national level—its lack of a concerned strategy to get broadband out to all of our people is like playing Russian roulette with our future. We've got to do better in getting telecommunications out to all of our people. And when I say that "all," I always underline that word, because that means everybody. We can't afford to leave anybody behind in this new age of high-speed communications. And that means those who live in rural America, those who live in the inner city, those who live on tribal lands. It means not just the affluent and the privileged, but it means those who are economically disadvantaged and people with disabilities. Each and every citizen of this country has to have access to the windows of communication. And I'm not talking about that from some kind of "social do-gooder" kind of perspective. I'm talking about not doing—I'm talking about doing America a favor. That's—that's what we've got to look at this as. I'm talking about making sure that our citizens have the wherewithal to compete in this highly-competitive global economy that we're in. I'm talking about potential small business success stories right here in Arkansas that aren't going to happen—that are not going to happen unless we wake up now and get a national strategy.

I think broadband is really the great infrastructure challenge of our time. And if you course back through the annals of America's past, it's—every generation seems to have some kind of a infrastructure challenge. We go back to when we settled this country. And the first job was, well, how do we get the produce and the products of the settlers to market. So we found a way as a country, government and business working together, to build roads and turnpikes and regional railroads and canals and harbors and all the rest. Then after the Civil War, we're all of a sudden a big continental nation. How do you bind that nation together? Again, we



found a way. Government and business and communities working together to build the transcontinental railroads. Even in our own time, we had the interstate highway system to bring cities, suburbs, and country together.

And my point is—first of all, in all of these great infrastructure build-outs, there has always been a critical role for having a national strategy and then having government and business and communities work together. We didn't just throw up our hands and say "let somebody else do it" or "the market itself is going to accomplish all of this stuff." We work together. That's really how we've built the United States of America. And to me, the broadband networks we're talking about are the roads and the highways and the canals of the 21st century. And we all know what happened in the last century. If the railroad didn't come to your city, bypassed your city, your city didn't thrive, and sometimes it didn't even survive. So it's a matter of really getting a strategy, bringing America into the game. And it's not just the international context that I'm looking at.

I'm looking at the gap within our country between rural and urban America. We had in the last century a gap even within the basic telecommunications until close to the end between rural and urban America. If we don't get this broadband right, we're going to have a bigger gap between rural and urban America in the 21st century with all this fantastic new technology and all the promise that it holds than we had in the days of plain old telephone service in the last century. I don't think we can afford to wait for that.

The world's not going to wait for Arkansas or rural America or the United States to catch up. We've got to do that ourselves, so I'm delighted to be here today to learn from your experience. I don't know that there is any "one size fits all" solution to broadband—cities are different than the country, mountainous areas are different than the deltas, and there are a lot of individual problems that we need to grapple with. The key, to me, is getting a strategy and with everybody working together to make that happen.

Just some ideas that I will just very quickly throw out, then I'll be quiet, because I think part of strategy would be having a Universal Service Fund that really has broadband as its core mission. I think that would be good. I think it would really help get this technology out. And I think that the folks on the business end would understand what the national strategy is. Business can't operate with a question mark as Senator Hollings used to tell me when I worked for him. So everybody needs to know what the strategy is. And it means having a much more active Federal Communications Commission than we have right now. We're not collecting the data. We're still calling broadband 200 kilobits up and down. We're still saying if there is one subscriber in a Zip Code, ergo everybody must have broadband. That's like saying if one person drives a Cadillac in town then that must mean everybody's got a Cadillac. That's the same kind of silly logic.

And then we have to have an FCC that's crafting innovative solutions with the authority it has. And then beyond the FCC, it means government coming up with solutions that may include tax incentives, more loans for rural utilities service, encouraging a municipality in local and regional innovations. Those are just some of

the thoughts I would have. I want to thank everybody for being here today, and sharing your experiences. And I know when I go back, I will have this valuable information to put into my calculator as we try to write rules that make sense for the future. So thank you, Senator, very much for inviting me here today.

[The prepared statement of Commissioner Copps follows:]

PREPARED STATEMENT OF HON. MICHAEL J. COPPS, COMMISSIONER,  
FEDERAL COMMUNICATIONS COMMISSION

Good morning and thank you Senator Pryor for inviting me to be here with you and so many good Arkansans this morning. I'm happy to be here for many reasons. First, I worked in the U.S. Senate for many years and getting to spend some quality time with our Senate leaders is always exciting for me—especially when it's someone who epitomizes the best of the Senate—mastering the issues, knowing how to work across the aisle to get things done, and having an expansive vision for this great country of ours. Like your father before you, you add luster to the Senate. I'm also glad to be here because of the proximity of the Presidential Library. I had the honor of serving President Bill Clinton as Assistant Secretary of Commerce for Trade Development and I am so proud of what he accomplished for America both at home and around the world and proud of the opportunity he gave me to serve.

"Don't stop thinking about tomorrow," Bill Clinton told us. And that's what this hearing is all about—tomorrow. Where are we heading in this still-new twenty-first century and what role are telecommunications going to play in shaping our future? My answer to that is that the future will belong to those who learn best how to deploy all these new technologies, products and services. My answer is we *have to get this right* for America. And part of my answer, unfortunately, is that right now we're not where we need to be. Oh, I know we all have lots of new gizmos and gadgets and that advanced telecommunications like broadband have brought us some pretty fundamental changes, including right here in Arkansas. But I also know that other countries are eating our lunch in building their communications infrastructures and I believe that America's lack of a concerted national strategy to get back in the lead is tantamount to playing Russian roulette with our future.

Let me begin by saying that my overriding objective since going to the FCC in 2001 has been to bring the best, most accessible and cost-effective communications system in the world to all of our people—and I mean *all* of our people. We can't leave anybody behind in this great new age of high-speed communications. That means those who live in rural America, those who live in the inner city and those who live on tribal lands; it means not just the affluent and privileged, but those who are economically disadvantaged and those with disabilities. Each and every citizen of this great country should have access to the wonders of communications. I'm not talking about doing all these people some kind of feel-good, do-gooder favor by including them; I'm talking about doing America a favor. I'm talking about making certain our citizens can compete here at home and around the world with those who are already using broadband in all aspects of their lives.

The way I see it, broadband is really the great infrastructure challenge of our time. If you course back through the annals of America's past, you will find that just about every major era confronted a stark infrastructure challenge. In the early days, as we settled new lands, the need was to get the produce and products of our settlers to market—so we built roads and turnpikes and ports and canals to get the job done. Then, as we became a continental, industrial power, we needed railroads to bring the Nation together, so we laid a railway grid across the country, climaxed by the great saga of the transcontinental railroads. Closer to our own era, in the Eisenhower years, came the Interstate Highway System, to bind city and state and nation. Even in telecom, we found ways to get telephone service out to most of our citizens. And here's my point: in all of these great infrastructure build-outs, there has always been a critical role for business, local community organizations and government to work together toward a great national objective. We didn't just throw up our hands and say "Leave it to somebody else," or "the market will automatically get it all done." No, these things were the business of the people. That's how we looked at these challenges. That's how we overcame them. That, my friends, is precisely how we built this great country of ours. We pulled together and worked together. You know, we all rightly value that great Declaration of Independence and that glorious fight for freedom, but in reality it was millions of Americans making a declaration of interdependence, one upon the other, that won us our freedom and allowed us to build the greatest nation in history.

To me—and I believe this deeply—the broadband networks are the roads and canals and railways and highways of the Information Age. Our future will be decidedly affected by how we master, or fail to master, advanced communications networks and how quickly and how well we build out high-speed communications connectivity. If we succeed, we will create millions upon millions of new educational and economic opportunities. We will see new local businesses—and local governments, too—providing tremendous value-added services everywhere in the country. We will advance medical care through the development and delivery of new health services. We will ensure that schools and libraries are huge digital resources for their communities. We will give that aspiring small business person in any number of rural Arkansas communities a level field on which to compete with folks in the city and competitors around the globe.

Those who get access to high-speed broadband will win. Those who don't will lose. It's as simple as that. I want to help make sure we all get there, and that America's rural communities get there as soon as everyone else. I'll tell you this with confidence: if high-speed broadband is permitted to be primarily an urban phenomenon, the digital gap in this country that already separates urban and rural America will grow still wider and rural America will be relatively worse off in the twenty-first century of modern communications than it was in the days of plain old telephone service in the last century. We can't let that happen. This competitive world of ours is not going to make time for rural America to catch up. That may sound harsh, but it's also true.

The important question, of course, is what can we do about all this? Now I don't happen to think there is a one-size-fits-all broadband solution for this country. The Ozarks in northern Arkansas will likely require a different tact than the flat expanses of the Delta along the eastern border. And surely whatever plans we have for dense urban centers like Austin or Denver are not going to be the ticket for success in our rural communities. There are great differences—in population, culture and topography across this vast land of ours. So we need to embrace all kinds of solutions if we have any chance of succeeding.

I think that means we need a Universal Service Fund that has broadband as its core mission. It means encouraging communities to develop innovative solutions to getting broadband out. It means having a Federal Communications Commission that provides the hard data we all need to understand exactly where we are—basic things like who actually has broadband, what it is costing, and how fast it is. It means having an FCC that is committed to deploying its expertise and assistance much more proactively than has been the case in recent years. It means government coming up with solutions that might include tax incentives, more Rural Utilities Service loans, public-private partnerships, and encouraging some old fashioned competition. And it means having government at all levels implementing a creative, comprehensive and well-funded strategy.

I look forward to getting your thoughts today. I want to understand better where you are and where you think we should be heading. So thank you all for coming here today—providers, local officials, educators, entrepreneurs, technologists, consumers and citizens who understand the real challenges and promise in your home state. I have no doubt that what I hear today will help shape my views as I work back in Washington to craft policies that can bring broadband to all Americans. And I am optimistic that everyone here, pulling and hauling together, can make sure that in the broadband revolution of our time no community—and no Arkansan—is left behind.

Senator PRYOR. Commissioner Adelstein.

**STATEMENT OF HON. JONATHAN S. ADELSTEIN,  
COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION**

Commissioner ADELSTEIN. Thank you, Senator Pryor and Mr. Chairman today for inviting me to discuss this common goal that we have of making sure we deploy broadband everywhere in this country, including to the rural parts of this state and rural America. I certainly want to thank you all for the warm southern hospitality. Reminded me of back when I visited in the days of when your father was a senator. What a wonderful place this is. What a beautiful state it is. And what a wonderful bunch of people that know how to get together and do things. We certainly have a fine

set of panelists, and we thank you all for sharing your insights with us today.

I certainly commend you, Mr. Chairman, for your leadership on this issue. I know that in Washington, you're seen as one of the leaders on technology and telecommunications issues, not only as a function of being on the Commerce Committee, but as a Co-Chairman of the Senate Democratic High-Tech Task Force. You really recognize the importance of promoting these innovative technologies and promoting broadband deployment, and how important that is as you've explained this morning. I mean, your focus as you've said on broadband is so important, because it really does change and revolutionize the way that our economy works, the health care opportunities for our people, public safety, which relies on broadband technology, educational opportunities, and even the very social and democratic opportunities for people to participate in our government.

Broadband is creating whole new opportunities by connecting entrepreneurs to millions of customers as we've mentioned is the case in northwest Arkansas facilitating telecommuting, allowing communities to attract skilled workers and increasing productivity for business and government of all sizes. I think coming from South Dakota as you said and having worked for this state for six years, I certainly think that broadband is critical for the rural economic development of this state and really for all of rural America. We have a challenge on our hands, and it's a real problem if we don't allow the full potential of people to be realized, that they'll fall even further behind.

So here we have an opportunity for enormous progress, but there is actually peril on the other side, because as other countries and other parts of the country are expanding and advancing in technology, if rural America falls behind and—or continues to remain behind, the gap could get even larger. And that's tragic, because the upside is so amazing. Think about distance learning in telemedicine and how it's transforming the way we educate and care for our citizens, and robust broadband services are critical in times of disaster as we saw in the Katrina situation. It conveys enormous amounts of information to public safety, it also enables citizens to reach each other in a time of need and it helps first responders. All these applications that you can go on and on about, and we're only scratching the surface. Now, in this age of global competitiveness where we're competing with Bangalore, India, I think we've got to tap the potential of all of our citizens, no matter where they live, to reach our full level of economic growth. We need to prevent outsourcing of jobs overseas by promoting the insourcing of jobs right here in the U.S. by companies within our own borders.

For a long time, particularly under the leadership of one of Arkansas' own, whose library we enjoyed the hospitality of last night, the U.S. was the world leader in telecommunications. And there was a real focus—regular meetings at the White House—real national leadership on this issue. And we need more of that kind of leadership in the Federal, state, and local levels. I have been encouraged that with the changes in Congress, the Senate Commerce Committee has heightened its attention to this issue over the past year as evidenced by this hearing today.

Now, this is the first Congressional hearing—I’ve been in the FCC for five years, and this is the first time I’ve been invited to a state to focus on the impact of broadband in that particular state. And that’s a real testament of the kind of leadership we have here, and that Senator Pryor brings nationwide and certainly Arkansas needs that, and so does every state.

We need to learn more about the challenges in Arkansas, and I’m glad we’re going to hear from you today, so we can forge together a path forward to make progress here. This is the kind of attention and importance that an issue like this deserves. And we’ve made some progress, and we’re going to hear some positive lessons from each of you here this morning. I remain concerned though as a nation that we are failing to keep pace with our global competitors. My colleagues here talked about how we’re slipping down in the international rankings of broadband penetration. But the real important statistic to me is that citizens of other countries are getting a better broadband deal—more megabits for less money than Americans.

And that’s not just a PR problem which some of my colleagues fight back at *The Wall Street Journal* and other places, say, “oh, don’t—don’t look at the statistics.” That’s a real productivity problem for our economy. We’ve got to do better. I am concerned also that the lack of a coherent broadband plan is one of the reasons that we’re falling behind. Every other country that has a national plan is the—are the ones that are beating us. And we need a comprehensive national broadband strategy that targets the needs of every part of this country. It should incorporate benchmarks, deployment timetables, and measurable thresholds that gauge progress. We need to set ambitious goals, shooting for affordable high-speed broadband. We should start by getting better data, so we can ascertain where the problems are and develop solutions.

The FCC should be able to give Congress and consumers a clear sense of the price per megabit, just as we look at the price per gallon as an indicator of economic welfare.

Now, an important tool for mapping broadband availability, which would enable the public and private sectors to work together to target under-served areas is something that you’re talking about doing here in Arkansas, this Connect Arkansas, which the legislature recently approved and the governor signed. That kind of initiative is something I look forward to hearing more about. It worked well in Kentucky, and I certainly think it can work well here in Arkansas. And as we look at a national broadband strategy, I think we’ve got to increase incentives for investment, because the private sector is going to be the primary driver of growth. We’ve got to promote competition, because ultimately that’s the most effective driver of both innovation and lower prices for consumers. Now Federal universal service plays a vital role in maintaining and improving rural networks, it’s a big source of—of funding here in Arkansas as voice becomes just one application along with data and video over broadband pipes, I think we need to ensure that universal service evolves as Congress intended to promote ubiquitous broadband. We should make broadband the dial tone of the 21st century.

One of the best opportunities for promoting broadband also is through spectrum-based or wireless opportunities. We've got to assess the latest technological developments and get spectrum into the hands of operators that are ready and willing to serve at the most local levels. We have this upcoming 700 megahertz auction, which is of the old television bands. We have an historic opportunity there to facilitate the emergence of a third broadband platform. That's the kind of competition we need. So this is the biggest and most important auction that we're going to have for many years to come. And while the rules for the upcoming auction reflect a compromise, not everything I wanted, but I hope there will be opportunity there for a diverse group of licensees and we can put in the most aggressive build-out requirements in the history of the FCC. That should benefit consumers everywhere in the state, including the rural areas. Unlicensed broadband services are also an important avenue for a lot of underserved communities. Unlicensed spectrum is free and lightly used in rural areas, and it can be accessed immediately, so the equipment is relatively cheap, because there is a good national market for it.

So we're working at the FCC to make more unlicensed spectrum available at higher power levels. There's a lot more Congress can do, too, as part of the national broadband strategy outside of the scope of the FCC, such as adequate funding for the rural utility service, broadband loans and grants, and making sure that those loans and grants are properly targeted to areas that really need it and not just subsidizing competition.

There can be tax incentives for companies that invest in broadband to underserved areas. We can devise better depreciation rules for capital investments and targeted telecommunications services. We need to invest in basic science research and development to spur further innovation in telecommunications. We need to improve math and science education. And also we need to make sure we get computers in the hands of all of our citizens who want one but can't afford one. So if you don't have a computer, broadband doesn't mean anything to you.

One other idea I think is ripe for consideration now is perhaps it's time for a national summit on rural broadband initiated at the Federal level involving state, local, and tribal governments along with the private sector who's going to drive this to forge a consensus and show the kind of leadership we need around developing a national strategy. I certainly look forward to hearing from all the impressive panelists here today. I thank you for inviting me to testify and for holding this hearing.

[The prepared statement of Commissioner Adelstein follows:]

PREPARED STATEMENT OF HON. JONATHAN S. ADELSTEIN, COMMISSIONER,  
FEDERAL COMMUNICATIONS COMMISSION

Thank you, Senator Pryor, for inviting me to testify about one of the critical challenges confronting our Commission and the country: ensuring the deployment of affordable, high-speed broadband infrastructure to every corner of this country. I would also like to thank Governor Mike Beebe, the Arkansas Chamber of Commerce, the many fine panelists who will share their insight, and the citizens of Arkansas for welcoming us to your state today.

Senator Pryor, I want to commend you and the Committee for the vital leadership role you have taken on broadband and technology issues, which is evidenced through convening this hearing and also through your work in Washington, D.C. As

Co-Chairman of the Senate Democratic High-Tech Task Force, you have recognized the importance of promoting technological innovation and advanced telecommunications for providing good jobs and enhancing our standard of living.

I appreciate your focus on these concerns, which are so critical to the economic and social prosperity of our communities. You understand the need to maximize the potential of every citizen to contribute to our social, cultural and economic life through communications. We must tap the talents of everyone in America, whether they live in cities or in rural areas, whether they are Native Americans living on tribal lands or residents of economically challenged sections of our inner cities, whether they live with disabilities, whether or not they speak English, and regardless of their income level. I would like to talk to you today about why I believe this is such an important guiding principle for communications policy and some of the ways we at the FCC, you in Congress, and all of the participants here today can achieve this ambitious goal.

We must engage in a concerted and coordinated effort to restore our place as the world leader in telecommunications by making available to all our citizens affordable, true broadband, capable of carrying voice, data and video signals. An issue of this importance to our future warrants a comprehensive national broadband strategy that targets the needs of all Americans.

#### **The Role of Broadband for our Nation's Communities**

We are only scratching the surface of the opportunities that broadband can bring. We stand at the threshold of a revolution in the applications that will ride over broadband infrastructure. By expanding the reach of advanced communications technologies, we can bring new hope to many communities where it is in short supply.

For a long time, the U.S. was the undisputed world leader in communications technology. Yet, in recent years, we have tumbled out of our historic global position. I am particularly concerned that we give our communities the tools that they need to compete in a more global era. We need greater leadership on this issue at the Federal, state, and local levels. I am encouraged that the Senate Commerce Committee has heightened its attention to this issue over the past year.

Hearings like this play a key role. Since I joined the Commission, I have traveled across the country and seen the impact of broadband on the economic, health, public safety, education, social and democratic opportunities of our citizens. Yet, this is the first time I have ever been invited to a Congressional field hearing that focuses on the impact of broadband on a particular state. That is testament to the kind of leadership that can propel Arkansas forward to the front ranks of broadband deployment. Every state, and the Nation as a whole, needs this kind of initiative by its leaders.

I am pleased to share some of my thoughts, and am also looking forward to hearing the testimony of the many Arkansas state and local government officials, your regional leadership, representatives of the educational and telemedicine communities, providers, and others who will testify today. Together, we can learn more about the opportunities and challenges faced here in Arkansas and forge the path toward progress.

Right now, broadband is creating economic opportunities that were previously unattainable, and the potential is even greater. Broadband can connect entrepreneurs to millions of new distant potential customers, facilitate telecommuting, and increase productivity. Much of the economic growth we have experienced in the last decade is attributable to productivity increases that have arisen from advances in technology, particularly in telecommunications. These new connections increase the efficiency of existing business and create new jobs by allowing new businesses to emerge and new developments such as remote business locations and call centers. The opportunities for rural areas that have seized the initiative are enormous.

Broadband technologies are being harnessed in ways that folks back inside the Beltway might never have imagined. For example, at auction houses across the Midwest, entrepreneurs are using broadband technologies to conduct real time cattle auctions over the Internet. Ranchers from across the country can log in, watch real time video of the livestock and make purchases without leaving their ranches. By putting their livestock up for bid in cyberspace, these auction houses have been able to bridge remote locations, expand their potential markets, and cut the costs of reaching their customers.

Broadband can also unlock transformational opportunities through distance learning and specialty classes that might otherwise be confined within the physical walls of a traditional school. Similarly, telemedicine applications are giving rural Americans access to diagnostic services, like mobile mammography and emergency services that had been unavailable because of distance, cost, weather, or geography.

As we saw in events like the devastation of Hurricane Katrina, communications services become even more critical in times of disaster or national emergency, whether as a means of conveying critical information to the public, enabling citizens to communicate with their loved ones, or providing an essential tool for our first responders. Broadband networks are essential to any plan to make emergency networks robust and redundant enough to survive and function in the face of such disasters in the future.

Broadband technologies have the potential to improve the quality of life in even some of our most remote and economically challenged communities. I have seen communities leveraging broadband infrastructure to bring jobs: opportunities that serve not only as important sources of employment, but also as training grounds for the young people of the community. In almost every small community I visit, I hear how hard it is to develop a workforce with sufficient training in technology. Yet without such workers, it is hard for a small town to develop and oversee cutting edge communications systems.

We want people to be able to stay, work, and thrive in the communities where they grew up. The problem I often hear that it is harder to keep young people in rural areas these days because they sense a palpable lack of local opportunities. Broadband communications can benefit our communities in many ways, perhaps most of all by restoring the sense of opportunity that first made Americans venture forth and settle the more remote areas of this country. Broadband can help our young people who want to live where they grew up, and enjoy that quality of life, have new opportunities for work and advancement.

Efforts to draw attention to the importance of high-speed Internet access are critical. I understand that Arkansas recently adopted a unique public-private partnership—Connect Arkansas—to enhance broadband availability and subscribership. Such public-private partnerships can play an important role, educating businesses and consumers about the importance of broadband and aggregating demand so that there will be incentives for providers to build. It worked well in Kentucky, and it can work well in Arkansas.

### **Broadband and Global Competitiveness**

Keeping our communities connected and ensuring that the latest technologies reach all Americans, including those in remote and underserved areas, are principles that are enshrined in the Communications Act. Meeting these goals will be more important than ever as we enter a new age of global competitiveness.

Even as consumers are increasingly empowered to use broadband in newer, more creative ways, the stage on which we all must compete is also evolving into a global one. New telecommunications networks are a key driver of this new global landscape. They let people do jobs from anywhere in the world—whether an office in downtown Manhattan, a home on the Mississippi Delta, or a call center in Bangalore, India. This trend should be a wake-up call for Americans to demand the highest quality communications systems across our nation, so that we can harness the full potential, productivity and efficiency of our own country. We must give all our towns the tools they need to compete in this new marketplace. If we fail in this, be assured, our competitors around the world will take full advantage of us.

We've made progress, many providers are deeply committed, and there are positive lessons to draw on. Yet, I am increasingly concerned that we have failed to keep pace with our global competitors over the past few years. Each year, we slip further down the regular rankings of broadband penetration. While some have protested the international broadband penetration rankings, the fact is the U.S. has dropped year-after-year. This downward trend and the lack of broadband value illustrate the sobering point that when it comes to giving our citizens affordable access to state-of-the-art communications, the U.S. has fallen behind its global competitors.

There is no doubt about the evidence that citizens of other countries are getting a much greater broadband value in the form of more megabits for less money. A recent OECD report ranked U.S. 12th in broadband value. According to the ITU, the digital opportunity afforded to U.S. citizens is 21st in the world. For small businesses, those in rural areas, and low income consumers, the problems can be even more acute. This is more than a public relations problem. It is a major productivity problem, and our citizens deserve better. Indeed, if we do not do better for everyone in America, then we will all suffer economic injury. In this broadband world, more than ever, we are truly all in this together and we need to tap all of our resources.

Some have argued that the reason we have fallen so far in the international broadband rankings is that we are a more rural country than many of those ahead of us. If that is the case, and since geography is destiny and we cannot change ours, we should redouble our efforts and get down to the business of addressing and overcoming this challenge.



I am concerned that the lack of a comprehensive broadband communications deployment plan is one of the reasons that the U.S. is increasingly falling further behind our global competitors. Virtually every other developed country has implemented a national broadband strategy. This must become a greater national priority for America than it is now. We need a strategy to prevent outsourcing of jobs overseas by promoting the ability of U.S. companies to “in-source” within our own borders. Rural America and underserved urban areas have surplus labor forces waiting to be tapped. No one will work harder, or work more efficiently, than Americans but many are currently without opportunities simply because the current communications infrastructure is inadequate to connect them with a good job. That situation must improve.

#### **A National Broadband Strategy for All Americans**

A true broadband strategy should incorporate benchmarks, deployment time-tables, and measurable thresholds to gauge our progress. We need to set ambitious goals and shoot for affordable, truly high-bandwidth broadband. We should start by updating our current anemic definition of high-speed of just 200 kbps in one direction to something more akin to what consumers receive in countries with which we compete, speeds that are magnitudes higher than our current definitions.

We must take a hard look at our successes and failures. We need much more reliable, specific data than the FCC currently compiles so that we can better ascertain our current problems and develop responsive solutions. The FCC should be able to give Congress and consumers a clear sense of the price per megabit, just as we all look to the price per gallon of gasoline as a key indicator of consumer welfare. Giving consumers reliable information by requiring public reporting of actual broadband speeds by providers would spur better service and enable the free market to function more effectively. Another important tool is better mapping of broadband availability, which would enable the public and private sectors to work together to target underserved areas. Legislation under consideration by leaders in both the House and the Senate would enable us and other agencies like the Census Bureau to make enormous progress on this front. The Connect Arkansas initiative will help in this state, and a similar approach should be adopted nationwide.

We must redouble our efforts to encourage broadband development by increasing incentives for investment, because we will rely on the private sector as the primary driver of growth. These efforts must take place across technologies, so that we not only build on the traditional telephone and cable platforms, but also create opportunities for deployment of fiber-to-the-home, fixed and mobile wireless, broadband-over-power line, and satellite technologies. We must work to promote meaningful competition, as competition is the most effective driver of innovation, as well as lower prices. Only rational competition policies can ensure that the U.S. broadband market does not devolve into a stagnant duopoly, which is a serious concern given that cable and DSL providers now control approximately 96 percent of the residential broadband market. We must also work to preserve the open and neutral character that has been the hallmark of the Internet, in order to maximize its potential as a tool for economic opportunity, innovation, and so many forms of public participation.

There also is more Congress can do, outside of the purview of the FCC, such as providing adequate funding for Rural Utilities Service broadband loans and grants, and establishing new grant programs supporting public-private partnerships that can identify strategies to spur deployment; ensuring RUS properly targets those funds; providing tax incentives for companies that invest in broadband to underserved areas; devising better depreciation rules for capital investments in targeted telecommunications services; investing in basic science research and development to spur further innovation in telecommunications technology; and improving math and science education so that we have the human resources to fuel continued growth, innovation and usage of advanced telecommunications services.

What is sorely needed, but fortunately in evidence here today, is real leadership at all levels of government, working in partnership with the private sector, to restore our leadership in telecommunications. This type of attention is needed today on a national scale. Much as we focus on Arkansas, today, a National Summit on Broadband—or a series of such summits—mediated by the Federal Government and involving the private sector, could focus the kind of attention that is needed to restore our place as the world leader in telecommunications.

Two other critical steps toward a national strategy, elaborated upon below, are properly channeling universal service toward broadband and promoting spectrum-based services for Rural America.

### **Universal Service: Evolving for the Broadband Age**

Congress and the Commission recognized early on that the economic, social, and public health benefits of the telecommunications network increase for all subscribers with the addition of each new subscriber. Federal universal service continues to play a vital role in meeting our commitment to connectivity, helping to maintain high levels of telephone penetration and increasing access for our Nation's schools and libraries. With almost a decade behind us since the 1996 Act, the FCC is re-examining almost every aspect of our Federal universal service policies, from the way that we conduct contributions and distributions, to our administration and oversight of the fund. As this review has gone forward, I have worked hard to preserve and advance the universal service programs as Congress intended.

We need to make broadband the dial-tone of the 21st century. Ensuring the vitality of universal service will be particularly important as technology continues to evolve. Increasingly, voice, video, and data will flow to homes and businesses over broadband platforms. In this new world, as voice becomes just one application over broadband networks, we've got to have ubiquitous broadband pipes to carry the most valuable Internet Protocol (IP) services everywhere. Without such broadband networks, IP services can't reach their full audience or capability. The economic, public health, and social externalities associated with access to broadband networks will be far more important than the significant effects associated with the plain-old-telephone-service network, because broadband services will touch so many different aspects of our lives. So, it is important that the Commission conduct its stewardship of universal service with the highest of standards and that we ensure that universal service evolves to promote advanced services, which is a priority that Congress has made explicitly clear.

### **Wireless: A Critical Source of Broadband Services**

One of the best opportunities for promoting broadband, particularly in rural areas, and providing competition across the country, is in maximizing the potential of spectrum-based services. The Commission must do more to stay on top of the latest developments in spectrum technology and policy, working with both licensed and unlicensed spectrum. Spectrum is the lifeblood for much of this new communications landscape. The past several years have seen an explosion of new opportunities for consumers, like Wi-Fi, satellite-based technologies, and more advanced mobile services. We now have to be more creative with what I have described as "spectrum facilitation." That means looking at all types of approaches—technical, economic or regulatory—to get spectrum into the hands of operators ready to serve consumers at the most local levels possible.

Of course, licensed spectrum has and will continue to be the backbone for much of our wireless communications network. We are already seeing broadband provided over satellite, new wireless broadband systems in the 2.5 GHz band, and the increasing deployment of higher speed mobile wireless connections from existing cellular and PCS providers.

During our review of the bandplan in advance of the auction last year of 90 MHz of new spectrum for the Advanced Wireless Service, I pressed for the inclusion of smaller blocks of licenses. I thought that smaller license blocks would improve access to spectrum by those providers who want to offer service to smaller areas, while also providing a better opportunity for larger carriers to more strategically expand their spectrum footprints. Our decision to adopt smaller license blocks was well received by a number of carriers and manufacturers.

The Commission now has a historic opportunity in the upcoming 700 MHz auction to facilitate the emergence of a "third" broadband platform that will ensure consumers everywhere the benefits of a high-quality wireless broadband network. This is the biggest and most important auction we will see for many years to come. While the Commission recently adopted auction rules that reflect a compromise among many different competing interests, I am hopeful that there will be opportunities for a diverse group of licensees in the 700 MHz auction and that our more aggressive build-out requirements will benefit consumers across the country. We also put in place a new approach to spectrum management by adopting a meaningful, though not perfect, open access environment on a significant portion of the 700 MHz spectrum. This decision represents an honest, good faith effort to establish an open access regime for devices and applications that will hopefully serve consumers well for many years to come.

Unlicensed broadband services are an intriguing avenue for many underserved communities because unlicensed spectrum is free and, in most rural areas, lightly used. It can be accessed immediately, and the equipment is relatively cheap because it is so widely available. I have also worked closely with the Wireless Internet Serv-

ice Provider (WISP) community, which has been particularly focused on providing wireless broadband connectivity in rural and underserved areas.

But we can always do more for rural WISPs and other unlicensed users. I have heard from operators who want access to additional spectrum and at higher power levels. And the Commission has been doing just that. We have opened up 255 megahertz of spectrum in the 5 GHz band—more spectrum for the latest Wi-Fi technologies—and are looking at ways to increase unlicensed power levels in rural areas.

I also have pushed for flexible licensing approaches that make it easier for community-based providers to get access to wireless broadband opportunities. We adopted rules to make spectrum in the 3650 MHz band available for wireless broadband services. To promote interest in the band, we adopted an innovative, hybrid approach for spectrum access. It makes the spectrum available on a licensed, but non-exclusive, basis. I have spoken with representatives of the Community Wireless Network movement, and they are thrilled with this decision and the positive impact it will have on their efforts to deploy broadband networks in underserved communities around the country.

We have also made spectrum available in the 70/80/90 GHz band for enterprise use. While you may not be familiar with this spectrum block, it can be used to connect buildings with gigabit-speed wireless point-to-point links for a mile or more. Instead of digging up streets to bring fiber to buildings, licensees can set up a wireless link for a fraction of the cost—and the spectrum is available to anyone holding a license. While others supported an auction, I successfully argued against them in this unique case, because I was concerned that auctions would raise the price of access and shut out smaller licensees. In fact, one company now is installing five links for the City of Sioux Falls in my home state of South Dakota. The links will be used for a number of city services, including public works, police and fire departments, as an alternative to fiber.

### **Conclusion**

Congress has charged the Commission with ensuring that the American public stays well-connected, directing us in the very first section of the Communications Act with making available to “all the people of the United States” rapid, efficient nationwide communications services. That starts with a continuing commitment to connectivity, for all our citizens. For the sake of ourselves, our children, and this great country, we must be bold and successful in this endeavor. So, thank you for your leadership on this important issue, for inviting me to Arkansas to hear from this impressive line-up of witnesses, and for the opportunity to testify before you today.

Senator PRYOR. Well, thank you. Thank you both for being here. I appreciate your words of wisdom there. Let me tell you what we’re going to do now. I’m not even going to introduce everybody. I’m going to let everybody just introduce themselves very quickly, and then—Daryl, from you all the way over here, we’re going to do three minutes per statement, then some students are going to have a ten, fifteen minute presentation.

And then on this side of the room, we’re going to do two minutes. And if we do the math on that, we’re running well over an hour there. So if everybody could keep their comments brief and stay within their allotted times, it would be very helpful. And we may ask questions if something comes up, something you say triggers a question, and I want the two commissioners to feel free to ask a question of some of the witnesses. That would be great. But we’re going to save most of our discussion for later. Once everybody’s had a chance to do their opening statement, then that’s when the real discussion will start. And because there are so many—and again, this issue touches everybody in many different ways. This is going to be much more of a round table-type discussion rather than a traditional Senate hearing.

You know, in the Senate, we get the witnesses there, and we start pounding on them—as the two Commissioners can testify to.

We'll get them over there, and we start pounding on them. That's not going to be the nature of this. This is going to be much more of a discussion. I love your thoughtful comments, your impressions—just things that you're seeing out there around the state and things we need to do, challenges, good ideas, and whatever it may be. And we'll have that discussion after everyone does their opening statements. But please bear in mind the two Commissioners and myself—we may ask questions of the witnesses as we go. So Daryl, if you wouldn't mind just to state your name and what you do and give your three minutes, and we'll go around the room.

**STATEMENT OF DARYL E. BASSETT, COMMISSIONER,  
ARKANSAS PUBLIC SERVICE COMMISSION**

Mr. BASSETT. I'm Daryl Bassett. I'm the Commissioner, Arkansas Public Service Commission. Senator Pryor, I want to thank you for this historic opportunity to discuss broadband. Commissioners Copps and Adelstein, welcome to Arkansas.

First question, with regard to broadband—it readily presents itself since there is near universal agreement about the benefits of broadband deployment—is why aren't we there yet? Why are we short of full deployment? And I think the question there lies—it's a question of policy. I think as policymakers, we have to move closer or look closer at the metrics that the Federal Government currently uses in determining broadband usage in the country.

Commissioner Copps touched on the fact that we need to pay more attention to the fact of the broadband bar, 200 kilobits per second is laughable when you consider the speeds that are available today. I think that any oversight committee should contemplate a review of that policy as well as the policy—the zip code policy. That says that if anyone within a zip code is served by broadband, then everyone is served by broadband. I think at the very least, we need to start looking at perhaps a zip code+four idea. That approach would certainly lend quality and credibility to our data collection activities. I think the Broadband Data Improvement Act that recently unanimously passed the Senate Commerce Committee goes a long way, rather, to closing that loophole. I support that initiative primarily, because I think the FCC should be directed to come up with a new metric for the second-generation broadband. And I think that second-generation broadband definition should be the minimum speed needed to string full-motion, high-definition video.

The second question regards our regulatory philosophy. I think we have to understand that the service providers are spending billions of dollars right now trying to expand the Internet's carrying capacity and its speed. And I think we need to be very careful as regulators to not practice any anticipatory regulation that might prevent those incentives from coming to bear. Getting dispersed areas such as what we have in Arkansas served by broadband is tough, it's risky. Often these companies have no idea of what a take rate they're going to have once they get out there. We need to look at incentivizing that kind of broadband deployment. And as a regulator, I'm particularly sensitive to any regulation that would prevent that kind of investment, particularly in rural areas. I'm going to run out of time very quickly, but I just really want to

stress the importance of continuing the process of increasing the radio spectrum that Commissioner Adelstein spoke on. I also would encourage you to continue your investigation into possibly subsidizing deployment in the areas that are considered marginal.

Senator PRYOR. Good. Thank you.

**STATEMENT OF REX NELSON, ALTERNATE FEDERAL  
CO-CHAIRMAN, DELTA REGIONAL AUTHORITY**

Mr. NELSON. Thank you Senator Pryor, Commissioner Copps, Commissioner Adelstein. We appreciate this opportunity. I'm Rex Nelson. I'm one of President Bush's two appointees to the Delta Regional Authority, which serves 240 counties and parishes in parts of Arkansas, Alabama, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee. And as you hit on, sometimes when you're a presidential appointee and you get called before a Senate committee by a member of the Majority, it's not always a pleasant thing.

So I appreciate this pleasant opportunity today, Senator. In fact, I'm convinced not once will I have to say, "I have no recollection of that, Senator," today.

[Laughter.]

Mr. NELSON. Senator Pryor and I have basically known each other since childhood, so he realizes he could put me under at any time, Mr. Commissioner, anyway. But as we look at the rural South, the area of the country that we cover, after World War II, we saw tremendous gains in this region in closing that huge gap in average per capita income between the rural South and the rest of the country. And I can point to three, among other reasons, for that. That is we started paving our roads. We got electricity in the rural areas. And because we got electricity in the rural areas, we got air conditioning in the rural areas. So suddenly in those years after World War II, we got out of the mud, we got out of the dark, and we got out of the heat. Can you imagine having this hearing today with no air conditioning in this room? And we did it in large parts of the rural South because of something that were a magic three letters around the region called the REA, the Rural Electrification Administration.

Now, if you look at the past ten to fifteen years, you will see that we have stopped making progress in the rural South in closing that gap. We have not successfully in our region made the transformation into the Information Age. And I would contend a lot of it is because we are not delivering broadband to our people. And I would also contend that having access to broadband in even the most rural areas of our country is just as important as getting that electricity to them, and therefore that air conditioning to them was back in the 1940s and the 1950s and for some even up into the 1960s.

So, Commissioner Copps, when you talk about a broad national strategy, I could not agree more. I think we have to work together with the private sector, in the public sector, to have a public/private strategy to make sure that the rural areas of our country aren't left behind, because if we don't, in this Information Age, not only will we not keep closing that per capita income gap, we're going to see that gap start to grow and continue to grow. And in

essence, we're going to be back where we were in the rural South before World War II. Thank you for the opportunity.

[The prepared statement of Mr. Nelson follows:]

PREPARED STATEMENT OF REX NELSON, ALTERNATE FEDERAL CO-CHAIRMAN,  
DELTA REGIONAL AUTHORITY

Senator Pryor, Commissioner Copps, Commissioner Adelstein: It is an honor to be asked testify this morning. We are happy to be a part of this important discussion. The Delta Regional Authority is a Federal-state partnership that serves 240 counties and parishes in parts of Arkansas, Alabama, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee. We operate a highly successful grant program in each of the eight states we serve. This program allows cash-strapped cities and counties to leverage money from other sources. The DRA also has expanded its regional initiatives the areas of information technology, transportation and health care.

Earlier this year, the Delta Regional Authority unveiled an information technology plan for the region. This plan, which has been presented to the President and Congress, was developed in conjunction with Southern Growth Policies Board. We hope to build information technology access and utilization in Arkansas and the other states we serve. The plan is titled "iDelta: Information Technology in the Delta," and its goals are to improve education, enhance entrepreneurship and improve health care through the use of information technology.

Southern Growth Policies Board is a public policy think tank based in Research Triangle Park in North Carolina. Formed by the region's Governors in 1971, Southern Growth Policies Board researches and develops economic development policies. The region is provided with authoritative research, discussion forums and pilot projects in the areas of technology and innovation, globalization, workforce development, community development, civic engagement and leadership.

The plan developed by DRA and Southern Growth Policies Board includes numerous recommendations. An estimated 15 percent of zip codes in the DRA region lack high-speed Internet services, compared with 12 percent nationally. In rural areas of the Delta, the lack of services grew to almost 18 percent.

What we've tried to accomplish with this plan is to provide a map for expanding information technology in the region. Information technology is as critical to the advancement of the Delta as good highways. We would never dream of limiting the access of drivers to publicly funded highways. By the same token, we must make sure people have access to the information highways. There are, of course, differences between highways and information technology. The nation and the states have large agencies dedicated to the planning, funding, construction and maintenance of highway systems. No such unified system exists for telecommunications access. Responsibility is widely scattered.

We also teach driving skills in this country. But we don't exhibit the same drive to teach technology skills. And roads don't come in as many radically different forms as is the case with telecommunications access. People can choose from a telecommunications menu that consists of cable, home lines, wireless, satellite and more.

Only 15 percent of local governments in the region have a website, compared with 24 percent of U.S. municipalities. Delta school districts with a website lag the national rate, 54.2 percent to 62.2 percent. Only 13 percent of the 240 counties and parishes have schools with community technology centers available after school hours. Just 37 percent of communities in the region have public technology centers outside of schools and libraries.

One of our key recommendations is the creation of a DRA iDelta Center that will act as an organizing entity for information technology initiatives in the region. This recommendation is based on successful models that already exist in the South. Other iDelta recommendations include funding telecommunications projects to connect the region with critical assets in health, education, workforce training, e-commerce and entrepreneurship; conducting a public affairs campaign on the value of technology; and funding local development districts to use GIS systems to support the DRA's regional initiatives.

During a planning retreat in February 2005, the DRA board voted to make health care, transportation and information technology the agency's major policy development areas. Last year, the DRA launched the Healthy Delta initiative, <http://www.healthydelta.com>. In February, we unveiled plans for the Delta Development Highway System. The proposed system consists of 3,843 miles of roads throughout the region. The estimated cost to complete the planned improvement projects for

these roads is \$18.5 billion. In April, we released a detailed study that identifies sites in the region where oil refining facilities can be placed. Such a facility has not been built in this country since 1976. Taken together, the highway plan, our health care initiative, the oil refinery plan and the information technology plan provide a blueprint for the economic revitalization of the region. We take our role as a regional planner, coordinator and advocate seriously. The release of this information technology plan is a major step in the life of the authority.

The DRA would like to be a unifying force in this region when it comes to information technology. This fits into our mandated role as a regional coordinator. No one is doing this for information technology in the region. We want to step up and help fill that gap. A wave of information technology investment is as necessary for the future of the Delta as great highway construction projects.

For more than a decade, economic development officials have been ringing the alarm about the region's lack of information technology access. To change this conversation and the region's reality, there must be significant new strategic investments in information infrastructure and resources. Our iDelta plan will provide a tool for guiding the development of such efforts. Hopefully, we can craft Federal interagency agreements that will allow our proposed DRA iDelta Center to articulate and fund the vision of universal access and usage.

Thank you again for the opportunity to testify.

Senator PRYOR. Thank you. Mr. Burdick, before you say a word, I will note that on my way in, we stopped in this library. We saw computers after computer there. And I know the librarians around the state made a serious commitment to technology in providing public access to the Internet and to technology generally, so go ahead.

**STATEMENT OF DAVID BURDICK, DIRECTOR, PINE BLUFF/  
JEFFERSON COUNTY LIBRARY SYSTEM; ON BEHALF OF  
ARKANSAS PUBLIC LIBRARIES**

Mr. BURDICK. Thank you for noting that. Senator Pryor, Commissioners, I'm honored to come before you today and appreciate the opportunity to speak on behalf of the public libraries in Arkansas. My name is Dave Burdick. I'm the Director of the Pine Bluff/Jefferson County Library System. Pine Bluff is located 45 miles southeast of Little Rock where the pine trees end and the delta farmlands begin. We have five public libraries serving a population of 82,000 people. Fifty-five percent of the population is black. Twenty percent of the population is below the poverty line.

Although nearly all public libraries in Arkansas are connected to the Internet, there are many of the small rural libraries where this connection is through dial-up, a dedicated 56k line, a DSL line, or a connection through a local cable television network.

Today, public libraries are a technological center for many of our citizens who either cannot afford to own a computer or afford to pay for a high-speed connection to the Internet. The Pine Bluff libraries are typical of many of the public libraries in Arkansas. One out of three people who walk through our doors use a public computer work station. The important thing is this: The public library is their gateway to the world. We offer this gateway to everyone. Yet in many cases, we're letting our citizens down by not offering a fast and reliable connection to meet their needs. In our two smaller branches, both located in towns of approximately a thousand people, we have a 56k connection for the three public work stations and two staff work stations. This is not adequate, and, unfortunately, it's typical of small, rural libraries throughout Arkansas.

In Pine Bluff, the infrastructure is such that many citizens cannot get DSL. Numerous times in the past few years, the Internet connection at one of our libraries has gone down simply because the phone company plugged in another new user into antiquated equipment, which was not intended to carry this type of load.

Pine Bluff is an impoverished community compared to other major cities in Arkansas. And the payback to the investment in the infrastructure is just not there as it is in other markets. It is like this throughout the rural areas of Arkansas, especially in the Delta region. It is my belief that the government must step in and offer incentives to help improve the infrastructure of these poor and rural areas. I envision the day when every public library throughout the state is connected to the Internet at a speed which will provide all of our citizens access to video-conferences, live online educational programs, live classroom instruction, and other resources which take a great deal of bandwidth. Internet sessions should be dependent on the current speed of the Internet and not the speed of the network which connects the citizens to the Internet. When we talk broadband as it pertains to public libraries, we should be talking about speeds which can reach 100 megabits per second. We need to move away from frame relay and move towards a long distance Ethernet or fiber optics network, so that our citizens can have quick access to our educational institutions.

You are here today because we all recognize that Arkansas is far behind the rest of the country in broadband services. Let's just be sure that everyone agrees that the public libraries of Arkansas must be included in all discussions and that solutions are found to bring Arkansas and Arkansas public libraries up to speed. Thank you.

[The prepared statement of Mr. Burdick follows:]

PREPARED STATEMENT OF DAVID BURDICK, DIRECTOR, PINE BLUFF/JEFFERSON  
COUNTY LIBRARY SYSTEM; ON BEHALF OF ARKANSAS PUBLIC LIBRARIES

Senator Pryor, Commissioners, I am honored to come before you today and appreciate this opportunity to speak on behalf of the Public Libraries in Arkansas.

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Thank you.

Commissioner COPPS. Can I ask a quick question?

Mr. BURDICK. Yes, please.

Commissioner COPPS. Do you have any figures or data on what percentage of libraries maybe are on dial-up? You know, we have the E-Rate program for schools and libraries. We're all very proud of that, and I'm a strong supporter of it. There are those who say, well, you've got 93 percent of the classrooms in the United States connected, but a lot of them are dial-up, aren't they?

Mr. BURDICK. The data that I've seen lately is a little old because the state library does collect that, but because so many are starting to move out away from the state-offered services, it's really hard to know exactly where each of those are. I do know by talking to other librarians that they have branches in these small areas, which are definitely on dial-up. I have no idea how—or what the number is.

Commissioner COPPS. That's a lot to expect our kids to compete on a dial-up connection with folks everywhere else that have high-speed.

Mr. BURDICK. That is correct.

Senator PRYOR. Dr. Lowery?

**STATEMENT OF CURTIS L. LOWERY, JR., M.D., CHAIRMAN,  
DEPARTMENT OF OBSTETRICS AND GYNECOLOGY;  
DIRECTOR, CENTER FOR DISTANCE HEALTH, UNIVERSITY OF  
ARKANSAS FOR MEDICAL SCIENCES (UAMS)**

Dr. LOWERY. Thank you. And thanks for the opportunity to present this very important issue. I'm first a practicing healthcare provider, but I'm also Director of the Center for Distance Health at UAMS and Chairman of the Department of Obstetrics and Gynecology. And I'll start by saying, where you live should not determine whether you live or die. That is the case. And as a healthcare provider, it's my mission to eliminate this disparity. It's unacceptable, and we should eliminate it. Information is available and needs—your information and special care can eliminate many of these deaths. So every day that we don't do this, there are people dying unnecessarily. So that's why I think it's really important.

Arkansas is the sixth poorest state in the Nation. We are among the worst nationally for stroke mortality, women's health, obesity, health insurance coverage, cardiovascular deaths, and overall health. And unfortunately, there is a long list of other problems we have. While we have made progress in the last few years in improving this, there is a lot more room for improvement. A few months ago, we formed Arkansas Telehealth Network. And this is an historical alliance of 16 of Arkansas' leading health care organization, has been realized as Arkansas formed the Arkansas Telehealth Oversight and Management Board—ATOM.

ATOM is called to the duty to fully connect, tactically expand, and officially manage the statewide telehealth system that builds upon the state's educational and clinical efforts. You may wonder why that's important to do this as a healthcare provider. And I'll tell you that 73 of the 75 counties in Arkansas are considered medically under-served. With that, Little Rock is the home to the vast majority of the state's only subspecialists making subspecialists' care concentrated away from the rural areas where they're most needed. This is true of many states, not just Arkansas, as well. It's hard to get subspecialists to go to rural areas.

Unique to Arkansas, all hospitals throughout this state are wired and ready for the telehealth network due to bio-terrorism grants that we got. So I want to make a pitch for the FCC grant—we should get that, we need it very much. We could make dramatic improvements in a very short time. ATOM identifies and leverages existing resources to make the most efficient use of funding and technology since we already have the, sort of the infrastructure in place. ATOM plans to update, expand, and connect all hospitals and other health care organizations to build a unified state virtual telehealthcare network that includes all hospitals and all providers. By doing this subspecialty support through telehealth enables us to oversee every patient transition from point-of-care from rural areas, to the cities, and back and forth, so that the patient is not a patient in the large hospital, but is a patient of everybody in the state. So if you transfer a patient, it's still your patient, and vice versa.

We can expect more cost savings and a diversity of disciplines as a result of this. Reaching telemedicine to rural Arkansas can stimulate workforce development, keeping telehealth dollars in rural towns that need them the most. We may be poor and we may not have a good health care standing as other states. What we do have is a network of telehealthcare providers focused on improving Arkansas through a unified statewide initiative.

Arkansas is rich in one area: a passion to overcome our shortcomings with the intellectual and technological infrastructure required to implement the Arkansas Telehealth Network. The support of the FCC, and you, Senator Pryor, can make this vision for the future come to fruition. Thank you for your desire to make Arkansas a better and eventually the best state in the Union for telehealth. Thank you.

[The prepared statement of Dr. Lowery follows:]

PREPARED STATEMENT OF CURTIS L. LOWERY, JR., M.D., CHAIRMAN, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY; DIRECTOR, CENTER FOR DISTANCE HEALTH, UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES (UAMS)

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES (UAMS)

PRESENTATION TO THE LEGISLATURE

*Arkansas Telehealth Network*

**(FCC WC Docket No. 02-60)**

*Overarching Theme*

*Where you live should not determine whether you live or die.* That sentiment resounds in the mission of Arkansas' healthcare providers. In a state where 73 of 75 counties are considered medically underserved, healthcare access is the most overwhelming reason for Arkansas' poor health standing. Faced with a statewide crisis in nearly every measurable healthcare category, an alliance of healthcare providers has sought to demonstrate that through collaboration and technology Arkansas is a place to live—not die.

*How do we plan to achieve this?*

In response to the FCC Rural Health Care Pilot Program, the State of Arkansas, in a historical feat, has allied its major healthcare service organizations and stakeholders, building the framework for a fully-connected, tactically-expanded, and efficiently-managed statewide telehealth system. This partnership of healthcare organizations is realized through the Arkansas Telehealth Oversight and Management (ATOM) Board, with a current membership of 16 organizations and an open invitation to all others interested in improving Arkansas' telehealth resources. With FCC assistance, ATOM will create the Arkansas Telehealth Network.

ATOM is comprised of a diverse group of Arkansas healthcare organizations operating statewide, including the following agencies:

- University of Arkansas for Medical Sciences.
- Arkansas Department of Health and Human Services.
- Baptist Health.
- Arkansas Center for Health Improvement.
- Arkansas Department of Finance and Administration.
- Arkansas Department of Information Systems.
- Arkansas Foundation for Medical Care.
- Arkansas Hospital Association.
- Arkansas Office of Information Technology.
- Arkansas Research & Education Optical Network.
- Community Health Centers of Arkansas.
- DaySpring Behavioral Health.
- Delta Regional Authority.
- Mental Health Council of Arkansas.
- St. Vincent Health System.
- Training, Research in Aging and Children Services (TRACS).
- And others as they choose to join.

As selected by the ATOM Board, the University of Arkansas for Medical Sciences (UAMS) serves as the legal and financial applicant seeking FCC funding. Through an innovative management plan and statewide collaboration and support, this pilot program will revolutionize the composition, interoperability, and management of Arkansas' telehealth efforts. A total request of \$5,054,988 and an accompanying hard cash match of \$837,300 will achieve goals of consolidation, expansion, and management of the Arkansas Telehealth Network.

*Why Arkansas?*

Arkansas is in the state of *need*. Results from the United Health Foundation's 2006 survey of national health standings reveal Arkansas currently ranks in the *bottom five* states in the Nation. Measuring a gamut of risk factors on personal behaviors, community environment, public and health policies, and health outcomes, Arkansas is *46th* out of 50 states in overall health status. To complicate matters,

Arkansas' status continues to hover in a declining pattern, having dropped from 45th placement in 1990. Among Arkansas' measured qualities, the following health outcomes contribute to this extremely poor ranking, while dually serving the purpose of highlighting Arkansas' need for improved medical services and interventions:

- Arkansas ranks 46th out of 50 states in *premature death*; years lost per 100,000 population: 9,587.
- Arkansas ranks 41st out of 50 states in *infant mortality*; deaths per 1,000 live births: 8.1.
- Arkansas ranks 44th out of 50 states in *cardiovascular death*; deaths per 100,000 population: 376.4.
- Arkansas ranks 44th out of 50 states in *obesity*; percent of population: 28 percent.
- Arkansas ranks 44th and 45th out of 50 states for *poor physical health days* and *poor mental health days* respectively; days in previous 30 days: 4.1 in poor physical health and 3.7 in poor mental health (*Unitedhealthfoundation.org, 2006*).

The University of Arkansas' Division of Agriculture explains in its 2005 Rural Profile of Arkansas 63 of Arkansas' 75 counties are considered non-metropolitan and consequently rural. As the report further highlights, the 2000 Census identified 48 percent of Arkansans as rural, compared to the nation, where only 21 percent were considered rural at the time of the 2000 census. Arkansas is also experiencing a boom in the state's Hispanic population, with the U.S. Census Bureau reporting a 337 percent increase between the 1990 and 2000 Census. According to the Urban Institute, Arkansas' Hispanic population grew 48 percent between 2000 and 2005, the fastest growth of any state in the Nation. As home to significant, growing populations from Mexico, Central America, and the Marshall Islands, there is a need for language translation services. Ranked 7th in the Nation for percent of people living at or below poverty in 2005, Arkansas is not only rural; it is poor.

Arkansas must expand and improve its telehealth resources to better serve its rural population. Concerns related to building and expanding the existing network encompasses problems in affordability of telehealth connectivity. Regarding the current telehealth networks, several issues exist to prompt the need to enhance network interoperability. Presently, Arkansas is home to three statewide telehealth networks: DHHS, UAMS, and Baptist Health, among a number of smaller, private networks. These three telehealth networks represent all areas of the state, serving consumers on a variety of levels including emergency preparedness (earthquake, pandemic flu, chemical spill, etc.), high-risk pregnancy consultation, diabetes self-management, health care education, home health, cardiology, psychiatry, and a number of other diverse medical applications. The networks also serve to educate providers across Arkansas, with health care meetings, continuing education opportunities, and other collaborative uses of teleconferencing. The co-existing networks have served many patients throughout Arkansas, yet these networks all function separately from one another, serving the same target population with needed services. The current telehealth network's greatest flaws are their *inability to easily communicate with one another* and *lack of a centralized, scheduling and management system*. Through this initiative, ATOM will seek to overcome these flaws.

The proposed statewide telehealth network will be created through three methods: (1) *Consolidation* of sites that currently exist on separate networks, (2) *Update and Addition* of sites in need of increased bandwidth and improved accessibility, and (3) *Expansion* of the network to include access to Internet2 and the Arkansas Interactive Video Network.

*What deliverables are expected?*

The ATOM Board proposes several related efforts and resultant deliverables through this pilot program proposal, each aimed at aggregating the needs of the state's health care providers and leveraging existing technology. These efforts are explained below.

- Effort 1: Consolidate Arkansas' existing public and private non-profit telehealth networks into one statewide Arkansas Telehealth Network.

*Deliverable: Cohesive statewide telehealth network.*

- Effort 2: Expand the Arkansas Telehealth Network to strategically enhance access to rural, underserved areas and populations of Arkansas to include a special emphasis on the Delta region.

*Deliverable: A more comprehensive statewide telehealth network.*

- Effort 3: Unite the Arkansas Telehealth Network to Arkansas' Educational Video Network.  
*Deliverable: Interoperability between the state's educational (520 endpoints) and telehealth resources (~270 endpoints).*
- Effort 4: Connect the Arkansas Telehealth Network to Internet2 and Arkansas' fiber backbone.  
*Deliverable: A fully connected statewide telehealth network with statewide access to the latest technologies and applications.*
- Effort 5: Manage and schedule the 24/7 needs of the Arkansas Telehealth Network.  
*Deliverable: A well-communicative network, with ease in scheduling and troubleshooting to encourage continued and frequent telehealth use.*
- Effort 6: Evaluate the success of the proposed initiatives on a scheduled and continual basis.  
*Deliverable: Evidence of the success of the pilot program for dissemination, publishing, and further replication of a model program.*

*How will this effort be managed?*

The management plan of this initiative stems from a collaborative approach between ATOM Board members. The ATOM Board is currently comprised of 16 partnering health care organizations, and other governmental or private, non-profit health or technology organizations are invited to join the Board.

Membership in the ATOM Board is open to any health or technology-related organization (governmental, private non-profit, or private-for-profit). Membership is intended to promote broad access and advocacy for telehealth services. Members elect representation to the ATOM Advisory Committee. UAMS will work under the direction of ATOM members through the ATOM Board. All members will participate in decision-making and management.

*What are our past successes?*

ATOM's day-to-day operations will be led by three organizations: the University of Arkansas for Medical Sciences, Baptist Health, and the Arkansas Department of Health, each with extensive telemedicine histories. As depicted below, each organization has been instrumental in bringing telemedicine to rural Arkansas.

**UAMS (University of Arkansas for Medical Sciences)**

Pioneered Arkansas' first telehealth system in 1991.

Created an award-winning, cost-efficient Medicaid-funded obstetrical telehealth program.

Delivers telehealth consultation in genetics, oncology, neonatology, psychology, education, etc.

**Baptist Health**

First in Arkansas and region to implement an eICU providing remote monitoring of Critical Care patients (2005).

Constructed a home health telehealth program for patient monitoring.

Provides remote teleradiology and sleep study patient assessment and consultation to rural hospitals.

**DHHS (Arkansas Department of Health and Human Services)**

Operates Arkansas' emergency preparedness telehealth system.

Supplies clinical and educational telehealth to providers and patients.

Launched a telehealth network serving rural health clinics, critical access hospitals, and the state's hospitals.

The University of Arkansas for Medical Sciences will provide the overall management of the ATOM effort, while also acting as the legal applicant for FCC Rural Health Care Pilot Program funding. Thus, this organization's qualifications are explained in greater detail. UAMS has years of experience in developing and managing telemedicine programs. Technical and organizational ability to implement this pilot program is evidenced by the fact that the UAMS Statewide Telehealth Network has grown to include more than 50 self-sustaining sites. As an overview of UAMS' programmatic achievements in telemedicine, UAMS' Rural Hospital and Antenatal & Neonatal Guidelines, Education and Learning System (ANGELS) programs are explained. These two programs led the University's and consequently the state's efforts in telehealth. Further, leaders from both organizations will continue to play instrumental roles in this pilot program effort through ATOM.

The UAMS *Rural Hospital Program* (RHP) led the state's efforts in telehealth when it was established in 1991 with two sites, having grown to include 50 rural hospital, Area Health Education Center (AHEC), and clinic sites across the state. The primary aim of the network is to share UAMS resources to increase timely access to specialty services and information in rural settings that would not otherwise be available. The program has extended telehealth services into some of the most rural and needy regions of Arkansas. With over 15 years of experience creating telemedicine sites, training facilitators, and developing compressed video programs and presentations, the RHP has worked with numerous communities and a variety of facilities throughout Arkansas to develop the statewide network. In 2006, RHP held 272 different continuing education programs over telemedicine, serving 5,820 attending healthcare professionals. Further, RHP offered 34 different consumer education programs broadcasted through telemedicine in 2006, with 614 consumers in attendance.

The *ANGELS* program is an innovative Medicaid-funded, telehealth consultation and education service established in 2003 for a wide range of physicians including family practitioners, obstetricians, neonatologists, and pediatricians in Arkansas. Utilizing interactive compressed video and Level II ultrasonography, telemedicine conferences enable physicians to confer with Maternal-Fetal Medicine specialists regarding high-risk pregnant patients. Clinical telemedicine consultations allow patients, local physicians, and UAMS physicians to consult and review ultrasonography results in real time, bringing the state's only certified Maternal-Fetal Medicine subspecialty support directly to hometowns. In support of its telemedicine services, ANGELS established a call center to direct 24/7 support to patients and providers needing evidence-based triage and guidance. In 2006, ANGELS performed 891 consultations through ANGELS telemedicine, a marked increase from its pre-implementation rate of 174 consultations in 2002.

*What long-term consequences may result?*

Through implementation of Arkansas Telehealth Network, rural Arkansas can overcome the distance barrier that separates its rural residents from the subspecialty care they need. This network provides the very foundation required to build a comprehensive plan to tackle the state's laundry list of health adversities. A centrally-managed, comprehensively-collaborative telehealth network will allow opportunities to build any number of programs: behavioral health services, telepharmacy programs, emergency-based stroke networks, and a continuing list of possibilities. What may result? Arkansas may transcend its poor health standing. Arkansans will have increased access to the care they need to prevent, maintain, and improve their health. This project builds upon relationships, technology, and support within the healthcare community, with one unifying theme held by all the ATOM membership: *Help Arkansas help itself.*

Mr. ADELSTEIN. Chairman, a quick question. I know about the grant. We're going to give it—we're going to take a hard look at it. We have an ongoing program, as you know, that Congress enacted in the rural telehealth program, part of universal service. I'm wondering if ATOM is participating in the FCC's E-Rate program for some help.

Dr. LOWERY. Yes, we do, but many of the hospitals aren't really eligible for it. We already get a good rate in the state already—the telehealth companies, so it ends up not really saving a lot of money for us in this state.

Mr. ADELSTEIN. Is there something we need to do to make it more helpful in the ongoing program?

Dr. LOWERY. Well, yes, I mean, I guess it would be to make it so that more hospitals could apply for it and take advantage of it, I guess, would be the issue. I mean, you know, \$500 doesn't seem like a lot of money, but for small hospitals that are barely making it, it's \$500. So the more hospitals we have onboard, the better off that we are. We've had—in our network at UAMS many of the hospitals dropped off because of the costs of the T-1 lines. I know that seems strange, but that's the reality.

Senator PRYOR. And just by way of background for the two Commissioners, UAMS is the University of Arkansas for Medical Sciences, part of the University of Arkansas system, so it's our medical school. They do a lot of medical research there, and they're very plugged in a lot of different ways. And it's a great asset to the state, because in many specialty areas, you can get state-of-the-art care throughout the state. Now, it also has a hospital, so it's a large hospital as well, and it has what we call the AHEC system, which is sort of distance clinics. I'm not quite sure—

Dr. LOWERY. Yes, that's right.

Senator PRYOR.—how you describe it, but clinics around the state. And the idea was years ago to try to get some of those specialties and some subspecialties out into rural Arkansas where folks can get, again, world-class care, and have access to world-class physicians.

Dr. LOWERY. The population density just won't support a pediatric nephrologist in Mena, Arkansas, but you can have this information available through these technologies to consult with guys in the rural areas that need this resource. So it's sort of like the Internet of health care in a way, right?

Senator PRYOR. Yes. And also UAMS works very, very closely with Arkansas Children's Hospital and also to a large extent with the VA Hospital, which is right on the edge of the parking lot, really. They almost share space. But that's the way Arkansas has approached health care. It has been a real pillar in our healthcare system here for a long time.

Dr. LOWERY. I want to make one thing clear, though, that this proposal, the ATOM group is made up of other hospitals—

Senator PRYOR. Right.

Dr. LOWERY.—Baptist, St. Vincent's, and all the hospitals around the state. And I don't think that this network should be limited, and in no way we've ever said that to just UAMS. This is designed to be a virtual health care network for all hospitals to participate, and that's the way it should be.

Senator PRYOR. Yes. I think that's a great point. But other states may do it differently, right? That's the way Arkansas has done it. Here again, one size fits all may not work for us, because we've taken a certain approach, which has been great for our state. And we were very collaborative. Our approach here in Arkansas was to always work with each other and try to help any way we can. That may not be true in other states, bigger cities, whatever, but that has certainly been our approach. Mr. Mjartan?

**STATEMENT OF DOMINIK MJARTAN, VICE PRESIDENT,  
SOUTHERN FINANCIAL PARTNERS**

Mr. MJARTAN. Commissioners, Senator—I want to thank you for allowing me this opportunity to briefly testify about the dire need for broadband in our rural areas. I serve as Vice President of Southern Financial Partners, a very comprehensive community development organization that's affiliated with Southern Bancorp, the largest rural development bank in America.

And our primary mission and our focus is to help revitalize rural communities, which we've been doing for about 20 years. So from that perspective, I'm going to talk about our experience with trying

to bring broadband into some of our communities that are really very small and distressed. Our flagship project is in Phillips County, Arkansas, which is the poorest county in the state of Arkansas. It has about a 30 percent poverty rate. And one of the greatest obstacles we've seen in reaching the outlying areas in Phillips County has been really a lack of the digital infrastructure and a problem that really makes these communities competing in the 21st century, global knowledge-based economy impossible. And one example that I gave to the Commissioner last night was when I drive to the Delta and want to visit with some of our communities—the best example is the mayor of Lakeview. I can send her a fax, or I can drive there on our asphalt infrastructure that's been developed. But to borrow Rex's analogy, I cannot use the digital infrastructure. So we've done a great job building asphalt physical infrastructure, but in the 21st century, we feel that the digital infrastructure is just as important as the physical asphalt and concrete infrastructure of the 20th century.

One of the programs that we have some experience with that has been widely successful I would argue in other parts of the country has been the USDA's Community Connect Broadband program. And this program has served many communities, but not a single community in Arkansas has successfully applied and received this grant. And I'd like to use this venue to make two recommendations that I think would make it much more likely for Arkansas communities to benefit from this fantastic program. One of them is eligibility criteria, which some of you have referred to it as zip code requirement, but it's a similar issue that really excludes many communities that have a single household with broadband access disqualified. So what we would like to propose is to change the requirement that at least 50 percent of the households in a community must have access to broadband in order to be disqualified from receiving this grant. And number two, you know, we've run into this challenge most recently where for-profit providers in geographically-dispersed rural areas really cannot make this project under the grant sustainable past a two-year cycle.

So what we would like to propose is to extend the cycle to give these for-profit providers a chance to gain enough customer base and start recovering the very high fixed costs that they incur in bringing broadband to rural areas.

And then finally I have a third point here. I've found out recently that the USDA has been very responsive and answered this challenge, which was an income requirement that was based on national income. Now it's based on state median income, and we're very pleased to see that the USDA is so responsive to our needs.

So finally I just want to conclude by really summarizing what everyone has said that we really feel that without high quality digital infrastructure, our communities will be unable to survive and compete in the global economy of the 21st century. And I really thank you for your leadership in coming to Arkansas, discussing this, and I applaud you for seeking additional ways that we can provide all of our citizens a chance to improve their lives, to learn to prosper and compete in the 21st century. Thank you.

[The prepared statement of Mr. Mjartan follows:]



PREPARED STATEMENT OF DOMINIK MJARTAN, VICE PRESIDENT,  
SOUTHERN FINANCIAL PARTNERS

Thank you for allowing me the opportunity to testify about the dire need for improved digital infrastructure in our rural areas. My name is Dominik Mjartan, and I serve as Vice President of Southern Financial Partners, a comprehensive community development organization affiliated with Southern Bancorp ("Southern"), the largest rural development bank in America. We operate in several targeted communities, but our flagship operations are in Phillips County, Arkansas.

With a poverty rate of 30 percent, Phillips County is the poorest county in Arkansas and exemplifies the problems faced by rural areas throughout the state. It has suffered significant economic and population declines over the past several decades, as the agricultural economy has undergone fundamental changes. Phillips County has experienced a host of other problems ranging from crumbling infrastructure to poor educational outcomes that make successfully competing in the 21st century knowledge-based economy difficult. Access to high-speed Internet offers a bridge between past challenges and future success.

However, most rural areas are completely cutoff from the digital world due to lack of broadband. The result is a digital divide that further worsens poverty and related issues. The most relevant and successful Federal program that addresses the need for increased broadband access in rural areas is the USDA's Community Connect Broadband program. The Community Connect program has successfully brought broadband service to communities in other parts of the country, but so far not a single Arkansas community has received a grant under Community Connect. While the overall structure of the program has the potential to benefit the struggling Arkansas communities Southern serves, these communities face several difficulties accessing the program:

- A key eligibility criterion for the grant is that no household in the community has access to a broadband service. This requirement excludes many communities that have only minimal broadband coverage, or whose coverage only includes higher-income neighborhoods. This also means that broadband providers can install a single switch in a community to pre-empt an attempt by a competitor to bring coverage to an area with help from the USDA program, leaving the community without real broadband coverage and unable to access the USDA's program.
- Community Connect awards points based on the economic need of the targeted rural area in a way that does not fully acknowledge the extreme income disparities that exist in many rural communities. The program awards points based on per capita income, instead of other measures, such as poverty rate or median income, which better reflect the economic hardship of the community. A community like Lake View in Phillips County scores only 15 out of 30 possible points in the "economic need" category, despite having a poverty rate of 45 percent, an unemployment rate of 30 percent, and a median income of \$15,500. It is worth noting that the USDA has responded to this challenge and accordingly modified the rules for the upcoming 2008 grant cycle.
- For-profit service providers are required to apply for Community Connect grants, but the grants don't adequately cover the costs of bringing broadband to many rural communities—particularly the smallest and most at-risk communities, which are unable to provide a substantial source of revenue to make the project sustainable beyond the term of the grant. As a result, service providers lack the confidence to make long-term commitments. Extending the grant period beyond 2 years would improve the cash-flow of these projects.

These proposed changes would go a long way toward leveling the playing field for Arkansas communities. Overall, more funding is needed, through this program or other Federal programs, to fulfill the urgent need to bring broadband services to rural areas.

Senator PRYOR. Thank you. Dr. Davis is next. And Dr. Davis, thank you again for hosting me on your campus earlier this month. It was great and for you all in the audience, he gave me a great history lesson on UAPB, and there are some phenomenal things that have happened there over the years. And some of the high-lights of that history and it is one of the premiere historically black colleges and universities sites in this country. So we're certainly proud to have him here today.

**STATEMENT OF LAWRENCE A. DAVIS, JR., CHANCELLOR,  
UNIVERSITY OF ARKANSAS AT PINE BLUFF**

Dr. DAVIS. Thank you very much, Senator. And I appreciate the opportunity to be here today. And certainly, I recognize the distinguished Commissioners for being with us today. I'm happy to have an opportunity to make comments on what I consider a great challenge and yet a great opportunity. I'm Lawrence A. Davis, Jr., I'm the Chancellor at the University of Arkansas at Pine Bluff. We are the second oldest state-supported institution of higher education in Arkansas. We are one of two land-grant institutions. And we are the only state-supported HBCU. And our business is the production of human capital, and we've been in that business over 134 years. We label ourselves as the flagship of the Delta.

Primarily because of our historic mission, providing opportunities and making a difference in the Delta, not only in terms of educational services, but economic development, and I don't want to go into all of that today. But as you're aware, Arkansas has the dubious distinction of being ranked in the bottom tiers of several quality education indicators: student achievement on national examinations, workforce availability, percentage of college graduates, reduction in the illiteracy rate, and the list goes on. And in my opinion, part of the reason that we remain in that position is because we have not been able to take advantage of broadband technology. Now, Columbus proved that the world was round, but technology has made the world flat. You know what we mean by saying that. Those of us who are not able to step up to the contemporary levels in technology will continue to occupy the lower echelons of educational achievement and the associated retarded economic development.

Now, although Arkansas ranks low in broadband deployment, it is encouraging to note that visionary leadership has developed a plan in Arkansas to move us to a more competitive position, at least, the four-year public institutions. We have a proposed ARE-ON (Arkansas Research and Education Optical Network) that will move the four-year public institutions to a position of equity with other states in terms of research, the ability to deliver online instruction, and other functions. Especially will this be a significant achievement for the University of Arkansas at Pine Bluff. Not only will it locate us on the frontiers of technology, but also it completes our multi-million dollar investment of past years in IP technology. At UAPB a few years ago, ten years or so ago, we made a major investment, so our security cameras, our PCs, and our telephones all travel along the same Internet Protocol lines. And, of course, this will ensure UAPB continues to be one of the few HBCUs in the Nation; Senator, that we can say does not have a technology gap. And as you know, that's an issue in Washington for many of our colleagues.

Also, our university will be able to expand the services and opportunities for citizens, especially in the Delta, which is a region, as I pointed out, most challenged in our state in terms of educational achievements and economic growth. Now certainly, technology is not a panacea, but it will accelerate our progress. When you think about what it's going to cost, reflect on where our Nation would be if we had not invested in the interstate highway system.

Where would we be today? We wouldn't be able to move from here to there as rapidly as we currently do. So I think that costs have to be associated with how much it will cost us if we don't do it. I believe that a move into broadband technology; Senator, is critical to the future of our state.

[The prepared statement of Dr. Davis follows:]

PREPARED STATEMENT OF LAWRENCE A. DAVIS, JR., CHANCELLOR,  
UNIVERSITY OF ARKANSAS AT PINE BLUFF

Arkansas has the dubious distinction of being ranked in the bottom tiers of quality education indicators: student achievement on national examinations, workforce availability, percentage of college graduates and reduction of illiteracy rates. Included in this list, which may be contributing to the previously identified negatives, is the state's ranking of 47 out of 50 states for broadband deployment.

The world has become flat because of the explosive development of technology and those who have not achieved contemporary technology levels will continue to occupy the lower echelons of educational achievement and the concomitant retarded economic development.

Although Arkansas ranks low in Broadband deployment, it is encouraging to note that visionary leadership has developed a plan to move Arkansas to a more competitive position. The proposed ARE-ON (Arkansas Research and Education Optical Network) will move the four-year public education institutions to a position of equity with those in other states. Especially will this be a significant achievement for the University of Arkansas at Pine Bluff (UAPB). Not only will it locate us on the frontiers of technology, but also it completes our multi-million dollar investment of past years in IP technology. UAPB will be among the few HBCUs not having a technology gap. Also, the University will be able to expand its services and opportunities for citizens in the Delta of Arkansas, a region much challenged in the areas of educational achievement and economic growth. An investment in ARE-ON is critical to the future prosperity of the state of Arkansas.

Senator PRYOR. Thank you. Dr. Smith, I know that the University of Arkansas years ago made a big commitment to distance learning.

**STATEMENT OF ROBERT V. SMITH, PROVOST,  
VICE CHANCELLOR FOR ACADEMIC AFFAIRS,  
UNIVERSITY OF ARKANSAS, FAYETTEVILLE**

Mr. SMITH. Well, thank you, Senator. Good morning to Senator Pryor and Commissioners Copps and Adelstein. I'm Bob Smith. I serve as the Provost and Vice Chancellor for Academic Affairs at the University of Arkansas in Fayetteville. Joining me today is David Merrifield, who's Chief Technology Officer in the Department of Computing Services at the University. I hope David will stand up for one moment. Along with David, Amy Apon is here. She's a University of Arkansas Professor of Computer Science and Computer Engineering, and is director of High Performance Computing at the university. The great English novelist and playwright, John Galsworthy said, "If you don't think about the future, you won't have one." And clearly you won't have one if we don't plan well.

And clearly, there has been a leadership team involving the University of Arkansas at Fayetteville, the University of Arkansas Medical Sciences Center that the Senator has so aptly described, and the University of Arkansas at Little Rock have gotten together, working with state agencies, most notably the Arkansas Science and Technology Authority among others, with private corporations, and with our sister institutions in the state of Louisiana, and have

developed, as Chancellor Davis noted, the Arkansas Research and Education Optical Network, or ARE-ON. This serves the advanced computing needs in Arkansas, and is appropriate for the 21st century, meeting the educational and economic development needs, particularly in rural areas of our state. I have provided copies to the Committee of written testimony, but I want to offer just very briefly some specific observations and conclusions. And my colleagues are here to help answer any questions that you have.

In our written testimony, we note that ARE-ON is on schedule with completion anticipated in late Summer of 2008. Red Diamond, a 256-processor, parallel super computer funded by the National Science Foundation has been functional at the University of Arkansas at Fayetteville for two years, but now is at capacity. The UALR is in the process of obtaining a similar parallel processing super computer funded by NSF and EPSCoR. And NSF has additionally funded the University of Arkansas at Fayetteville to more than double the size of Red Diamond by an award of \$800,000.

We are now in the process of identifying vendors and possibly leveraging that award. The plan is to connect the two sets of parallel processing units when we are all on ARE-ON. And in October, a group of high-performance computer experts will visit Arkansas to help with a state-wide plan and to help us recapture a position among the 500 advanced computing operations in the world. And we note as the Commissioners and the Senator have noted, it's always a moving target, and we tend to move in the reverse sometimes, but we're going to pick up the pace, and hopefully get back into that position. We do appreciate this opportunity to offer testimony on contributions of the state's major institutional partners in advancing computer technology. We look forward to answering questions that you may have, and Mr. Merrifield and Dr. Apon are here to help us with that. Thank you, Senator, and thank you, Commissioners.

[The joint prepared statement of Mr. Smith, Mr. Merrifield and Dr. Apon follows:]

JOINT PREPARED STATEMENT OF ROBERT V. SMITH, PROVOST, VICE CHANCELLOR FOR ACADEMIC AFFAIRS; DAVID MERRIFIELD, CHIEF, TECHNOLOGY OFFICER, DEPARTMENT OF COMPUTING SERVICES; AND AMY APON, PROFESSOR, COMPUTER SCIENCE AND COMPUTER ENGINEERING, UNIVERSITY OF ARKANSAS, FAYETTEVILLE

#### Arkansas Partnership for Advanced Computing

The University of Arkansas (UA), Fayetteville, the University of Arkansas at Little Rock (UALR), and the University of Arkansas for Medical Sciences (UAMS) are partnering with state industrial affiliates currently including representatives from Axiom and Accelerate Arkansas, and state government representatives currently including the Arkansas Science and Technology Authority and the Arkansas Department of Information Systems, to leverage the Arkansas Research and Education Optical Network (ARE-ON) in a vision and plan to execute that vision for the state of Arkansas in high-performance computing for research, education, and business infrastructure. We believe that the availability of high-performance computing infrastructure will be essential to the economic development of any state in the 21st century. High-performance and advanced computing capabilities and technology for the understanding and solution of complex problems in science, engineering, and industry are critical to scientific leadership and economic competitiveness in the state of Arkansas. This is in keeping with the findings of the report from the President's Information Technology Advisory Committee (PITAC) ([http://www.nitrd.gov/pitac/reports/20050609\\_computational/computational.pdf](http://www.nitrd.gov/pitac/reports/20050609_computational/computational.pdf)).

The debut of the Arkansas Research and Education Optical Network (ARE-ON) is a clear indicator that the state of Arkansas is taking a fresh and energetic ap-

proach to high performance computing for educational benefit and economic development. ARE-ON came online to the University of Arkansas, Fayetteville, in December 2006, and has already been instrumental in UAF participation in a collaborative course with Louisiana State University (LSU) this past spring. This is one example of one type of educational activity that ARE-ON will support. ARE-ON represents a statewide initiative that already puts Arkansas ahead of some other states.

Just as ARE-ON is a statewide effort for connectivity, the Arkansas Partnership for Advanced Computing recognizes that there needs to be a complementary statewide effort to support computational infrastructure. Three additional indicators show that the timing and support are right for such an effort:

1. This growing partnership between UA, Fayetteville, UALR, and UAMS and several statewide industrial and government partners provide a solid foundation for a state vision for high performance computing.
2. Legislative support of the Arkansas Science and Technology Authority (ASTA) may provide funding potential that is an opportunity to gain seed funding for an initiative.
3. Funding from the National Science Foundation (NSF) provided for the purchase and deployment of the first supercomputer in Arkansas, Red Diamond, on the UA, Fayetteville, campus, in February 2005. Additional funding from the National Science Foundation and EPSCoR in 2006 to UALR and from the NSF in 2007 to UA, Fayetteville, is enabling the significant expansion of high-performance computing infrastructure. With coordination between the researchers on both campuses it will be possible to double the size of Red Diamond at UA, Fayetteville, and to establish a complementary cluster at UALR. ARE-ON will provide the link to connect the supercomputing facilities as a nationally-competitive high-performance computing grid that is accessible to researchers across the state.

Fundamentally, this initiative for high-performance and advanced computing is about quality, quantity, and the diversity of an emerging workforce. The workforce includes:

- The current student body.
- Importing of new workers who are attracted to our state because of technology opportunities and jobs, and
- The reinvention of older workers who can be trained in new technologies.

There are several statewide goals:

- Increase the college graduation and retention rate.
- Increase the high school graduation rate.
- Attract new industry.
- Enhance existing industry, and
- Catalyze startup companies and invention

To achieve these goals requires a statewide commitment to modernization and technology—a move to the 21st century. With these indicators and goals, a plan has been made that is economically sound that will move rapidly toward the goals, with modest risk. The plan will reach the goals with minimum cost, with the maximum likelihood of success, and will mix external expertise with internal experts and leaders in the state. This is a three-pronged attack:

1. With support from UAF, UALR, ASTA, and the National Science Foundation, we have formulated a high performance computing External Advisory Committee (EAC) to look at the requirements and needs of the state. This external experience base will make recommendations, and provide guidelines and milestones. Dr. Thomas Sterling, Professor, LSU has provided some initial guidance on our current status and has recommended that this is the fastest way to get the high-quality insight necessary to leap-frog our current position. Dr. Dan Reed, director of the Renaissance Computing Institute in North Carolina, Chancellor's Eminent Professor and member of the PITAC committee, has agreed to be the Chair of the EAC.

The external advisory committee will visit Arkansas over a 3-day period in October. They will conduct a series of brief interviews with stakeholders in the state, spending a day each in Little Rock and Fayetteville. The deliverable of the EAC is a strategic plan that describes the scope and a roadmap for developing high performance computing infrastructure in the state of Arkansas.

2. We have implemented a standing Internal Review Committee composed of experts within the state of Arkansas. This committee consists of approximately two dozen participants from the state of Arkansas, and an additional one, two, or three external participants. The Internal Review committee will refine the statement of goals that the External committee has developed. This committee will be an interface to the academic community, K-12, and industry.

3. We will be in partnership with the state legislature, the Governor, and key leaders across the state to develop a sustainable funding model.

Industrial partners from Axiom and Accelerate Arkansas have been participating in this discussion for over a year. One thing that will help to drive this effort is the identification of one or more "Killer Applications" (ones that grab the attention of funding agencies) that ARE-ON and the computational infrastructure can facilitate, and these may originate from industry, agriculture, or academics. For example, in Louisiana, "Killer Applications" include: (1) modeling of storm surge to avoid damage and save lives during hurricanes and other storms, (2) modeling of depleted oil wells and seismology studies that can help to avoid wild cat digging that wastes millions of dollars and harms the environment, (3) modeling of the preservation and ecological changes to wetlands, and (4) education as a first-class application, to improve the competitiveness of Louisiana as a state.

High performance computing must be a synergy of education, industry, and research and is a requirement for ensuring that all Arkansans can fully participate in the digital world.

Senator PRYOR. Thank you. Ms. Bailey?

**STATEMENT OF CLAIRE BAILEY, DIRECTOR, DEPARTMENT OF INFORMATION SYSTEMS, STATE OF ARKANSAS**

Ms. BAILEY. Good morning. I am Claire Bailey. I am your Director of the Department of Information Systems for the State of Arkansas. I apologize for my voice this morning. I lost it somewhere between my flight home from Minneapolis at a telecommunications conference to Little Rock. I got in about midnight, but I am very excited to be here today and to have the opportunity to address you and my colleagues. I wanted to open by describing our state network in place today, and I've provided a couple of graphical representations.

The State of Arkansas Department of Information Services brokers and manages the public sector network. We have one state network for state agency boards and commissions. We also provide our public school network, and we partner with our groups in higher education as well. The second map represents our digital radio system that we are very happy about and appreciate the support of Senator Pryor and the FCC and other state partners. The Arkansas Wireless Information Network is our public safety network. I wanted to start back and talk a little bit about what we do at the department. We manage a wired network that includes over 1,900 edge points and we work very closely with our public and private sector partners. The integration of these networks also is how we provide our Internet access. And if we step back in time, in 1994, just a few years ago, we were so excited. Our Internet capacity for the state network was nine megs. There is an industry trend on networks that Internet capacity doubles about every 18 months. Today, we are slightly behind that average. We have doubled every 19 months. And we stand at 990 MB capacity today. In just a little over a month at the University of Arkansas at Pine Bluff, we will take our network, Internet Point of Presence to over one gig. And we are very excited about that.

Our statewide video network provides and supports distance education, e-learning. We have over 520 systems in our educational network. And we average over 19,000 conference hours a month, which means that we provide that type of learning and opportunity for 92 subjects with over 500 courses. That snapshot of what we have today in many ways showcases that the state has become what we define as the anchor tenant in our communities. As public services that we deliver continue to drive our network capacity needs, as an anchor tenant, the funding provides or can provide an economic incentive for our private sector partners to be able to continually improve their infrastructure in support of the public sector needs.

There are partnerships with private sector. Our city, our counties, our state and Federal groups, we all share a common goal. Everyone in this room has a united vision to continue to advance the technology environment to be able to provide for our most precious people, our children, and we thankfully have some to address us today, the ability to access the best and newest learning tools and the current technology to be able to maximize it. Everyone in this room also has the ability to impact societal change in our Arkansas. Whether you live in the northwest region of our state or our Delta, your ability to have access to the services, the research, and the jobs of tomorrow, we want to ensure that no Arkansan is left behind.

As I close, I wanted to leave you with a quote from our Governor's State of the State Address from this past January: "When people look to Arkansas, they should see a leader in the Nation, in the world, and say: We want to do what they did in Arkansas." And through the collaborative efforts of everyone in this room, we are champions to help Arkansas in every way we can. Thank you for this wonderful opportunity to address you today, and I look forward to any questions you may have.

[The prepared statement of Ms. Bailey follows:]

PREPARED STATEMENT OF CLAIRE BAILEY, DIRECTOR,  
DEPARTMENT OF INFORMATION SYSTEMS, STATE OF ARKANSAS

Thank you so for the opportunity to address you at this U.S. Senate Commerce Committee field hearing. It is truly an honor to be a part of this event.

I would like to open by describing our state network in place today. We have provided a hand-out which showcases our wired and wireless sites for the state of Arkansas Public Sector Network. We at DIS provide management and systems integration of these networks which includes 1,900 'edge' devices of the Arkansas Public Sector Network.

To showcase our history of state access, our state Internet capacity in 1994 was nine (9) megabits per second. The industry standard for doubling Internet capacity is that it is doubled every eighteen (18) months. In Arkansas on our Public Sector Network, we are slightly behind this standard. We double every nineteen (19) months, and we stand at 990 megabits per second soon to be just over one (1) gigabit per second of capacity with our latest implementation at our Internet Point of Presence (POP) at our shared services location at the University of Arkansas at Pine Bluff.

Our statewide video network supports approximately 520 systems in our education environment and averages over 19,000 conference hours a month with over 92 subjects and over 500 courses.

That is a snapshot of what we have today. In many ways the state becomes the 'anchor tenant' in a community. The demand for public services our state delivers continues to drive network capacity needs. As an anchor tenant for communities, the funding the state provides impacts the economic incentives for our private sector

partners to be able to continually improve their infrastructure in support of our state's needs.

Through our partnerships with the private sector, city, county, state and Federal groups, we all share a common goal—a united vision—to continue to advance the technology environment to be able to provide our most precious people—our children—the ability to access the best and newest learning tools and the technology to maximize it.

Everyone in this room has the ability to impact true societal change in Arkansas. Whether you live in the Northwest region of our state or our Delta, your ability to have access to public services—the research—the jobs of tomorrow—we want to ensure no Arkansan is left behind.

As I close, I wanted to leave you with a quote from our Governor's State of the State address from this past January: "When people look to Arkansas—they should see a leader in the nation—in the world and say, 'We want to do what they did in Arkansas.'"

Through collaborative efforts of everyone in this room, we are championed to help Arkansas in every way we can.

Thank you for this wonderful opportunity to speak this morning and for being here to hear our state's vision for tomorrow.

Senator PRYOR. Thank you. Now, John, before I introduce you, I need to say that during the last legislative session, the Arkansas legislature enacted Act 602 legislation to create and operate a Connect Arkansas, nonprofit organization. The bill was sponsored by Senator John Paul Capps of Searcy. The bill created a public/private partnership aimed at increasing the broadband coverage for health, industry, education, and general economic development, and John Paul Capps is here today. Thank you for doing that, John Paul. Mr. Ahlen?

**STATEMENT OF JOHN W. AHLEN, PRESIDENT,  
ARKANSAS SCIENCE AND TECHNOLOGY AUTHORITY**

Mr. AHLEN. Thank you, Senator, Commissioners. My name is John Ahlen. I'm president of the Arkansas Science and Technology Authority, an instrumentality of the State of Arkansas that has the mission of bringing the benefits of science and advanced technology to the people of the state of Arkansas. We know a lot about what the problems are.

We know that in a world where markets are dynamic, global, and networked, locations without affordable broadband are disconnected and at an economic disadvantage. We know this is especially true in an information age, knowledge-based economy. Locations that do not have affordable knowledge-carrying infrastructure are both at a disadvantage informationally and again economically where talent and innovations are the driving influences. I appreciate your interest and leadership in addressing the issue of affordable broadband deployment in rural places and would suggest the following, and you're very much aware of these things.

Use a robust definition of broadband to accommodate future applications. Develop a better mapping tool to measure and guide broadband deployment decisions. We know what worked in the past, and we might consider broadband deployment incentives for service providers, such as grants and investment tax credits, universal service fund models that we used for telephone deployment, the co-op model that was used for the deployment of electric power, and federal/state cost sharing, which is the model used in transportation infrastructure deployment.



And lastly, I hope you'll take action now. The future of rural communities depends on it. The state can do some things for itself, and Connect Arkansas, which my two colleagues who follow will talk about, will be very helpful in providing broadband to business and industry to entrepreneurial businesses, and in enabling people at work, at home, and on the go to access all manner of digital resources wherever and whenever they need. But we need your help to make that possible. Thank you.

[The prepared statement of Mr. Ahlen follows:]

PREPARED STATEMENT OF JOHN W. AHLEN, PRESIDENT,  
ARKANSAS SCIENCE AND TECHNOLOGY AUTHORITY

Good morning Senator Pryor and Commissioners, my name is John W. Ahlen. I am president of the Arkansas Science & Technology Authority, an instrumentality of the state of Arkansas whose mission is to bring the benefits of science and advanced technology to the people and the state of Arkansas.

We know that in a world where markets are dynamic, global, and networked, locations without affordable broadband are disconnected and at an economic disadvantage.

We know this is especially important in an information-age knowledge-based economy; locations that do not have affordable knowledge-carrying infrastructure are at both an informational disadvantage and an economic disadvantage where talent and innovations from research and development are driving influences.

I appreciate your interest and leadership in addressing the issue of affordable broadband deployment in rural places, and would suggest the following:

- Use a robust definition of broadband to accommodate future applications and
- Develop a better mapping tool to measure and guide broadband deployment decisions.

We know what has worked in the past. Consider broadband deployment incentives service providers such as:

- grants and investment tax credits,
- the universal service fund model that was used for telephone deployment,
- the co-op model that was used for electric power deployment, and
- the Federal-state cost sharing model that is used in transportation infrastructure deployment.

Lastly, I hope you'll take action now, the future of rural communities depends on it. The state can do some things for itself—like Connect Arkansas—but we also need your help.

\* \* \* \* \*

Affordable broadband access is an economic development issue, which can be addressed along four dimensions: broadband deployment, technology, the urban-rural split, and time.

*Broadband Deployment.* What is it? It is information-carrying capacity (measured in bits per second), and the demand for capacity by applications keeps going up. Definitions of broadband include 256 kilobits per second (OECD) and 384 kilobits per second (Connect Arkansas), with experimental capacity in research domains exceeding gigabits per second. Other countries and some states are concluding that broadband capacity delivered by fiber to the home should be the minimum. Recommendation: *use a robust definition of broadband.*

Where is it? Broadband availability is typically shown by postal zip codes, which is not a very informative way to discriminate between locations that do or do not have access. The EAST students today will show a much more useful way to map broadband availability and inform deployment decisions. Recommendation: *develop a better mapping tool to measure and guide broadband deployment.*

*Technologies.* Broadband technologies vary and their deployment is influenced by competing business models and regulatory structures. As more content is digitized—and digitization is the key technology driver in the new economy—any of the competing technologies can provide content previously considered the proprietary domain of other competitors, leading to a kind of regulatory convolution, if not gridlock. The market success of all of the business models is measured in terms of the return on the deployment investment, which is much more favorable in areas where

the customers are densely packed. If equal broadband access is the American goal, then market forces have failed to deliver, just look at broadband deployment in the Mississippi River Delta. Recommendations: *consider incentives for service providers that address areas without affordable broadband; base incentives on independently compiled deployment data; and use more refined mapping tools.*

*Urban-rural.* The least favorable locations for broadband deployment are rural, where customers are few and separated by long distances and where deployment cannot be justified by the return on investment. With markets dynamic, global, and networked, locations without affordable broadband are disconnected and at an economic disadvantage. State government provides broadband for education, health care, and other government services—often supported by Federal grants—but broadband deployment is about economic growth, so it is about business and industry; entrepreneurship services; and enabling people at work, at home, and on the go to access all manner of digital resources wherever and whenever they need. If we were talking today about electric power instead of broadband, we would be saying that students can have lights at school, but have to read in the dark at home. Recommendation: *consider broadband deployment incentives such as grants and investment tax credits, the universal service fund model for telephone deployment, the cooperative model for electricity deployment—including Federal subsidy, and the Federal-state cost sharing model used in transportation infrastructure deployment.*

*Time.* The clock is ticking for rural Arkansas and rural America. According to a report by the Organization for Economic Co-operation and Development, the United States has the largest number of total broadband subscribers in the OECD, but on the basis of broadband subscribers per 100 inhabitants, the U.S. ranks 15th in the OECD at 19.6. A report today indicates that China will have “the world’s largest Internet population in just 2 years.” Recommendation: *Take action now, the future of rural communities depends on it.*

Senator PRYOR. Thank you very much.

Mr. WINNINGHAM. Senator, if we possibly could, could we let Mr. Walls go first?

Senator PRYOR. Sure. That’d be great. That’d be great.

Mr. WINNINGHAM. That’d be great. That’d be great.

#### **STATEMENT OF C. SAM WALLS, CEO, ARKANSAS CAPITAL CORPORATION**

Mr. WALLS. Thank you, Senator. I’m Sam Walls, and I’m the Chief Executive Officer of the Arkansas Capital Corporation. We’re a 50-year-old private, nonprofit business development corporation that was named in the Connect Arkansas legislation to be the entity to form the Connect Arkansas nonprofit organization. To my left is James Winningham. He is the Chairman of the Arkansas Broadband Initiative. And collectively with Dr. Ahlen, we’re here representing Connect Arkansas.

Connect Arkansas is a private and public sector collaborative effort to bring broadband Internet access to all Arkansans. We’re going to focus on three key activities. The first activity will be to accurately map where connectivity truly exists in Arkansas and at what speeds. This will require working with numerous entities, primarily the service providers that operate here in Arkansas. Because Connect Arkansas is designed to encourage collaboration, it will work with providers on getting the relevant information to accomplish this task. The second activity of the effort will be to survey communities throughout the state to better determine either why they choose to use broadband or conversely, why they have chosen not to. And this complements the third activity of the effort—working with leadership in every county of Arkansas to develop a strategy to educate the populace on the value and need for broadband in their personal and professional lives. This preparing of people and organizations to take advantage of the benefits of

broadband is perhaps the most important part of our effort. Without preparation, broadband is in danger of being a very powerful economic and social tool, but without people and businesses with the necessary skills and insight to take advantage of it and ultimately without enough demand to sustain it. Connect Arkansas is a delivery platform-neutral entity.

And by that I mean that it will not seek to advocate for one broadband Internet delivery system over another. Its only focus is to drive market demand in the belief that once a market can be demonstrated, the private sector will step in to meet that demand. Connect Arkansas' success will in large part be driven by the ability of the private and public sector to work together to accomplish this vital task. There is no question in my mind, however, that creating statewide broadband connectivity is the single most important activity that we can be involved in. At the Federal level, there is a need for our leaders to elevate this issue as a top priority.

Unfortunate recent events in Minnesota have drawn the Nation's attention once again to the deteriorating infrastructure of the United States and for good cause. The inadequacy of our technology infrastructure, however, should be of equal concern. Just as the Federal Government provided incentives and capital to pave and light rural America in the last century, ultimately it will most likely take delivery mechanism-neutral incentives to extend broadband Internet access to those same areas.

To conclude, it is time for everyone to publicly acknowledge that high-speed broadband Internet access is not a luxury but a basic necessity. As a nation, lack of broadband puts us at an unacceptable competitive disadvantage. The United States relies a great deal on the innovation and creativity of its populace to maintain our dominant strategic and economic position in the global community. We jeopardize that position by allowing other countries to move further and further ahead of us in the availability and usage of broadband. At the state level, rural states like Arkansas will never be able to effectively develop and improve without access to this indispensable utility. For many, the education, health, and social benefits that can be derived from broadband access is their only chance to better their lives and the lives of their children. Thank you.

[The prepared statement of Mr. Walls follows:]

PREPARED STATEMENT OF C. SAM WALLS, CEO, ARKANSAS CAPITAL CORPORATION

Good Morning. My name is Sam Walls, Chief Executive Officer of Arkansas Capital Corporation. With me is Mr. James Winningham, Chairman of the Arkansas Broadband Initiative, and Dr. John Ahlen, President of the Arkansas Science and Technology Authority. We are here today representing *Connect Arkansas*, a private and public sector collaborative effort to bring broadband Internet access to all Arkansans.

Connect Arkansas is based on principals derived from models in other parts of the country that faced similar obstacles that we here in Arkansas are dealing with. Connect Arkansas will focus on three key activities. The first activity will be to accurately map where connectivity truly exists in Arkansas and at what speeds. This will require working with numerous entities, primarily the service providers that operate here in Arkansas. Because Connect Arkansas is designed to encourage collaboration, it will work with the providers on getting the relevant information to accomplish this task.

The second activity of the effort will be to survey communities throughout the state to better determine either why they choose to use broadband or conversely

why they have chosen not to. This compliments the third activity of the effort, working with leadership in every county of Arkansas to develop a strategy to educate the populace on the value and need for broadband in their personal and professional lives. This preparing of people and organizations to take advantage of the benefits of broadband is perhaps the most important part of our effort. Without preparation, broadband is in danger of being a very powerful economic and social tool, but without people and businesses with the necessary skills and insight to take advantage of it, and ultimately without enough demand to sustain it. Our goal is not just to move Arkansas forward, but to also to move all of its people forward with it.

Connect Arkansas is a “delivery platform neutral” entity. By that I mean that it will not seek to advocate for one broadband Internet delivery system over another. Its only focus is to drive market demand in the belief that once a market can be demonstrated, the private sector will step in to meet that demand. Connect Arkansas’s success will in large part be driven by the ability of the private and public sector to work together to accomplish this vital task.

Arkansas Capital Corporation has been involved in economic development in Arkansas for 50 years, the last 18 of which I have been with the organization. Today, we are involved in a number of activities related to improving the economic environment of Arkansas including Access to Capital, Business Development, and Education. There is no question in my mind, however, that creating statewide broadband connectivity is the single most important activity that I and my organization have been involved with.

After World War II, Federal and state leaders realized that for rural states like Arkansas to prosper, they must have good roads and access to reliable and affordable electricity. Later, phone lines were considered a requirement. For this century, broadband Internet access is the absolute necessity without which these people, who are already more often than not at a disadvantage, are left further and further behind. It is literally this era’s “interstate highway system”. Look at the various obstacles that many rural states face, inadequate healthcare, below standard educational opportunities, and lack of business development. As the states try to address these issues the solutions invariably involve broadband Internet access.

At the Federal level, there is a need for our leaders to elevate this issue as a top priority. Unfortunate recent events in Minnesota have drawn the Nation’s attention once again to the deteriorating “infrastructure” of the United States and for good cause. The inadequacy of our technology infrastructure, however, should be of equal concern. Just as the Federal Government provided incentives and capital to pave and light rural America in the last century, ultimately it will most likely take “delivery mechanism neutral” incentives to ultimately extend broadband Internet access to those same areas.

To conclude, it is time for everyone to publicly acknowledge that high-speed broadband Internet access is not a luxury but a basic necessity. As a nation, lack of broadband puts us at an unacceptable competitive disadvantage. The United States relies a great deal on the innovation and creativity of its populace to maintain our dominant strategic and economic position in the global community. We jeopardize that position by allowing other countries to move further and further ahead of us in the availability and usage of broadband. At the state level, rural states like Arkansas will never be able to effectively develop and improve without access to this indispensable utility. For many, the education, health and social benefits that can be derived from broadband access is their only chance to better their lives and the lives of their children.

Thank you for your time.

Senator PRYOR. Thank you. Mr. Winningham?

**STATEMENT OF JAMES WINNINGHAM, ORGANIZING CHAIR,  
ARKANSAS BROADBAND INITIATIVE (ABI)**

Mr. WINNINGHAM. Senator, Commissioners—good morning. Senator, thank you for your flexibility. Thank you for your leadership in bringing this subject to Arkansas. My name is James Winningham. I am the Organizing Chair of the Arkansas Broadband Initiative, a group of educators, government people, and industry to promote broadband in Arkansas. ABI is the group which worked with Senator John Paul Capps to draft this year’s Connect Arkansas Act. Why is Connect Arkansas so important to our state? This year in his State of the State Address, Governor

Beebe said that “in today’s world, just learning to type on the keyboard won’t suffice. Our kids deserve broadband infrastructure that connects them to the Internet and provides technology equity.” It never has been about the keyboard, of course. That’s just part of the computer. And the computer age has never really been about the computer.

The computer age has always been about the data, the information. Data is information. And information is power. And broadband is information on steroids.

[Laughter.]

Mr. WINNINGHAM. Broadband is the power for a U.S. Senator in Washington to coordinate a meeting in his home state in a fraction of the time it would take with dial-up data service. Broadband is the power for a student to find a thousand related articles for a homework assignment in a fraction of the time it would take to find even one article in the school library, unless that school library has broadband. A student with broadband at home has several hours of broadband to research in any given day, whereas a student that only has library broadband may have one hour if it’s the right day of the week and if that student can get one of the computers.

Broadband is the power for that student’s mom to find that student two pairs of jeans she can afford instead of one pair she can’t afford. And she can find those two pairs in a fraction of the time it takes to find that one. Broadband is the power for that single mom who can’t leave her child to take night classes. Broadband is the power for that school to offer night classes, midnight classes to a thousand such moms across the country instead of offering 7 p.m. to 9 p.m. classes to five or six moms who live within 20 miles. Broadband could be the power of that child to stay here in Arkansas with his broader family instead of having to be exported somewhere else where there are jobs that are commensurate with their abilities. Broadband is the power for a small business in rural Arkansas to offer its products to people all across the United States and across the oceans instead of offering them to only the 1,500 residents in their town. I suggest to you that Governor Beebe’s words are not only true for Arkansas, but they’re also true for every child in the United States.

And that true technology equity is not had, as long as there is another nation with better broadband than the United States—that’s why Connect Arkansas is so important to Arkansas, because we have moms, we have children, we have small businesses. We need a Federal economic environment that is broadband-friendly, because we need technology equity for our children, for our state, and for our Nation. Thank you for your time and attention.

[The prepared statement of Mr. Winningham follows:]

PREPARED STATEMENT OF JAMES WINNINGHAM, ORGANIZING CHAIR,  
ARKANSAS BROADBAND INITIATIVE (ABI)

Mr. Chairman and Members of the Committee, good morning.

My name is James Winningham. I am the Organizing Chair of the Arkansas Broadband Initiative (ABI). ABI is the group which worked with Senator John Paul Capps to draft this year’s Connect Arkansas Act.

Why is Connect Arkansas so important to our state? This year in his State of the State address, Governor Beebe said that “in today’s world, just learning to type on

the keyboard won't suffice. Our kids deserve broadband infrastructure that connects them to the Internet and provides technology equity."

You see, it has never been about the keyboard. That's just part of the computer, and the computer age has never been about the computer. It has always been about the data.

Data is information, and information is power, and broadband is information on steroids. Broadband is the power for a U.S. Senator in Washington to coordinate a meeting back in his home state in a fraction of the time it would take with dial-up data service.

Broadband is the power for a student to find a thousand related articles for a homework assignment in a fraction of the time it would take to find even one article in the school library . . . unless that school library has broadband.

A student with broadband at home has several hours of broadband research time in a day, whereas a student that only has library broadband may have 1 hour, if it is the right day of the week.

Broadband is the power for that student's mom to find that student two pairs of jeans she can afford, instead of one pair she can't afford, and in a fraction of the time it takes to find the one.

Broadband is the power for that single mom who can't leave her child to take night classes.

Broadband is the power for that school to offer night classes . . . midnight classes . . . to a thousand such moms across the country, instead of offering 7 p.m. to 9 p.m. classes to five or six moms who live within 20 miles.

Broadband is the power for a small business in rural Arkansas to offer its products to people all across the United States and across the oceans instead of offering them only to the 1,500 residents of their town.

I suggest to you that Governor Beebe's words are not only true for Arkansas, but also true for every child in the United States, and that true technology equity is not had as long as there is another nation with better broadband than the United States.

That's why Connect Arkansas is so important to Arkansas, because we have moms, and children, and small businesses. We need a Federal economic environment that is broadband-friendly, because we need technology equity for our children, for our state, and for our Nation.

Thank you for your time and attention.

Commissioner COPPS. Can I ask a quick question?

Mr. WINNINGHAM. Yes, please do.

Commissioner COPPS. Have you advanced to the point with Connect Arkansas that you have some time frames in mind for getting the mapping data and just who has what, at what speed, and all?

Mr. WINNINGHAM. Commissioner, we really have done our planning, essentially based on—well, really on two things. ConnectKentucky is one model that we've looked at. And another model is one that has been used in California and a couple of places, but this is a very new effort. We do have a draft plan in place, but we really haven't finalized plans at this point.

Mr. WALLS. That's correct. We have, as James said, a preliminary business plan that's been completed and which the governor's advisory board has been appointed. And we are in the process of electing our board of directors for the effort. The mapping would be the first step that follows this.

Commissioner COPPS. I would just like to stress the importance. You will be collecting data, I guess, from a lot of providers. Sometimes that's a challenge to do that, but I get the impression in this state that folks are used to working together. And I hope that that will happen here, because it really is vital that you get a better handle on deployment than we've been able to get so far at the FCC.

Mr. WALLS. Commissioner, that's written into Act 604. That's one of the provisions for Connect Arkansas is to set forth a process for

broadband providers to report that. We also have another ace in the hole that you'll hear about later from our EAST students.

Commissioner COPPS. Thank you.

Senator PRYOR. Thank you. Next, we have Matt Dozier, and he has some students with him, and, if possible, the students can come forward and go ahead and get set up while I introduce them. This is The EAST Initiative. These students are from Ashdown, Mineral Springs, and Saratoga High Schools. EAST is an educational initiative that allows students to tackle real problems facing their communities. These students are involved in the EAST Rural Broadband Project in a collaborative effort between The EAST Initiative and the Arkansas Science and Technology Authority that is engaging students and communities in the ArkLaTex where you—for you all who are uninitiated, that's Southwest Arkansas and Delta region—that's east Arkansas—to address issues related to entrepreneurial development, broadband, high-speed Internet in rural areas of the state. With Tricia Tart and Lila Sivley from Ashdown High School, Michelle Neal from Mineral Springs, and Andrew Mays from Saratoga.

Mr. MAYS. I'm from Mineral Springs. She's from Saratoga.

Senator PRYOR. I'm sorry. Matt, why don't I introduce you, and you can take over here.

**STATEMENT OF MATT DOZIER, PRESIDENT AND CEO,  
THE EAST INITIATIVE, INC.**

Mr. DOZIER. Thank you so much, Senator, Commissioners. Good morning, and we are so excited about the opportunity to speak with you today. My name is Matt Dozier, and I head an educational nonprofit group that delivers training and support on an educational program that has been named a national model by the Federal departments of Education and Labor. This program is called EAST, and it was started here in Arkansas in 1996 and has since grown to schools across the country. In a nutshell, EAST is an educational program that addresses 21st century educational needs by combining local service projects and high-end technology with a student-centered approach that allows our students to take responsibility for their own learning and their projects in a very real world fashion.

Last year, we were approached by the Arkansas Science and Technology Authority (ASTA) about using EAST students to develop and deploy a project looking at broadband access in rural Arkansas. With funding from ASTA and the Winthrop Rockefeller Foundation, we recruited student teams from ten schools in two of the southern regions of our state to participate in this project. And I am pleased to have representatives from this regional working group here today. They are eager to explain the things that they have done, and how they have made a difference in their communities. Andrew—Michelle.

[The joint prepared statement of Mr. Dozier, Ms. Neal, Mr. Mays, Ms. Sivley and Ms. Tart follow:]

JOINT PREPARED STATEMENT OF MATT DOZIER, PRESIDENT AND CEO, THE EAST INITIATIVE, INC., MICHELLE NEAL, STUDENT, SARAGTOGA HIGH SCHOOL, ANDREW MAYS, STUDENT, MINERAL SPRINGS HIGH SCHOOL, LILA SIVLEY, STUDENT, ASHDOWN HIGH SCHOOL, TRISHA TART, FRESHMAN, THE UNIVERSITY OF ARKANSAS

#### **Matt Dozier**

Good morning and thank you for the opportunity to speak today. My name is Matt Dozier and I head an educational non-profit group that delivers training and support on an educational program that has been named a national model by the Federal Departments of Education and Labor. This program is called EAST and it was started here in Arkansas in 1996 and has since grown to schools across the country. In a nutshell EAST is an educational program that addresses 21st century educational needs by combining local service projects and high-end technology with a student-centered approach that allows our students to take responsibility for their own learning and their projects in a very real world fashion.

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#### **Andrew Mays**

Hello! My name is Andrew Mays of Mineral Springs High School, where I am currently a sophomore in my 6th semester of EAST which stands for Environmental and Spatial Technology.

This past year, as one of my EAST projects, I represented the Mineral Springs School District, in collaboration with students from 9 other schools in 6 different counties, to gather information about the usage of Broadband throughout the state of Arkansas. In the beginning phase of the project, we decided to change the phrasing in order make the survey more comprehensible to the general public. Broadband was such a new and foreign concept, that many households in our area were unfamiliar with the terminology originally used in the surveys. After we finished rewriting the surveys, we distributed them to students and businesses in our designated areas, eventually gathering 2,500 usable surveys from the counties of Howard, Little River, Ashley, Bradley, Drew and Lincoln. The survey's questions ranged from as simple as, "Do you own a computer?" to as difficult as, "Is DSL available in your area?" Upon receiving the returned information, we began diligently downloading the results into our own schools databases. Then students from each of the counties met in Monticello and compiled their area's information, along with ours, into one database. While in Monticello, we were assisted by professors of both the University of Arkansas at Monticello and the University of Hope. With their help we created a map using ESRI mapping software. This map is currently on display before many today. In working on this project, we the EAST students of South Arkansas have realized the need for the expansion of broadband availability to all of our state's citizens, not only for educational purposes, but also for economic growth, and the advancement of our state into technology of the 21st century. I thank you for your time.

#### **Michelle Neal**

Hi, my name is Michelle Neal and I am a junior at Saratoga High School. I started working on the Rural Broadband Project with the EAST Initiative organization in the 2006 school year. We went and handed out surveys to our local businesses and people in our community. Basically we wanted to get a picture of who had broadband and who wanted it but couldn't get it. Broadband is important simply because of the fact of education. Future college students could go online and take classes if they had access to the Internet. E-mail is also an important source of communication in today's society. Broadband would be beneficial to parents also because most parents don't realize that you can go online and check their child's grades, test scores, and progress of what they're doing in school; and most parents don't know this because they can not get Internet in their area. Our research shows that most people don't even have a computer and we believe this could be because of the broadband issue.

#### **Lila Sivley**

Hey everyone! I'm Lila Sivley. I'm with the Ashdown High School EAST lab. EAST is Environmental and Spatial Technology. I've been a part of EAST since Au-



gust 2006 and have been on the EAST Broadband Project since January 2007. It's a huge priority to us and our class plans to see the finish of this project. When I was asked to come here Ms. Glaze said that you were looking for personal testimony.

Every morning when I get ready I use hairspray! Well how much does one use? I would have to start getting ready 2 hours earlier if I wanted to get on the Internet and check the weather since I have dial-up. Dial-up Internet is so incredibly slow and I would mimic the noise, but it's extremely embarrassing.

Right now Arkansas is in a box, we have our limits. It is time for rural Arkansas to get out of that box. Broadband is not a convenience, but a source of technology that will move us forward with the rest of the world.

I'm also a senior in high school and I take several classes that are concurrent with college. It's almost impossible to check online grades and rankings at home. Even at school, where time is limited, the Internet isn't much faster.

Thank you for letting us come and speak to you today.

#### **Trisha Tart**

I am Trisha Tart a freshman at the University of Arkansas. I graduated from Ashdown High School in May of 2007 where I had been working on this project for almost 2 years. I am proud to be one of the founding members of Ashdown EAST's Rural Broadband team. It is so hard to describe to outsiders dial-up in the rural community. It was really only after I had arrived at college and experienced the campus high-speed network that I myself completely understood what I had been missing and how hard it was to access information back home.

In this project, we conducted surveys and had a lot of fun helping to educate people about having broadband. Often, they don't know what broadband really is or the effects it can have on them. What I think is really important for you to know, is that everyone here realizes that people in rural Arkansas need this. It is really important. What we need to do is make it available in the rural areas because that is the only way we are going to advance. These kids are going to college and all the scholarships and applications online are impossible unless you do them at school . . . and our school Internet isn't even that fast and it's difficult to get on a computer but, it is really important that everyone here understand that this would have such a positive effect on everyone's education. The people of Arkansas, they're going to love it . . . it's great. If high school students are this excited—we worked so hard surveying—everyone is going to see that. Once the adults realize what broadband can offer their communities, and how it is going to affect everyone then they will absolutely want it. It's great and we love it.

#### **Matt Dozier**

As you can see, there is a great deal of capacity in our local communities and within our youngest citizens to engage in real work that can address local needs. What we believe we have demonstrated through this project is that a "local engagement" strategy is the best way to not only educate people on larger issues, but also to allow them to be part of the solution rather than outsiders looking in, waiting for someone else to solve their problems. Students like these are typical of EAST students, and indeed all students. They are creative, intuitive, adaptable, and ready to serve in their communities. We all benefit when we don't stand in their way, but rather stand behind them and provide them with the tools they need to take on challenges.

Just as we brought electricity and telephone service to all of Arkansas in an effort to keep pace with the needs of the modern world, we can bring broadband access to every community to allow it to become a larger part of the wider world. This issue strikes at the core of communities of students like these. This is truly an area where, if we fail to act, we will leave a generation behind. The EAST Initiative is dedicated to helping our students find within themselves the abilities that will serve them and us well through their adult careers. They need your help as well. Thank you.

#### **STATEMENT OF MICHELLE NEAL, STUDENT, SARATOGA HIGH SCHOOL**

Ms. NEAL. Hello, everyone. My name is Michelle Neal, and I am a junior at Saratoga High School. I started working on the rural broadband project with The EAST Initiative organization in the 2006 school year. What we did was we went out and handed out

surveys to local businesses and people in our community to see who had broadband or who wanted broadband, but couldn't get broadband because they lived in such rural areas. I think this would be beneficial to everyone for the simple fact of education, because people who want to go to college—future college students could go online and take classes if they had access to the Internet. Also, another important aspect is e-mail. E-mail is a really good source of communication in today's society.

And parents would benefit from this also, because most parents don't know that you can go online and look at your child's test scores and grades and progress in school. Most parents don't know this, because they can't get Internet in the rural areas.

Also, our research shows that most people don't even have a computer, and we think that this could be because of the DSL issue. And all of us that are in EAST, most of our projects are—almost all of them have to have work on the Internet. And since we live in such rural areas, we can't get Internet. We have to wait until we get to school to do homework, and we think that this would be beneficial in our work.

#### **STATEMENT OF ANDREW MAYS, STUDENT, MINERAL SPRINGS HIGH SCHOOL**

Mr. MAYS. Like was said earlier, I am Andrew Mays, from Mineral Springs High School, and I am a sophomore working in my sixth semester of EAST. And this past year, as one of my EAST projects, I actually represented Mineral Springs School District in collaboration with students from nine other schools in six different counties, around the equivalent of 19 students, in order to gather information about the usage of broadband throughout the state of Arkansas. In the beginning phase of the project, we actually decided to change the wording in order to make the survey more comprehensible to the people.

Since broadband was such a new and foreign concept, many households in our area were unfamiliar with the terminology originally used in our surveys. So after we finished rewriting the surveys, we distributed them to the students and businesses in our designated areas, eventually gathering 2,500 usable surveys from the counties of Howard, Little River, Ashley, Bradley, Drew, and Lincoln. The survey's questions ranged from as simple as: Do you own a computer? To as difficult as: Is DSL available in your area? Upon receiving the returned information, we began diligently downloading the results into our own schools' databases.

The students from each of the counties then met in Monticello and compiled their area's information along with ours into one large database. While in Monticello, we were assisted by professors of both the University of Arkansas at Monticello and the University of Hope. With their help, we created a map using ESRI mapping software. This map is currently on display before many today. In working on this project, we, the EAST students of South Arkansas, have realized the need for the expansion of broadband availability to all of our state's citizens, not only for educational purposes, but also for economic growth and the advancement of our state into the technology of the 21st century. Thank you for your time.

**STATEMENT OF LILA SIVLEY, STUDENT,  
ASHDOWN HIGH SCHOOL**

Ms. SIVLEY. Hey everyone, I'm Lila Sivley. I'm from Ashdown. I help out in the EAST lab. EAST is Environmental and Spatial Technology. We help a lot in our communities, and broadband is our main priority, in ours I know it is. I've been with this project since January this year, and we've been working really hard. We've got the marketing plan and it was after ConnectKentucky, and we're trying to get it to be Connect Arkansas, as everyone must know. One of the big deals that Mr. Pryor needs to know is how's it going to help us. Well, me, I wake up every morning. I put hair spray in my hair. How much, you may think. Well, you get on the Internet, and if I don't get up two hours early, then I have no chance of getting on the computer. Do you realize how long it takes for dial-up? I would mimic the noise, but it's embarrassing. It's so slow. And if I wanted to do homework, absolutely impossible. Unless it's calculator and pencil, no help. I do essays and I'm a senior—if I didn't say that. I don't know if I did. But I am going to go to college, and a lot of classes that I take this year as a senior are concurrent with college credits. So if I was to want to get online, I'd have to do it at school. It's simply impossible to do it where I live. And I'm only about ten minutes out of town. But I just want everybody to realize, it's a must-have. It's time for Arkansas to not be limited. We're in a box. We need to step out of that and really get out there. Get out in the world. But I'm going to let Trish talk now. Thanks.

**STATEMENT OF TRISHA TART, GRADUATE,  
ASHDOWN HIGH SCHOOL**

Ms. TART. Hi, I am Trish Tart. I'm a freshman at the University of Arkansas. I graduated from Ashdown last year, and I've been working on this for almost two years now. I was one of the founding members. And it's so hard to describe dial-up in a rural area until you go somewhere else and you have broadband. I'm in college now and I have it, and I just realized how difficult it was. You know, we did do the surveys. We had a lot of fun with that, going through and seeing the ignorance that a lot of people have about having broadband. They don't know what it is, and they don't know what, you know, the effects it can have on them. But I think what's really important is that everybody here realizes people in rural Arkansas need this. You know, it's really important.

All we need to do is get it out and get it to those people, because that's the only way anybody's going to advance. Now these kids are going to college, and all the scholarships and applications you have to do are online. It's impossible unless you do it at school. And our school Internet's really not even that fast. It's difficult to get on a computer. But it's really important that everybody here realizes that it's going to have such a positive effect on everybody's education. And the people in Arkansas, they're going to love it. It's great.

So if high school students are this excited—we worked so hard surveying everybody, I think people are going to see that. And if students are this excited, once the adults realize what it is and how

it's going to help everybody, everybody is going to want it. So I think it's great, and we love it.

Senator PRYOR. We have a question or two.

Commissioner COPPS. I just wanted to ask, and those were wonderful presentations. Thank you for sharing them. Is there a generation gap, do you think? With some of the folks we've talked about, a lot of people don't understand the potential of this. But don't most young people really get it, or do you really see a problem even among your peers—they that don't understand the potential of this stuff?

Mr. MAYS. Actually, whenever we first started doing the surveys, we actually ran a test on our school to see how realistic it would be to them. And in our actual school itself, we had to go around the class and actually explain what every word was to them. So, I mean, there is a very small gap between the actual generations. But there is still a gap. I would love for everyone to be able to know what it is exactly, but there is still a lot of lack of knowledge like she said.

Commissioner ADELSTEIN. Those are great buttons. Where'd you get those "Got Broadband" buttons?

Ms. SIVLEY. We made them. We have some—we may have more.

Commissioner ADELSTEIN. That's marketing.

Ms. SIVLEY. Do you want one? You can have mine.

Commissioner ADELSTEIN. No, thank you, though.

Ms. SIVLEY. Thank you.

Senator PRYOR. Matt—

Mr. DOZIER. As you can see, there is a great deal of capacity in our local communities and within our youngest citizens to engage in real work that can address local needs. What we believe we have demonstrated through this project is that a local engagement strategy is the best way to not only educate people on larger issues, but also to allow them to be part of the solution rather than outsiders looking in, waiting for someone else to solve their problems. Students like these are typical of EAST students.

Believe me, they are typical of EAST students. But, indeed, they are typical of all students. They are creative, intuitive, adaptable, and ready to serve in their communities. We all benefit when we don't stand in their way, but rather stand behind them and give them the tools to take on challenges. Just as we brought electricity and telephone service to all of Arkansas in an effort to keep pace with the needs of the modern world, we can bring broadband access to every community to allow it to become a larger part of the wider world. This issue strikes at the core of communities of students like these. This is truly an area where if we fail to act, we will leave the generation behind. The EAST Initiative is dedicated to helping our students find within themselves the abilities that will serve them and us well through their adult careers. They need your help as well. Thank you.

Senator PRYOR. Thank you. Well, now we're getting to the point in our panel, you know the old saying: Save the best for last. Well, we didn't do that. I'm just kidding. I'm kidding. No, we really did. We've talked a lot about the need for broadband, and the application of broadband, and the promise and potential, the great things, the reason Arkansas needs to be where it needs to be.

But the next panel is where the rubber meets the road. And these are the companies that provide broadband. And they want to talk about some of the challenges that they have in trying to deploy broadband, some of the things that they are doing, some of the innovations, the investments that they're making in our state, and I know that because I've talked to many of them on previous occasions, and today as well. I know that we're going to hear a lot of good news about broadband, but we're also going to hear some about the challenge, and the reality is that it is a challenge to these companies that have investors that expect a great return on their investments, it's a challenge for them to make investments sometimes if there is not some sort of public/private partnership.

Universal Service Fund is something that I'm very interested in, something like a rural utility service loan is a concept that we're beating around up in Washington to see if that might work. But this next panel really is, in my view, really where the rubber does meet the road, because we need to help these companies deploy broadband and increase the penetration of broadband around the state. One of the things I said in the beginning is I do have a concern about two Americas, a rich America, a more densely-populated America that has access to broadband, and then a part of America that's left behind. Rural America that just because they don't have the population density, maybe they don't have the wealth or the capital to cover other needs that employ broadband.

So the two commissioners who have talked about this—this is very similar to maybe what we saw in the 1920s, 1930s, with electricity, maybe what it was like in the 1930s with telephones. We need to help in any way we can and make sure that broadband gets out to every sector of the state of Arkansas, and, for that matter, every section of the country. So what I'd like to do now is again, say, two-minute statements from here on. First, I'd like to introduce Scott Ford.

**STATEMENT OF SCOTT T. FORD, PRESIDENT AND CEO,  
ALLTEL COMMUNICATIONS, INC.**

Mr. FORD. Thank you, Senator. I'm going to take one minute and just say thank you to the Commissioners and to yourself for coming down and hosting this. I don't know that everybody on the panel gets the chance to appear before you as regularly as I do, and so I really just want to, for the benefit of the group, make sure that they know what an honor it is that you two would come to Arkansas. Your time is under great demand, you have enormous issues beyond even telecommunications and broadband that you have to deal with. This is not an easy time to be an FCC Commissioner, from the best I can tell from looking from the outside in, and it's great that you would take the time to come down here. We greatly appreciate it. You have been, particularly the leaders, making sure that companies that serve America serve all of America.

As you know, at Alltel we're the largest rural provider in the wireless business in the country. We compete for capital against companies like Verizon and T-Mobile and companies who generally only serve metropolitan areas and the freeway. So it's difficult to attract shareholder capital to put in rural America. And the reforms that have been in place, through allowing wireless companies

to tap in as an ETC through the USF funds, has been an enormous help to building cell sites and to providing connectivity. Arkansas just this year, early this year, under Governor Beebe's leadership, enacted—and the Public Service Commission—adopted rules that allow wireless companies in Arkansas to tap into USF. And we will be taking that money and building cell sites into rural America.

So we are slowly making progress through all that. I must also say, Commissioner Copps, that progress was going to be killed by the wireline companies until you kind of singularly voted on the Federal-State Joint Board to put a halt to that. I don't think that you, particularly, were perfectly pleased with everything that was involved in that in terms of how it came out. And I know you want overall reform, and I know that everybody wants to see USF reformed on a holistic basis. Not throwing the wireless business under the bus was a good step to actually bringing everybody to the table to reform that, and we appreciate it. Senator Pryor, I'll throw out three things. As you guys think about take-aways from this—first of all, we are grateful that you came. Second of all, think about mobility and broadband. Mobility and broadband are what the American consumer wants, it's what they pay for, and it's what they want, even those that can't afford it.

The second thing I ask you take away is the thought that as you add customers and you incur the expense of adding customers, you ought to gain subsidy for that. You shouldn't gain subsidy for losing customers regardless of what Mr. Gardner's going to tell you next. We used to get along great. Now we're just arguing.

[Laughter.]

Mr. FORD. That's an attempt at humor.

The third thing is, if you look at broadband, it's not a road. You don't build it and then just come back and check on it every now and then for maintenance and potholes. Broadband requires 24-hour monitoring. It is very expensive to provide, once we build it. If you look at the wireline telephone system, a great amount of subsidy flows through to the actual retail user. The retail user only pays about half of what it costs to provide service to them. Whereas in the wireless business, customers pay in the 97 to 98 percentile. Just a couple of other things for you to think through as you think about the fact that wireless pays in \$2.5 billion into the USF and only takes \$1 billion out. Thank you very much for coming. We do appreciate the time.

[The prepared statement of Mr. Ford follows:]

PREPARED STATEMENT OF SCOTT T. FORD, PRESIDENT AND CEO,  
ALLTEL COMMUNICATIONS, INC.

Senator Pryor, Commissioners Copps and Adelstein, ladies and gentlemen, I would like to welcome you to Little Rock, and to thank you for conducting this important field hearing here in our home town. I appreciate your invitation to participate today, and am pleased and honored to discuss ways to sustain and promote the deployment of fixed and mobile broadband services, here in Arkansas and across the country.

Alltel provides leading-edge, digital mobile wireless services to nearly 12 million wireless customers in 35 states, including several hundred thousand here throughout virtually all of Arkansas. We operate the Nation's largest wireless network in terms of geographic area served, but our customer base is smaller than those of the larger carriers. This is because we are one of the few major wireless operators to

focus on serving the mid-size and smaller cities, as well as rural and more sparsely populated areas.

We offer our customers a range of mobile broadband services that are increasingly important parts of our product mix. A majority of our handsets, including nearly all of our newly launched devices, support wireless broadband. Alltel is rapidly deploying network facilities that support EV-DO-based Axxess<sup>SM</sup> Broadband service that provides average speeds of 400–700 kilobits per second with bursts up to 2.4 megabits per second. These technologies support web-based e-mail, text and photo-messaging, mobile game and ring-tone downloads, mobile music and video, and Internet access services for individual consumers. In addition, we offer enterprise mobile data solutions used by government, public safety agencies, and industries as diverse as agriculture, education, finance, health care, and manufacturing.

We provide these high-speed, advanced services in over 100 communities covering 44 million people across our 35-state footprint. Here in our home state of Arkansas, we will provide access to these services to nearly 62 percent of the households by the end of this year. We are constantly building out broadband facilities and offering advanced services to additional communities.

As you know, consumers increasingly demand higher-bandwidth services: across the country, purchases of broadband lines increased by 52 percent from 2005 to 2006, according to recent FCC reports, including an increase from fewer than 400,000 wireless broadband lines in 2005 to over 11 million in 2006. Through innovative service features and plans, wireless carriers are bringing additional competition to the broadband marketplace and offering American consumers unique ways to stay connected to information. Broadband services—both fixed and mobile—are absolutely vital for the 21st century economy. But clearly much more needs to be done to bring broadband services out to consumers. According to the latest FCC high-speed report, fewer than 13 percent of Arkansas residents had broadband service as of June 30, 2006.

Consumers also increasingly need and depend on mobile wireless services of all kinds, for voice as well as data. Over the past 5 years, the number of mobile wireless subscribers has grown by 86 percent, from 118 million in June 2001 to 219 million in June 2006. According to FCC data, mobile wireless service across the country has grown by 50 percent during the 3 years ending in December 2005, and consumers now use more wireless than wireline phone lines. Here in Arkansas, Alltel's mobile wireless customer base has grown by 24 percent over the past 3 years. U.S. Department of Health and Human Services conducted a survey and found that over 12 percent of households in the country are using wireless as their only phone service. And among consumers with more than one connection, a substantial proportion now use wireless as a primary means of communications. Without question, wireless communications is the "lifeline" of today's consumers.

Rural consumers have the same interests in obtaining access to high-speed technologies and mobile services, and are demonstrating changes in demand that parallel those of consumers across the country. If anything, mobile wireless services may be even more important to rural consumers than to those in urban areas. People in rural areas often spend more time than their urban counterparts on the road. For example, an entrepreneur may need to reach contacts when driving from one end of a large county to another for business; a parent may need access to telecommunications while driving children to and from relatively distant schools; and a farmer may need access to data on agricultural prices while working on a remote part of his or her property. Wireless broadband is often the only means of high-speed access in many high-cost areas and is playing a major role in bridging the "broadband divide."

Rural residents and public safety "first responders" particularly value their mobile wireless services in emergency situations. Mobile 9-1-1 and E-911 are vital health and safety services, especially for people who frequently have to travel long distances—and more than 240,000 wireless E-911 calls are made every day. But they cannot be provided unless adequate infrastructure and service is available. But due to the relatively high costs of deploying wireline and wireless networks in many rural areas, we all need to do more to make sure consumers in rural areas have access to these services. In our state, the 86th General Assembly of the Arkansas legislature passed a bill last year to create the "Connect Arkansas" program and the Arkansas Broadband Advisory Council, which are working to monitor, educate, promote and facilitate the deployment and adoption of broadband Internet services. Several members from this initiative are here today and I congratulate them for their efforts to bring advanced telecommunications services to our state.

Senator Pryor, I would like to commend you for your strong commitment to ensuring that citizens of rural parts of Arkansas and across the country have access to high-quality fixed and mobile broadband services, as well as other mobile wireless

services. The important legislation that you co-sponsored with Senators Smith and Dorgan—S. 711, the “Universal Service for the 21st Century Act” of 2007—wisely recognizes that *any technology*, including wireless, can be included in the definition of “broadband communications service,” as long as it operates at the specified high-speed and enables users to originate and receive high-quality voice, data, graphics, and video communications. Your forward-thinking legislation also recognizes the importance of universal service funding to support and extend both *broadband* services and *mobility* to unserved and underserved rural areas. Until just recently, only a negligible amount of universal service funding was going to support the deployment of wireless service to high-cost areas—even though consumers in those areas desperately need and want wireless technology and networks. Of the \$25 billion spent on high-cost universal service since 1996, only about \$2 billion has gone to wireless carriers and other competitors. Even today, less than 25 percent of universal service high-cost funds go to support the deployment of wireless service, even though there are now more wireless subscribers. At the same time, wireless contributes more than twice the amount into the universal service fund than it receives out of the fund.

The 1996 amendment to the Communications Act making non-wireline carriers eligible for universal service support has made possible a tremendous expansion of wireless service into rural areas. With universal service support, Alltel and other wireless carriers are building facilities deep into rural areas, not just along major highways, and delivering service to consumers where they live and work. According to the FCC, wireless penetration rates went up from 41 percent in 2001 to 68 percent in 2005 in the most sparsely populated areas with fewer than 100 residents per square mile.

America is getting a great return on its investment in wireless universal service. It's true that support for wireless has increased over the past few years. But that has come with a tremendous expansion of wireless service into rural areas. In the past, many wireless companies were building cell sites only along major highways and population centers. Now, with universal service support, we are building facilities deep into rural areas and getting service out to consumers who live and work there. For example, on the Pine Ridge Reservation in South Dakota, the Tribe estimated that less than 30 percent of the population had telephone service prior to Alltel's entry into the market as a wireless universal service provider. Today more than 80 percent of the population on the Pine Ridge reservation has access to wireless telephone service. The vast majority of these consumers are eligible for and receiving a discounted Lifeline service of only \$1 per month. This is the true meaning of universal service.

We are concerned with short-sighted views that fail to recognize the importance of wireless universal service. Support for rural wireless is not a problem—and an anti-competitive proposal to reduce universal service funding for wireless consumers is not the answer. Alltel appreciates the letter that you submitted to the Federal-State Joint Board on Universal Service, jointly with Senators Rockefeller, Dorgan, Klobuchar, and Smith, opposing the plan to restrict universal service funding for wireless carriers by imposing a cap exclusively on competitive eligible telecommunications carriers.

We share your hope that the Joint Board and the FCC abandon counter-productive “interim measures.” Instead, they should follow the lead of the Senate Commerce Committee, and turn their attention to equitable and sensible comprehensive reform of the universal service program. Rather than continuing to target funds mainly to the traditional voice telephone services of the last century, the Universal Service Fund should be realigned to promote the services that consumers most need and demand going forward: *broadband* and *mobility*.

Senator Pryor, in your letter to the Joint Board, you said that long term universal service reform should result in a competitively neutral system, promote accountability in how the funds are used, and promote the build-out of advanced services in rural regions through effective targeting of funds to high cost areas. Alltel firmly agrees. But we find it puzzling that some still argue that “universal service is not about competition.” Ever since the adoption of the Telecommunications Act of 1996, our Nation's policy has been to favor competition for all communications services, in all markets. Competition is the best way to assure high quality services, rapid advancement and deployment of new technologies, and low prices. Why would anyone want to take away the benefits of competition from consumers in rural areas?

The FCC's policies up to now have correctly attempted to promote both universal service and competition at the same time, by moving toward a system of funding *portability*. Some argue, however, that portability and competitive neutrality are inappropriate. We disagree. The purpose of universal service is to benefit customers, not carriers, so high cost support should be directed to the services that customers



decide to buy. Providers should have to show that they are using the support for its intended purpose in order to receive funding; they shouldn't retain funds when they are losing consumers. Some components of today's overall Federal universal service funding system are fully portable, but others are not. Under the non-portable funding mechanisms, certain carriers continue to receive universal service funding *even when* customers no longer want to buy service from them. This makes no sense and is causing unnecessary increases in the size of the fund. Wireless carriers, in contrast, lose support when they lose customers. To protect consumer choice, accountability, and an efficient use of funding, this Committee should exercise its oversight over the FCC to ensure that the universal service system moves toward greater portability—not less. Portability will ensure the steady deployment of basic and advanced services to rural consumers. We fear that the Joint Board's current drive toward moving wireless carriers to a "cost based" system will overlook the fundamental flaws with the current incumbent-biased funding system. We look forward to helping you, Senator Pryor, to make sure that sensible and equitable long-term reforms are implemented instead of ones whose practical effect is to inoculate incumbent carriers from any and all form of the competitive pressures that wireless carriers like Alltel and others face daily.

In sum, Alltel applauds this Committee's emphasis on promoting universal access to both *broadband* and *mobility* services in rural America. A reformed, *pro-competitive* universal service fund could be one of the most effective tools to achieve these twin objectives. We look forward to working with this Committee, the Joint Board, and the FCC to advance the objective of promoting the deployment of both fixed and mobile communications technologies and services on a competitive basis in all parts of the country.

Thank you.

Senator PRYOR. Thank you.

Mr. FORD. Should I give him this?

Senator PRYOR. Yes. Please do.

Mr. FORD. Mr. Gardner, your rebuttal?

[Laughter.]

#### STATEMENT OF JEFF GARDNER, PRESIDENT AND CEO, WINDSTREAM CORPORATION

Mr. GARDNER. Good morning, Senator Pryor, Commissioner Adelstein, and Commissioner Copps, and other distinguished guests. I am Jeff Gardner, President and CEO of Windstream, the largest local exchange serving company in the country focused on serving rural America. On behalf of our more than 8,000 employees, I am proud to extend a warm welcome to Little Rock, the home of our headquarters, and to Arkansas where we provide communications and entertainment services to more than 160,000 customers.

Windstream has more than 3.2 million voice customers and more than 750,000 broadband customers across the 16 states we operate in. As a result of our aggressive deployment of broadband services, 83 percent of our voice customers can purchase high-speed Internet access services. Remarkably, we have achieved these high levels of accessibility and penetration in rural America while receiving less than one percent of our annual revenue from Federal Universal Service High-Cost support. With an average density of slightly more than 20 customers per square mile, we clearly understand the many geographic and economic challenges that must be overcome to increase our country's broadband service adoption rates. But while many are calling for expansion of the Federal Universal Service program, to support broadband build-out, I would urge policymakers to consider other alternatives before making a decision.

As you know, the existing universal service program is in dire need of comprehensive reform. We are encouraged by the policy-

makers' recent focus on this reform. While increasing broadband adoption rates is an important national goal, it should only be considered in tandem with comprehensive reform. Any Federal program including universal service designed to increase broadband adoption rates should address the consumers' ability to afford broadband service. As stated in my pre-filed testimony, policy-makers may want to consider funding to offset the cost of broadband access for low income consumers and allocating funds to increase personal computer ownership. I applaud your efforts to organize this hearing.

I thank you for taking the time to come to Arkansas, and look forward to working productively in partnership with the policy-makers to move Americans and Arkansans to their rightful place at the forefront of broadband service adoption race. Thank you.

[The prepared statement of Mr. Gardner follows:]

PREPARED STATEMENT OF JEFF GARDNER, PRESIDENT AND CEO,  
WINDSTREAM CORPORATION

Thank you, Senator Pryor and the Senate Commerce Committee, for the invitation to speak at the hearing today. I also would like to extend an Arkansas welcome to Commissioners Copps and Adelstein.

My name is Jeff Gardner. I am the President and CEO of Windstream Corporation, a wireline telecommunications company that provides voice, broadband, and entertainment services to primarily rural communities in Arkansas and 15 other states. The company, which is headquartered here in Little Rock, has approximately 3.2 million access lines.

Windstream has been an active participant in developing Federal broadband policy. For example, Windstream supports the U.S. Senate Commerce Committee's broadband mapping efforts. We worked closely with Senate staff to encourage broadband subscription mapping at a census tract level, and we are pleased to see that census tract mapping is included in the latest version of the bill. Using census tracts as a common denominator, broadband maps will provide greater insight into the relationship between broadband adoption rates and other socioeconomic factors tracked by the U.S. Census Bureau.

We at Windstream share Senator Pryor's desire to ensure all Arkansans—and all Americans for that matter—can fully participate in the digital world. Deployment of broadband service is a strategic imperative for our company. In 2006 alone, we grew the number of our broadband customers by 46 percent to more than 656,000 customers, and as of second quarter this year, we have approximately 753,000 broadband customers nationwide.

We are continuing to upgrade our networks and increase the percentage of our customers with broadband access. This year alone we expect to spend between \$350 and \$380 million on capital expenditures, of which a significant portion is devoted to broadband. Now more than 80 percent of our voice customers can purchase wired broadband service from us, and as the Internet becomes more important to our customers, they are using a rapidly increasing amount of bandwidth. Our subscribers' bandwidth usage doubled over the last year.

Windstream's broadband investments extend to Arkansas. Windstream is the third largest ILEC in the state. We serve predominantly rural areas, from Elaine in the Delta to Wilmot in southeast Arkansas, but also some larger exchanges, such as Harrison. Harrison actually was our company's first exchange to offer DSL.

In Arkansas, we offer broadband at speeds of 1.5 Mbps, 3 Mbps, and 6 Mbps. Prices of these services may range from \$19.99 to \$29.99, when a customer bundles broadband service with voice or digital TV.

Windstream also has CLEC operations in central and northwest Arkansas. As a CLEC, we provide critical communications services, including broadband data services, to Arkansas hospitals and the state government.

Windstream will continue to offer DSL deeper in our markets and at faster speeds. In Arkansas and other states, we are upgrading our network to enable us to introduce broadband speeds of 10 to 12 Mbps, and we expect to complete this effort late this year or early next year.

But these build-out efforts are only one piece of ensuring all individuals can fully participate in the digital world. Broadband subscribership rates depend not only on

a consumer's *geographic* access to broadband, but also on a consumer's *economic* access to and awareness of the benefits of broadband. Consumer economic factors include both the affordability of broadband service and the ability to purchase a personal computer. Pulling a variety of different levers is necessary to increase broadband adoption rates broadly and effectively.

I believe that many are overly focused on pulling one lever: obtaining Federal funds to help offset the cost of constructing their broadband networks. However, there are three notable problems with advocating this solution in isolation.

First, if the goal is 100 percent terrestrial broadband deployment and subscription at affordable rates, achievement of this goal will require the Federal Government to spend considerable resources to offset the high cost of network build-out. Windstream, like other broadband service providers, has found that its costs increase exponentially as we attempt to provide broadband access to our remaining unserved customers.

As we reach into our unserved areas, we face a number of challenges: We may need to shorten the, often significant, distance between potential customers and the closest DSLAM, the point where a digital subscriber line is connected to the Internet. We also may need to lease transport from other carriers to connect our facilities, which in some cases can be very isolated, to the national Internet backbone. The potential number of broadband customers may not sustain these additional investments.

Here's a rough sketch of our predicted capital costs for deploying broadband service to the rest of our customers: It will cost Windstream a considerable sum to provide broadband service to an additional 5 percent of our customer base. To provide broadband to the next 5 percent slice of our customers, we expect it will cost us approximately two times that amount. For 5 percent more, approximately four times that amount. Deploying broadband to the next 5 percent of our unserved customers, in other words, will cost us approximately twice as much as what it cost us to deploy to the last 5 percent of our unserved customers. And as these customers demand higher speeds, our expenses increase still further as we upgrade our networks to support greater bandwidth.

Sponsoring universal build-out of terrestrial broadband networks would undoubtedly cost many billions of dollars. Providing exclusive attention to ensuring universal terrestrial broadband deployment—as opposed to increasing subscribership where broadband is already available—may drain Federal resources that could be focused on other factors that might have a greater impact on our Nation's adoption rates.

For some consumers, it may make more sense to invest in other technological solutions, which may be more affordable. Diverse technologies—such as satellite broadband—are providing new paths around geographic obstacles.

Second, focusing solely on broadband build-out costs overlooks the significance of the accompanying operating costs. Yet any successful broadband deployment strategy must properly account for both capital and operating expenditures.

Just because a functioning broadband network is built, does not automatically mean that it would make economic sense for a provider to *operate* that network. Indeed, in many areas, including some of our smaller exchanges in Arkansas, we have determined that we would not likely obtain enough broadband subscribers at affordable rates under current conditions to cover our incremental operating costs. So in order to keep broadband service affordable, providers likely will need additional funding to help cover ongoing operating expenses.

Third, even if sufficient funding could be devoted to creating a fully operational broadband network throughout the United States, it still does not mean all Americans would be able to purchase broadband service. A deployment-focused solution, without more, assumes “if you build it, they will come.”

But clearly that is not the case. Overall broadband adoption, in part, is a function of geographic access, but as I noted before, it also is a function of economic access and consumer awareness of the benefits of advanced technologies. Many recent press reports on the fate of municipal wireless networks have observed that multiple factors ultimately are responsible for consumers' broadband adoption rates.

So where does this assessment leave us? For Windstream, this analysis has made us look more carefully at the other levers that may be pulled to increase broadband adoption rates. While we aggressively deploy new facilities, we continue to think about new and innovative ways in which we can increase broadband adoption where we have already deployed the service.

Public-private partnerships, such as Connect Arkansas, may further promote low-income consumers' broadband usage. Windstream was an active participant in the Arkansas Broadband Initiative, which led to the development of Connect Arkansas. We anticipate that Connect Arkansas will be able to leverage resources of a wide

variety of stakeholders to bring more Arkansans online. We have witnessed the importance of cross-sector partnerships as a longtime board member of ConnectKentucky.

In particular, our experience has underscored the importance of a non-geographic factor that contributes to broadband adoption rates: affordability. The gap between those consumers who are online and offline more and more is defined by their economic, rather than geographic, conditions.

Focusing on affordability is important and in many cases actually may be the basis for more economically efficient policies to increase broadband adoption rates. As such, in addition to dedicating funds to aid deployment in unserved areas, policymakers should (a) devote funding to provide support for low-income consumers' broadband access and (b) allocate funds to increase computer ownership.

With respect to making broadband service more affordable, the Federal Government should strongly consider the use of general revenues, instead of universal service funds, to subsidize broadband service for low-income consumers. But if policymakers conclude it is appropriate to use universal service funds, they should consider extending Lifeline/Link-Up to assist low-income consumers' purchase of broadband services.

Addressing economic access to broadband will help a significant percentage of Arkansas consumers that remain offline. According to the U.S. Census Bureau, only 12 percent of Arkansas residents that live in households earning less than \$15,000 per year use the Internet at home.<sup>1</sup>

In addition, Windstream recommends that the Federal Government consider providing some funding for low-income individuals' personal computer ownership. If consumers cannot afford a computer, they will not be able to use broadband in their homes—no matter how reasonably priced that broadband service may be.

Among the 50 states and the District of Columbia, Arkansas ranks last, 50th, in the percentage of households with a personal computer.<sup>2</sup> And personal PC ownership, like Internet usage, is highly correlated with household income: 83 percent of households in Arkansas earning less than \$15,000 per year do not own a computer, compared to 38 percent of all households nationally.<sup>3</sup>

At Windstream, we are experimenting with ways in which we can help more of our customers afford household computers. For example, this month we launched a pilot program to offer discounted computers to qualified new broadband customers who purchase broadband service from our company.

Although there is much private industry can do, the private sector on its own cannot resolve issues around low-income consumers' ability to afford computers. Policymakers should give serious consideration to what role the government can play in addressing computer affordability.

Going forward we're going to need to wade into the details of how these various proposals could best be implemented. Windstream is committed to devoting resources to these ideas, and we look forward to partnering with the Federal Government to develop new and innovative ways to boost broadband adoption in Arkansas and throughout the United States.

Thank you for allowing my company and me to participate in this hearing.

Senator PRYOR. Thank you. Mr. Allis?

**STATEMENT OF EDWARD K. ALLIS, EXECUTIVE DIRECTOR,  
GOVERNMENTAL AFFAIRS, AT&T ARKANSAS**

Mr. ALLIS. Thank you, Senator. I don't use hair spray, but I'm thinking about starting. I appreciate the EAST labs presentation. I think that was a real bright spot for us today. My name is Ed Allis, Executive Director of Governmental Affairs for AT&T. A field hearing like this is a unique experience I think for most of us, and we do appreciate the opportunity to provide a local perspective on the issues before the Committee. Perhaps the main thing I'd like to do today is to lend AT&T's endorsement to Connect Arkansas and EAST labs. And I will talk about that in just a minute.

<sup>1</sup> U.S. Census Bureau, *Current Population Survey: Computer and Internet Use 2003*, special tabulation by the U.S. Department of Commerce. Calculation by The Children's Partnership.

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

First, just a bit about AT&T. We are the state's largest and oldest provider. We've been around for almost 130 years. And while we serve most of the metro areas in the state, we maintain a very significant rural presence. Of AT&T's 102 exchanges across the state, fully 40 of them have less than a thousand access lines. Sixteen have fewer than 500 access lines. One of our exchanges, Arkansas City, has only 100 lines. So we are familiar with the challenges of serving rural Arkansas. This fact-finding hearing comes not a moment too soon. Arkansas must catch up.

Senator Pryor, you said Arkansas ranks 47th in the Nation right now, and that's certainly a challenge for all of us. But there are areas where progress has been made. I think all the presenters can talk about some of their success stories. For AT&T's part, we can also point to progress. We are expanding the availability of our wireline DSL in our footprint. And, in fact, we expect to have all of our exchanges equipped for DSL by the end of next year, 2008. We are also proud of our affiliation with Distance Learning that was mentioned by Ms. Bailey. She covered that, and I won't talk about it in any great detail other than from an educational perspective, we have 80 higher ed sites on that system, and over 300 K through 12 sites. AT&T provides network facilities and maintains network facilities for that system. That is a tremendous asset, I think, to rural Arkansas and to rural school districts.

But as everyone agrees, there is much to be done. And while AT&T is committed to proceeding with its broadband initiatives, we have become convinced that Connect Arkansas may very well hold the key for the most rapid advancement of broadband deployment in the state. With their mapping capabilities in conjunction with EAST, their formation of e-committees, educational efforts, and demand stimulation programs, they hold promise for some benefits that could be substantial and very tangible.

Connect Arkansas, I think, would tell you that they can create over 8,000 jobs in the state and that they can add \$2.6 billion to the state gross domestic product annually. So it's something that we all need to pay attention to. As with all things of that sort, funding is the issue. At least initially, Connect Arkansas will have to operate with private funding only.

So I think Federal funding either from the Congressional side or the FCC side is desperately needed both for Connect Arkansas and for providers. And I know as policymakers, you all have to make decisions about how much money to spend and where it's going to go and to set the priorities. And as you're doing that, please, please remember Arkansas, keep us on your radar screen. If you do fund us, we'll make you proud of the investment. Thanks.

[The prepared statement of Mr. Allis follows:]

PREPARED STATEMENT OF EDWARD K. ALLIS, EXECUTIVE DIRECTOR,  
GOVERNMENTAL AFFAIRS, AT&T ARKANSAS

### **Introduction**

My name is Ed Allis. I am the Executive Director—Governmental Affairs for AT&T in the state of Arkansas. My biographical summary was previously submitted for the record. AT&T extends a warm welcome to Commissioners Adelstein and Copps. A field hearing such as this is a unique experience for those of us involved in the telecommunications industry and all of us are appreciative of this opportunity to provide a local perspective on "The State of Broadband in Arkansas."

AT&T Arkansas traces its roots back to the state's first switchboard in 1879, right here in Little Rock—almost 130 years ago, just 3 years after Alexander Graham Bell invented the telephone. Today, AT&T is the state's oldest and largest provider; serving 102 local exchanges across the state. In addition to landline service, we offer high-speed broadband Internet access, wireless and satellite TV service to communities large and small. AT&T's commitment to rural Arkansas should be apparent.

This fact finding hearing comes not a moment too soon. Along with most others from whom you will hear today, AT&T considers the timing critical for Arkansas' future. I believe we have come to recognize that we are in a race, not just with other states—but with other nations as well. Simply stated, Arkansas must first catch up before it can surpass others. By now you are aware of Connect Arkansas and the broadband data collection activities in which it has engaged. According to Connect Arkansas, Arkansas ranks:

- 47th in the deployment of broadband.
- 49th in the percentage of the population online.
- 41st in the percentage of farmers using computers online.
- 30th in the use of information technology to deliver state government services.

Despite those statistics, the Committee should note that Arkansas has made significant progress in bringing technology to rural parts of the state. Some of the presenters today have outlined some of that progress in their areas of knowledge or will shortly.

#### **AT&T**

For its part, AT&T has demonstrated a fundamental commitment to rural America and rural Arkansas in a number of ways. While there may be some that believe AT&T is a company that provides telecommunications services only to urban areas of the country, that's simply not the case. In fact, AT&T is the single largest provider of telephone service to rural America—we serve over 7 million rural customers.

In Arkansas, of AT&T's 102 exchanges, 57 have fewer than 3,000 access lines; 40 have fewer than 1,000 access lines and 16 have fewer than 500. One exchange, Arkansas City, has just 100 access lines. Beyond doubt, AT&T is a rural provider in Arkansas and across America and has demonstrated a commitment to those areas.

For example, in the past 2 years AT&T has contributed grants of \$4.6M to support the needs of various rural communities throughout the country. It is expanding the availability of broadband over satellite (provided by WildBlue) across its 22 state wireline footprint. At the same time, AT&T has deployed additional wireline broadband in Arkansas this year and plans additional deployment in 2008. AT&T anticipates that every Arkansas exchange will have broadband capability by the end of 2008.

In Arkansas, AT&T is particularly proud of its involvement in distance learning. AT&T provides and maintains network facilities used by the State of Arkansas for VNet, a fully interactive video conferencing network used for education, healthcare and state government. There are approximately 520 interactive video sites on VNet, including:

- 78 higher education.
- 301 Kindergarten through grade 12.

Usage has grown to over 20,000 conference hours per month. More than 400 courses are being taught using the technology, giving students access to an enriched curriculum and college preparatory courses and providing professional development opportunities and instructional resources for teachers and administrators. Both AT&T and the state have garnered numerous awards for VNet.

AT&T was one of the first major providers to commercially launch fixed wireless broadband using wireless and other technologies. Fixed wireless offers the potential to deliver broadband Internet to areas where wireline high-speed Internet or cable modem services are not available today.

Setting aside the consumer segment for a moment it should be noted that regardless of location, most businesses in Arkansas generally have access to high-speed Internet access. Through high capacity facilities, even remotely located businesses generally can obtain high-speed Internet access, but it's at prices that only a business can reasonably be expected to pay.

Yet, despite the strides that have been made there is still much to be done. If the provision of broadband in rural Arkansas was easy, it would be there today. However, significant hurdles stand in the way in many areas. That's why AT&T is

committed to helping to develop collaborative, innovative solutions at both the state and local level.

While AT&T intends to continue its pursuit of its own broadband initiatives, AT&T is convinced that Connect Arkansas holds the key for the most rapid acceleration of broadband deployment by all providers.

#### **Connect Arkansas**

Connect Arkansas is an entity that is uniquely equipped to coordinate all of the various resources in the state for a common purpose.

It is common knowledge that Connect Arkansas has used ConnectKentucky as a model. There are good reasons for this as statistics from Kentucky demonstrate.

Before ConnectKentucky, approximately 60 percent of that state had access to broadband service. Today:

- Over 93 percent of the state has broadband access.
- Over \$600M of private capital has been invested in broadband related telecommunications.
- Broadband usage has increased by a nation leading 73 percent.
- ConnectKentucky anticipates the creation of over 15,000 jobs and the addition of over \$5B to the Gross State Product annually.

Connect Arkansas was established by Act 604 (sponsored by Senator Capps) passed by the 86th General Assembly earlier this year. Among other things it is designed to map broadband availability in Arkansas and stimulate demand through education of users regarding the benefits of broadband. Much of this education will be coordinated through county officials and volunteers. Since Connect Arkansas is a private non-profit entity, it will be able to enter into non-disclosure agreements with all providers so that proprietary competitive data can be collected and analyzed. That will be a key component of the mapping process.

Connect Arkansas' efforts will be technology neutral. Recommendations and proposals for individual underserved areas of rural Arkansas may depend on an analysis of which technology appears to be most suitable. While an approach like this will require extraordinary cooperation among all participants, it is a cornerstone of the Connect Arkansas program and inherent in Act 604.

If Connect Arkansas is successful, the state as a whole will reap substantial and tangible benefits. Connect Arkansas has estimated that 8,200 jobs will be created and over \$2.6B will be added to the Gross State Product annually.

#### **Funding**

For the time being Connect Arkansas is without the public funding that could be used for educating consumers, establishing e-committees and training county officials, providing grants, etc. The initial source of funding must come from private sources and perhaps state government agencies and educational institutions that have the available resources.

Ideally, Connect Arkansas would be funded through a tri-partite partnership of Federal funds, state funds and private funding. While the Arkansas General Assembly will likely be asked to make state funding available in the future, it will be helpful if sources of Federal funds could be found. All of the involved parties in Connect Arkansas would be willing to work with Senator Pryor's office and other members of the Committee in order to facilitate an investment of this type in Arkansas' future.

The FCC as well has the capacity to influence the economic future of this state. In July of this year, AT&T submitted an *ex parte* presentation to the FCC in which it suggested a pilot project designed to accelerate the deployment of broadband to rural America. It would provide funding on a technology neutral basis while long term reform of the Federal Universal Service Fund is being debated. Additional information regarding the pilot project is being submitted to the Committee for inclusion into the record.

#### **Long Term**

If all of the collaborative efforts planned for the state come to fruition and broadband becomes a reality in all parts of rural Arkansas, what we will have is a beginning—an important beginning. It will be a first step; but, the reason you take a first step is so you can take additional steps. We must not lose sight of the long term needs of Arkansans. More bandwidth and more availability is inextricably tied to Arkansans' ability to compete for economic development, jobs, educational opportunities and a quality of life that Arkansans deserve.

Commissioner ADELSTEIN. I know that AT&T's making a lot of efforts nationwide to upgrade your infrastructure to be able to carry video to provide some badly-needed competition to cable, I wonder how is that going here in Arkansas for AT&T?

Mr. ALLIS. We are—Commissioner Adelstein, we have made a lot of progress in securing agreements with individual cities and municipalities. Deployment of the U-verse technology and the provision of the service, we are still a number of months away from that, but I think next year you'll see it take off.

Senator PRYOR. Thank you. Mr. Waits?

**STATEMENT OF R. PAUL WAITS, PRESIDENT,  
RITTER COMMUNICATIONS**

Mr. WAITS. My name is Paul Waits, the president of Ritter Communications out of Jonesboro, Arkansas. We must be a relatively newcomer to the state compared to Ed here.

[Laughter.]

Mr. WAITS. We've only been in the telephone business here 101 years. The world is flat, and it's getting flatter. The Internet has indeed leveled the field of play, if one is connected to that field. And I think that has been the point that has been reiterated across the panel so far. If you're a wireline company like us, broadband is your future. It is the business we are in, and we must be totally committed to. We totally agree, too, that there is a linkage that's growing stronger between broadband access to the public Internet and economic health, as well as vitality across all spectrums of human interaction, collaboration, education, medical care, governmental services, creative endeavors, as well as business communications.

We, too, appreciate the fact that you are here having this hearing, a step toward necessary and lucid assessment of availability and need. We agree with the comments to expand the definition of dial tone, a basic service, to include broadband access, to create an expanded focus for the universal service fund, but one that targets high-cost areas, based on the cost to serve those areas. We also would encourage the Commission if it does so, to recognize an evolving definition of broadband.

Prognosticators in our industry predict that by 2012, broadband would be defined as 100 megabits per second, not 200 kilobits per second. The big driver behind that, of course, is video and the emerging forms of communication and collaboration that are evolving at a very rapid pace. Our company serves some very, very rural areas of the state, some throbbing metropolises like Jasper, Osage, Alpena, Western Grove, the mountainous area. We also serve some very depressed areas in the state in the East of I-55, as they say. Our coverage though is pretty strong. Ninety percent of our very rural residents have access to broadband. Ninety-eight percent are incumbent telephone company customers that have access to broadband. A hundred percent of our cable customers have access to broadband. We are as large in cable TV as we are in incumbent telephone services. We also have CLEC.

And we also share in wireless partnerships with Alltel. That makes us a bit bipolar when we consider what our position is on some issues.



[Laughter.]

Mr. WAITS. Alltel solved their problem. They divested part of it.

[Laughter.]

Mr. WAITS. We don't have such a luxury. We still have to weigh these issues internally. And I guess the parting words we have in that regard, to try to keep my comments brief, is that as we weigh those issues internally, we discover that if we look beyond the pecuniary interests, and look at the customers and what's in their long-term interests, the different segments of customers, they provide a pretty good guide to us as for what's in our long-term business interests. So that would be our best advice to policymakers to look beyond pecuniary interests and the short-term shrill needs of publicly-traded stockholders, and look to the long-term needs, assessed lucidly, of their customers. Thank you.

[The prepared statement of Mr. Waits follows:]

PREPARED STATEMENT OF R. PAUL WAITS, PRESIDENT, RITTER COMMUNICATIONS

#### **Introduction**

My name is Paul Waits. I am President of Ritter Communications, based in Jonesboro, Arkansas, and I manage a company that provides a wide variety of communications services across Northeast and North Central Arkansas. On behalf of our company and our communities, we welcome Commissioners Adelstein and Copps, and are encouraged by the interest this hearing reflects regarding the future of broadband services in Arkansas.

#### **Ritter Communications**

Last year, Ritter Communications celebrated its 100-year anniversary as a telephone company, having its roots in providing basic telephone service in Poinsett and Mississippi Counties. Since that time, the company has grown and diversified, and presently owns and operates other incumbent telephone operations in Boone and Newton Counties, cable TV franchises across Northeast and North Central Arkansas, competitive communications and business integration services in Jonesboro, as well as a number of wireless partnerships with Alltel. All of these varied business interests are sufficient in scale to cause us to weigh among and balance competing interests internal to our company, *e.g.*, cable versus telephone, wireless versus wireline, in formulating and advocating positions on policy issues. We think this puts us in a unique position to offer observations and recommendations that balance such disparate interests.

In the context of the current availability and future of broadband services, our greatest concern is the needs of the most rural areas we serve, specifically the sparsely-populated areas of Newton and Boone Counties, and the rural agricultural communities of Northeast Arkansas. Some of these areas present extraordinary economic challenges related directly to the cost of deployment, as well as the general level of computer literacy and ownership. We estimate that we have the capability to provide high-speed Internet access services to about 90 percent of our telephone company customers in the mountainous areas of North Central Arkansas, and about 98 percent of our telephone company subscribers in Northeast Arkansas. All central offices and remote terminals are equipped with DSL technology, but distance limits of DSL prevent availability to the most remote customers. In our cable TV areas, we can provide high-speed Internet access to virtually 100 percent of the homes passed in these hybrid fiber-coax systems. The percentage is greater for cable because such systems typically do not extend to areas with low subscriber density.

#### **Universal Broadband Service**

As a nation, we have virtually achieved universal telephone service as a direct result of the long-standing public policy of promoting universal telephone service through implicit and explicit rate averaging across the country. Governmental programs such as the Federal Universal Service Fund (Fund) have been instrumental in supporting the investment required for rural telephone services, and such is still needed for many areas too sparsely populated to economically justify either wireline or wireless coverage. To get a first-hand view of the rural needs and challenges, we invite and would welcome members of the Committee to tour our rural service areas.

Today, high-speed Internet access is fast becoming indispensable to basic communications and commerce, just as the telephone has been for many decades. This is true across all spectrums of human interaction, including education, medical care, governmental services, creative endeavors, as well as business communications and collaboration. We believe the FCC and Congress must take the first step to affirm a new, expanded policy of universal service, one that defines basic service to include broadband access to the public Internet.

In doing so, we must be careful not to legislate an Internet access speed, *i.e.*, not to cast in bureaucratic stone the definition of what we mean as broadband. Instead, we should allow the definition of broadband to evolve as technology and its application evolves. Internet video applications that are emerging at a rapid pace will fuel consumer demand for faster connections, just as distributed computing and software hosting will drive demand for faster, more reliable connections for businesses large and small.

In recent years, Ritter Communications has been deploying fiber-to-the-premise services to the medical community in Jonesboro, in direct response to demand for very high bandwidth to support video applications used for remote diagnostics. The gigabit-per-second level bandwidth required could only be provided today by direct fiber connections, since wireless and other wireline technologies lack this ability. We believe this trend will continue and extend to other business applications and activities, and there will be a diverging standard that will emerge between mobile and fixed technologies in recognition of the limitations of mobile technologies to support high-definition video applications.

### **Funding**

We believe that current Federal funding for universal service is in jeopardy, and warrants reformation to ensure sustainable and predictable support for rural communications services, which is rendered more imperative by the need to expand such funding for broadband access services. The amount of funding for rural support is eroding as the base for such support is attriting because of the transition, ironically, to Internet-based telephony, which does not collect universal service fund fees. Support for rural carriers is also adversely affected by the transition of telephony minutes and access services from wireline to wireless services, which do not contribute support in the form of carrier access charges. It is imperative that the FCC focus on these issues to ensure that rates and services are, in the words of the Telecom Reform Act of 1996, "reasonably comparable between urban and rural areas of the Nation."

We consider it unfortunate that the Federal universal service program has become a political target because of some confusion regarding its purpose, *e.g.*, whether its mission is to promote rural competition, and/or to provide for comparable rural services and rates in high cost areas. These twin goals are now at odds. The fund has grown in scale and scope to the point that there is a growing concern that it should be better targeted to the needs of the rural public. We share this concern. This will be particularly true if the fund is transitioned to promote and support the funding of rural broadband services. In this context, we believe the identical support rule, allowing competitive carriers to receive support based on the incumbent carrier's costs, has created some burdens on the fund, with questionable benefits for the public. Although some of Ritter Communications' business interests benefit from this rule, we are concerned about the long-term sustainability of the Fund, and the continued viability of the most rural areas of the State of Arkansas. We believe a better long-term policy is to continue to target high cost areas, with funding solutions based on each provider's actual costs to serve those areas.

### **Conclusion**

We are indeed encouraged by the interest this hearing represents, and share a concern regarding the need for a proactive policy on the assessment and support of broadband services, especially in the most rural areas of the state. As a company actively engaged in providing broadband services in a wide variety of locales, using a variety of technologies, to a broad mix of customers and customer types, we believe we have some unique perspectives to offer to this conversation.

We respectfully recommend that Federal policy first be augmented to redefine and expand basic service to include broadband access services. In the pursuit of this goal, such policy should provide for an evolving definition of broadband access services, and that policy's primary focus should be to ensure, at a minimum, that the most rural, high-cost areas of the state are not left out of the digital age.

Senator PRYOR. Thank you. Ms. Cunningham?

**STATEMENT OF MARYCE CUNNINGHAM, SECRETARY,  
ARKANSAS BROADBAND ADVISORY COUNCIL;  
GOVERNMENT RELATIONS MANAGER, MIDSOUTH REGION,  
SUDDENLINK COMMUNICATIONS**

Ms. CUNNINGHAM. Thank you, Senator. My name is Maryce Cunningham. I am the Secretary of the Arkansas Broadband Advisory Council and the Government Affairs Manager for the MidSouth Region of Suddenlink Communications. Our 276 Arkansas employees take great pride in offering broadband and other advanced services to secondary markets in rural communities in Arkansas from the size of Jonesboro to College City with fewer than 300 residents.

However, despite our best efforts to take broadband to the state's smallest communities, we know there are still some areas with no broadband service, and these typically have only a few dozen residents and very low population densities. To take broadband to them, several things need to be done. In our extended testimony for the record, Suddenlink suggests four steps for your consideration. In our limited time today, I'll address two of those.

The first step is to develop a comprehensive map, which has been mentioned so many times today, where broadband service is available in Arkansas and where it is not. As Senator Pryor knows, Congress is considering a national broadband mapping bill. Meanwhile, in West Virginia the state government is marshaling resources to produce a detailed map of the availability of broadband there. We believe such an effort is likewise critical in Arkansas so that any future resources devoted to the issue here can be productively focused.

The second step is to make sure that private enterprises which have already worked hard to take broadband to rural Arkansas, have a fair and level playing field to continue their efforts. Our companies market power is dwarfed by certain entities with which we are required to negotiate.

In that environment, the electrical cooperatives are threatening to charge exorbitant pole rental fees, while large media conglomerates are threatening excessive retransmission consent fees. And if realized, these threats will divert funds that could otherwise be used for additional broadband deployments. Accordingly, we and others recommend policies that inject public interest goals like the extension of broadband to rural areas into these market processes like retransmission consent, and pole attachment negotiations. Especially where these negotiations are controlled by powerful entities with economic interests that may frustrate or hinder the public interest.

Again, I offer more detail on these and other steps in the written testimony that we provided for the record. And in the interest of time, I'll conclude my remarks by expressing our gratitude to Senator Pryor and his staff, to Commissioners Copps and Adelstein and their staffs. And thank you for being here, and allowing us to participate in this hearing today.

[The prepared statement of Ms. Cunningham follows:]

PREPARED STATEMENT OF MARYCE CUNNINGHAM, SECRETARY, ARKANSAS BROADBAND  
ADVISORY COUNCIL AND GOVERNMENT RELATIONS MANAGER, MIDSOUTH REGION,  
SUDDENLINK COMMUNICATIONS

Thank you, Mr. Chairman. My name is Maryce Cunningham. I'm both the Secretary of the Arkansas Broadband Advisory Council and the Government Relations Manager for the MidSouth Region of Suddenlink Communications. This region of our company includes the state of Arkansas, of which I'm delighted to be a resident, along with 275 of my Suddenlink colleagues.

Suddenlink is a top 10 U.S. operator of cable broadband systems. We support the information, communication, and entertainment needs of approximately 1.4 million total customers across the country, roughly 9 percent of which are in Arkansas.

Here, as elsewhere, our employees take great pride in serving secondary markets and rural communities. We are equally proud that, in a growing number of those communities, we offer advanced services that are comparable to what you would find in the largest metropolitan areas, such as digital TV, competitive phone service, and of course, high-speed Internet or broadband service.

In fact, Suddenlink's story is the story of how private enterprise has *already* done a great deal to close much of the digital divide that separates smaller communities from urban centers.

In early 2003, our management team took over the operation of what was then known as Classic Communications. At the time, roughly 30 percent of the company's customers had access to broadband service. By 2005, we had more than doubled that percentage. And today, we are at 99 percent, rapidly moving to 100 percent, covering markets all the way from Jonesboro with 60,000 residents to College City in Lawrence County, with a population of fewer than 300 people.

All told, counting our past and current operations in Arkansas, we and our predecessors have invested nearly \$225 million in this state since 2003, to help take broadband to areas where it previously was not.

And we're not finished yet: Even as I speak, we're rolling out lightning-fast connections to mid-size and smaller markets alike, offering download speeds of up to 10 megabits per second (Mbps). Until now, those speeds were unheard of outside the largest metro areas.

As demonstrated by this list of accomplishments, our collective effort to bring broadband to Rural America is indeed a success story of the first degree, for both our company *and* our industry. *However*, we recognize that—as much as our industry has already done to connect Rural Arkansas—there are areas of the state that still do *not* have broadband access.

Furthermore, it is our impression, based on our experience in serving secondary and rural markets, that the remaining, unconnected areas of the state—by and large—do *not* have populations of several thousand or even several hundred people. To the contrary: Today's unconnected communities typically have only a few dozen people living in them, with population densities that are often 10 homes per mile or less.

To reach those areas, we believe several things need to be done.

The first and most important step is to develop a comprehensive map of precisely where broadband service is available in Arkansas and where it is not. We understand the data maintained by the FCC only looks at zip codes and that it designates a zip code as “served,” even if only *one home* in that zip code has broadband available to it. Unfortunately, in geographically large and sparsely populated zip codes, such data is not useful.

Accordingly, as Senator Pryor knows, Congress is considering a national broadband mapping bill, which was recently passed out of the Senate Commerce Committee. Meanwhile, in West Virginia—home to Senator Pryor's senior colleague on the Commerce Committee, Senator Rockefeller; and *also home* to more than 600 Suddenlink employees and more than 200,000 Suddenlink customers—the state government is currently marshalling resources to produce a detailed map of the availability of broadband there.

In short, mapping efforts have both precedent and momentum, and we believe such an effort is critical in Arkansas, *so that* any future resources devoted to the issue here can be most productively targeted.

We further believe such mapping efforts should help determine home-PC penetration in rural areas, *in addition to* the availability of broadband services. Current data suggest that PC penetration is often quite low in rural and economically depressed areas and thus broader-scale efforts may be needed to help lower-income families secure a home computer *before* broadband service is relevant to them.

After broadband mapping, we believe the second critical step is to make sure private enterprises like our company—which have already done much to take

broadband service to Rural Arkansas—have a fair and level playing field on which to continue our efforts.

Despite Suddenlink's rank among the top 10 U.S. cable operators, we remain a relatively small company and our market power is dwarfed by several entities with which we are required to negotiate contracts, including electric cooperatives and media conglomerates.

Without government intervention, the electric cooperatives have made it very clear they will charge exorbitant pole-rental fees, tripling if not quadrupling our costs. The result: Our company and others will have less capital to deploy broadband to remote areas.

On a similar note, without government intervention, large media conglomerates have made it clear they will continue to seek excessive retransmission-consent fees, likewise diverting funds that could otherwise be used for broadband deployment.

At our current size, Suddenlink does not have the negotiating leverage to resist those threats and the resulting diversion of precious resources.

In short, we need the careful application of government programs that *inject* public-interest goals, like extension of broadband to rural areas, *into* market processes like retransmission-consent and pole-attachment negotiations. That is especially true when these negotiations are effectively controlled by large, powerful entities with clear economic interests that will frustrate or hinder the public interest by significantly driving up the costs of broadband providers as they seek to extend service into areas of low-population density.

The third step in the process is to carefully review technology alternatives. For instance, ours is primarily a *wireline* business, but we recognize that *wireline* broadband will not always be the most economical option for reaching the most remote and rural areas. Instead, *wireless* broadband (over licensed spectrum) may ultimately represent the best combination of reliability and economics to reach those areas.

Fourth and finally, we believe the process of bridging the last span of the digital divide will involve carefully targeted government subsidies—subsidies that rely on the aforementioned maps and analysis of alternative technologies.

In making this recommendation, I want to be very clear: We do *not* believe subsidies should be granted in the form of low-cost loans. At low-population, low-density levels, it's all-but-impossible for a broadband company to develop a viable business plan, even with the most favorable loan terms.

That's a lesson the U.S. Department of Agriculture's Rural Utilities Service (or RUS) has learned the hard way. Directed by Congress to prioritize low-cost broadband loans to companies that propose extending service to *un-served* areas, the RUS has received very few loan applications from those areas.

Why? Because the loan applicants, even on preferential, cost-of-money terms, cannot develop a viable business model that would allow them to pay back the money. *Instead*, the RUS has received and approved loans to companies that propose to serve areas where broadband is *already* available, often from three or more incumbent providers, defeating the purpose of the original legislation.

For that reason, we believe the process of closing the final inches of the digital divide will require *direct* government support. *That said*, knowing government funds are scarce, I want to reiterate that a broadband subsidy program should *not* be designed until the prior steps I've discussed (such as the mapping project) are undertaken. Only then can we ensure that subsidies are carefully and appropriately targeted to the few remaining areas with no service option.

Thank you for your time, today. We look forward to working with our peers on the Arkansas Broadband Advisory Council, Senator Pryor and his staff, Commissioners Copps and Adelstein and their respective staff, and others to carefully examine and act upon these and similar recommendations.

Senator PRYOR. Thank you. Mr. Jones?

**STATEMENT OF JOHN F. JONES, VICE PRESIDENT,  
REGULATORY AND GOVERNMENT RELATIONS,  
CENTURYTEL, INC.**

Mr. JONES. Being at this end of the table, I'm reminded by something Commissioner Adelstein told a group of us when we were debating inter-carrier compensation reform with about 40 of us in the room, and he said: Everything about this subject has been said. It's just everyone has not said it yet.

[Laughter.]

Mr. JONES. Good morning. My name is John Jones, and I'm Vice President of Regulatory and Government Relations for CenturyTel. I appreciate the opportunity to testify today, and I think that hearings like this are both timely and important, as all of us grapple with advancing technologies and customer demands. You'll find that despite many commonalities associated with broadband deployment, each state also has challenges, opportunities, and characteristics unique to their population and geography.

In 2000, CenturyTel purchased more than 200,000 access lines in Arkansas from what was then GTE. Since that time, our company has invested approximately \$1 billion in infrastructure to bring broadband services to these markets, where before, they had very few options like that. Today, we serve approximately 220,000 customers, and 82 percent of those customers have broadband availability.

In Arkansas and mostly rural markets in 24 other states, CenturyTel is introducing a variety of new broadband services at speeds up to ten megabits per second. We're delivering those services with our core wireline network and alternative broadband access technologies such as mesh Wi-Fi hot spots and point-to-point wireless broadband into strategic areas. As part of our testimony today, we want to leave you with three key points relating to providing broadband to rural areas.

Number one, in rural markets, affordability, lack of customer density, and PC availability are the biggest obstacles to increased broadband's subscribership.

Number two, reaching the remaining unserved customers in rural markets that do not have broadband today would require significant additional investment.

And number three, efforts by the Joint Board and FCC to stabilize the Universal Service Fund are critical to a long-term viability of the Fund, and consequently the goal of universal broadband access for all.

In most of our operating states, we are working with our state governments to identify broadband challenges, and engaging in public/private partnerships, such as Connected Nation and Connect Arkansas, to help all providers to deploy in unserved areas. We believe customer broadband expectations revolve around faster speeds, lower prices, and competitive service bundles. Also, we've seen some really great success stories out of this state in areas like Forks, Washington, that lost its economy due to the timber business and reinvented itself with broadband connectivity and Bayou La Batre, Alabama, which was cleaned off the map by Hurricane Katrina, and bringing broadband to that area and how they in two short years have basically put themselves back on the map through economic development and broadband outreach.

In closing, CenturyTel believes that rural customers are speaking loudly about what their telecom needs are. It is not necessarily about wireless or wireline voice service because, they have that in most of the cases. It's about broadband, affordable broadband, and faster broadband. We look forward to working with other Arkansas stakeholders to strengthen the link between broadband availability and broadband subscribership, and continue in meeting their evolv-

ing telecom needs for Arkansas citizens. And, again, I thank you so much for inviting us here today, and appreciate the opportunity. [The prepared statement of Mr. Jones follows:]

PREPARED STATEMENT OF JOHN F. JONES, VICE PRESIDENT, REGULATORY AND GOVERNMENT RELATIONS, CENTURYTEL, INC.

Senator Pryor and distinguished guests, my name is John Jones, and I am Vice President of Regulatory and Government Relations for CenturyTel, Inc. I submit this testimony as part of the above referenced proceeding, and thank you for allowing our company to participate. We believe hearings of this type are both timely and important as the industry works to keep pace with evolving technologies and an ever-changing marketplace. You will find that despite many commonalities associated with broadband deployment, each state also has challenges, opportunities and characteristics unique to their population and geographic area.

In 2000, CenturyTel purchased more than 200,000 access lines in Arkansas from what was then GTE. Since that time, our company has invested approximately \$1 billion in this state and located our Southeast Regional Office in Cabot. The changes we brought to the former GTE customers from a telecommunications perspective were dramatic. In nine short months, we intensified efforts and through a disciplined investment strategy brought broadband and dial-up Internet services to rural markets that had few if any such options. Today, CenturyTel serves approximately 220,000 customers in the State of Arkansas, with more than 82 percent having access to DSL services.

In Arkansas and in various rural markets in 24 states, CenturyTel is introducing new services such as broadband TV, personalized broadband content and broadband access speeds up to 10 Mbps. In addition, we are deploying alternative broadband access technologies such as mesh Wi-Fi "hot spots" or "hot zones" and "point-to-point" wireless broadband in strategic areas.

As part of our testimony today, we want to leave you with three key points relating to providing broadband in rural areas:

1. In rural markets, affordability, a lack of customer density and PC availability are the biggest obstacles to increased broadband penetration;
2. Reaching the remaining unserved customers in rural markets that do not have broadband today will require significant investment and cost, with few, if any, business cases to support that investment; and
3. Efforts by the Joint Board and FCC to stabilize the universal service fund are critical to the long-term vitality of the fund and, consequently, the goal of universal broadband access for all Americans. Americans in all parts of the country are sending the message that their telecom and economic future depends on robust broadband deployment. In the years ahead, global economic competition will require increasingly sophisticated networks that deliver unprecedented levels of speed at much lower costs. Reform of USF must account for this central public policy goal.

In most of our operating states, we are seeing an increasing interest in "last mile" broadband solutions. Like other providers, we are working with our state governments to identify broadband challenges and engaging in public-private partnerships, such as Connected Nation and Connect Arkansas, to help all providers deploy in unserved areas. We believe customer broadband expectations revolve around faster speeds, lower prices and competitive service bundles. It is our view that with the doubling of Internet traffic every year, capacity and speed will be the key differentiators as the high-speed data market continues to evolve and be driven by customer demand.

As you know, broadband connections and the services they deliver will be the core strategic product for our future growth. Eventually, all voice, data and entertainment services will ride the broadband pipe. Also, from a consumer acquisition and retention perspective, broadband is becoming the consumer linchpin for the bundling, pricing and marketing of other services. To that end, price and speed are becoming the key drivers of customer demand.

Despite remarkable success in deploying broadband services in some very rural areas, subscribership rates in rural markets remain relatively low because of issues with affordability and PC availability. The main point I want to make about this is that even though a customer in a rural market has broadband available to them, other important factors will ultimately impact their decision on whether to become a broadband subscriber or not.

CenturyTel recognizes that deploying broadband to the remaining unserved or underserved areas will be an expensive undertaking. If the Nation's telecom policy goal should become ubiquitous or nearly ubiquitous broadband availability, ultimately some form of broadband support will be needed to help offset the cost drivers for rural service. There are several categories of costs that CenturyTel believes are not addressed today.

As an example, most of the monthly recurring inter-office transport and backhaul costs between rural local exchange areas and the nearest tandem switch or urban Internet access point, which may be hundreds of miles away, are not expressly covered by the Federal high-cost programs today. This backhaul infrastructure is also relied upon by ISPs, wireless providers, VoIP providers and others sending traffic to or receiving traffic from rural customers.

CenturyTel believes that targeted universal service funding for the highest cost areas will be needed in conjunction with other support mechanisms such as grants, tax investment incentives and low interest loans. Regardless of the funding source established, the key will be to properly define what is meant by "broadband" and "support for broadband" on the front end of the process. In light of the rapid technological changes taking place, the new definition must be flexible to accommodate evolving technology. Therefore, it will be important for policymakers to revisit and update the standard periodically in order to keep affordable bandwidth speeds in rural areas comparable to those in urban areas.

This hearing today would not be as worthwhile if the witnesses did not offer potential solutions to help expand the availability of advanced services into underserved and unserved areas. CenturyTel believes that a limited, but clearly defined, separate broadband *program* for unserved high-cost areas would be a good first step. Funding for such a program might come from the restructure of some existing USF elements. For example, limiting support to only one wireless CETC per market should produce significant savings. In addition, we support the recent Federal-State Joint Board recommendation to place an interim cap on CETC support at 2006 levels. This recommendation is a logical and rational first step toward meaningful reform.

I want to leave you with a broadband success story from Mountain Home, Arkansas. Miles and Michelle Riley moved from Mississippi to Arkansas in 1998 to start a small family business offering guided hunting, fishing and nature trips on the White and Buffalo Rivers to customers from around the Nation. CenturyTel installed high-speed Internet at the Riley's remote location shortly before Memorial Day in 2005. Since that time, the Rileys have basically remained booked solid and can offer their customers the ability to book their guided outings via the Internet and check their e-mail and stay connected to their business via a wireless router. The Rileys maintain they could not maintain their business at the level they do without the broadband connection. This is just one example of the tremendous economic impact broadband can bring to rural America.

In closing, CenturyTel believes that rural consumers are speaking loudly about what their telecom needs are. It is not about wireless or wireline voice service because they have that in most cases. It is about broadband, more broadband and faster broadband. In the years ahead, global economic competition will require increasingly sophisticated networks that deliver unprecedented levels of speed at much lower costs.

We look forward to working with other stakeholders to strengthen the link between broadband availability and subscribership and continue meeting the evolving telecommunications needs of Arkansas citizens.

Again, thank you Senator Pryor for giving us the opportunity to provide input on such an important public policy.

Senator PRYOR. Thank you. Mr. Ashcraft?

**STATEMENT OF GREG ASHCRAFT, CFO,  
SOUTH ARKANSAS TELEPHONE COMPANY**

Mr. ASHCRAFT. Senator and Commissioners, thank you for bringing the field hearing to Arkansas. I appreciate it. And thank you for the opportunity to speak before the Committee. My name is Greg Ashcraft. I am CFO for South Arkansas Telephone Company. South Arkansas Telephone Company is a rural incumbent local exchange carrier in south Arkansas with 3,900 customers. I'm here today representing South Arkansas Telephone Company and 14



other rural independent telephone companies. These companies understand the importance of broadband to the medical, educational, social, and economical needs of Arkansans and Americans. These companies have been working very hard on the deployment of broadband in their service areas. The following percentages are a year old, but it is evidence of their hard work.

Broadband is available in a hundred percent of the exchanges of these rural ILECs. Broadband is available to 82 percent of the customers of the rural ILECs. And 11 percent of the customers had subscribed to broadband as of a year ago. This level of deployment of broadband has been accomplished due to the dependability, reliability of the revenue stream from the Universal Service Funds and NECA pools. We feel it's important to protect these pools to ensure the availability of broadband to the rural systems in the future. This deployment has also been to some of the most remote and most rural areas of the state of Arkansas.

For instance, South Arkansas Telephone Company has two subscribers per route mile of cable, and the other 14 companies have similar statistics. These companies are working hard in deploying broadband to the remaining 18 percent of the customers. The problem is this last deployment will be the most difficult to accomplish and the most expensive. These companies are dedicated to making broadband available to 100 percent of their customers.

So in closing, the rural telephone companies of Arkansas feel we've made great steps in the deployment of broadband, but there is still work to do. And the last deployment will be the most expensive, most difficult. This is one of the main reasons why we are just as committed to help stabilize the USF, to continue to support broadband through the USF, and to help protect the long-term viability of the USF. Thank you.

[The prepared statement of Mr. Ashcraft follows:]

PREPARED STATEMENT OF GREG ASHCRAFT, CFO,  
SOUTH ARKANSAS TELEPHONE COMPANY

Hello, my name is Greg Ashcraft and I am the CFO for South Arkansas Telephone Company and a member of the Arkansas Broadband Advisory Council. South Arkansas Telephone Company is a small incumbent local exchange carrier (ILEC) in south Arkansas with 3,900 customers. I am here today representing South Arkansas Telephone Company and 14 other small independents that are not represented on this panel. I work closely with these 14 companies on policy development.

The small rural Arkansas telephone companies understand the importance of Broadband to the medical, educational, social and economic needs for rural Arkansans and Americans.

The small telephone companies in Arkansas have worked very hard in recent years to deploy broadband to their customers. Evidence of our work is included in this data that is over a year old:

- Broadband service is available in 100 percent of the exchanges of these companies.
- Broadband had been made available to 82 percent of the total customers of the rural ILECs.
- Approximately 11 percent of the customers of the rural ILECs had subscribed to broadband.

The cost of service is reasonable and the companies are working hard to finish providing broadband to the remaining 18 percent that they had not reached a year ago and to encourage more households to subscribe to broadband service.

The benefit of ILEC broadband service includes:

- the historical reliability of service.
- the community based owners and the adherence of these companies of public service commission customer service rules that protect customers and allow a supervised complaint process in event of dispute.

The broadband available through these small companies is backed-up by power generators and by engineered lines that are programmed to allow alternate facilities to be used to maintain service, in the event of any disaster or attack.

The broadband deployment in these rural companies should be understood as service to some of the most rural areas of Arkansas. For instance South Arkansas Telephone Company has 2 customers per route mile of cable and many of the other 14 companies have similar statistics. The 82 percent availability of broadband is not because of population density, but in spite of population density. This wire-line service has been provided to these rural customers with the reasonable reliability of revenue streams, such as the Federal Universal Service and NECA pools. These services will continue to be provided on a fair, reasonable, affordable and community basis in the coming years. One of the problems is that making broadband available to the remaining 18 percent of these companies customer base will be the most expensive deployment; however the rural ILECs are dedicated to providing 100 percent deployment.

The rural companies are leaders in deploying broadband to rural areas due to the reliability and dependability of Federal Universal Service and NECA pools in the past. It is important that these pools be protected to ensure continued availability of broadband to the rural citizens in the future.

We would urge this Committee to join the efforts of the rural telephone companies in Arkansas, and the efforts of the Joint Board and the FCC, to stabilize the USF, continue to support broadband in the USF and protect the long-term viability of the USF.

Senator PRYOR. Thank you. Mr. Pitcock?

**STATEMENT OF LEN PITCOCK, EXECUTIVE DIRECTOR,  
ARKANSAS CABLE TELECOMMUNICATIONS ASSOCIATION**

Mr. PITCOCK. Thank you, Senator. And welcome again on behalf of all of us. I'm Len Pitcock, the Executive Director of the Arkansas Cable Telecommunications Association. We're headquartered here in Little Rock, and we represent about a dozen of the state's broadband and cable providers. Our membership ranges from some of the countries largest multi-system operators serving our state to some of the smaller family-owned companies with a few hundred subscribers. We also have two municipally-owned cable operators in our membership. Broadband deployment in Arkansas has played a pivotal role in the growth of our industry over the past ten years. Our membership has connected Arkansans to the rest of the world through private investments we've made in our businesses. From the fastest growing metropolitan areas of our state in the northwest to central Arkansas to the smallest communities in the Delta, many Arkansans are taking full advantage of the technology available to them today.

Haynes, Arkansas, is a prime example of the Arkansas cable industries commitment to rural broadband deployment. This small Delta farming community of 187 residents is miles from the nearest population base. Yet cable's investment in the area has resulted in 18 high-speed Internet customers. That's ten percent of the community, and I think that's up for debate whether or not ten percent of the community is a good thing or a bad thing. The broadband investment in Haynes like almost all across the state was made with no government assistance whatsoever.

As I am sure many of you have heard before, the cable industry, it takes great pride to think that we have collectively invested over

\$100 billion in private capital deploying broadband across this country in recent years. Here in Arkansas, we've easily spent a half billion dollars in that same time period. These expenditures result in jobs, tax revenues, and many other economic factors contributing to our state's financial well-being.

This is not to say we're done, however. One Arkansas community without access to broadband is one too many. The cable industry is not and never has been opposed to government incentives for the deployment of broadband. In many cases, we recognize policy measures are the only avenue available to further deploy broadband to portions of the state that might not realize it any other way. Our position has been and remains today that government assistance should be closely monitored and should only be available to areas where no service exists. Government-subsidized competition occurs when incentives are available to providers to deploy broadband in areas that already have it. This is our fear—the availability of tax breaks, low interest loans, and other economic benefits provided by the government for others to enter the market where we've already made private investment, we and others have made private investment.

Broadband deployment in Arkansas is important. We—the cable industry—recognize that we are one of the leading providers of broadband in the state and we take our role very seriously. We were there on the front end, and we will continue to assist Arkansans in our collective, and when I say collective, all of us in this room are collective efforts to be a member of the global community. This concludes my testimony.

[The prepared statement of Mr. Pitcock follows:]

PREPARED STATEMENT OF LEN PITCOCK, EXECUTIVE DIRECTOR,  
ARKANSAS CABLE TELECOMMUNICATIONS ASSOCIATION

I'm Len Pitcock, Executive Director of the Arkansas Cable Telecommunications Association. We are an industry organization comprised of a dozen cable and broadband operators here in the state. Our membership ranges from several of the country's largest multi-system operators, to smaller family-owned companies with a few hundred customers. The Association also has two municipally-owned cable systems included in its membership.

Broadband deployment in Arkansas has played a pivotal role in the growth of our industry over the past 10 years. Our membership has connected Arkansans with the rest of the world through the private investments we've made in our businesses. From the fastest growing metropolitan areas of our state in Northwest and Central Arkansas, to the smallest communities in the Delta, many Arkansans are taking full advantage of the technology available to them today.

Haynes, Arkansas is a prime example of the Arkansas cable industry's commitment to rural broadband deployment. This small Delta farming community of 187 residents is miles from the nearest population base. Yet cable's investment in the area has resulted in 18 high-speed Internet customers. That's 10 percent of the entire community.

The broadband investment in Haynes, Arkansas, like almost all across the state was made with no government assistance whatsoever. As I'm sure many of you have heard before, the cable industry takes great pride in the fact that we have collectively invested over 100 billion dollars in private capital deploying broadband across the country in recent years. Arkansas companies have easily spent over a half billion dollars. These expenditures result in jobs, tax revenues and many other economic factors contributing to our state's financial well being.

This is not to say we are done however. One Arkansas community without access to broadband services is one too many.

The cable industry is not, and never has been, opposed to government incentives for the deployment of broadband. In many cases, we recognize policy measures may be the only avenue available to further deploy broadband to portions of the state

that might not realize it any other way. Our position has been, and remains today, that government assistance should be closely monitored and available only to areas without service. Government subsidized competition occurs when incentives are available to providers to deploy broadband in areas that already have it. This is our fear—the availability of tax breaks, low interest loans, or other economic benefits provided by the government for others to enter the market and compete with those who've already invested there.

Broadband deployment in Arkansas is important. The cable industry of the state takes its role as one of the leading providers very seriously. We were there on the front end and will continue to assist Arkansans in our collective effort to be a member of the global community. This concludes my testimony.

Senator PRYOR. Thank you. Mr. Massaglia?

**STATEMENT OF GARY MASSAGLIA, VICE PRESIDENT AND  
GENERAL MANAGER, COMCAST CORPORATION—ARKANSAS**

Mr. MASSAGLIA. Thank you, Senator and Commissioners. My name is Gary Massaglia. I'm the Vice President of Operations for Comcast Corporation here in Arkansas. We serve basically two geographic areas in the state: around the Little Rock area here and in the West Memphis area up into more of the northeast section of the state. We have over the past years invested about \$60 million as Mr. Pitcock mentioned of privately-raised capital into building our broadband network, so that we can provide all of the products and services that our customers are looking for in those two geographic areas.

As we prepared that network, we have spent that money so that we could bring not only all of our video products but also broadband Internet and now telephony. We're doing this because there is a customer demand in the communities and neighborhoods that we serve. And because of this investment, all of our customers have access to the myriad of products and services. Those include 250 all digital video channels, multiple high definition channels, high-speed Internet, On Demand programming, and now with telephony products also available facilities-based. We offer speeds on our high-speed Internet up to 12 Mbps today. Those are constantly growing, so the investment never stops. We invested that \$60 million as I mentioned, that continues to grow because you have to keep up with the demand for more bandwidth, not only from our residential customers, but also from the business community. What's interesting to think about is just ten years ago, most Americans used dial-up, which we've heard mentioned by some of the students earlier.

Most of us as Americans used dial-up Internet, and we paid expensive per minute charges, and quite frankly, I think we all thought it was pretty neat. Today, we think it's very archaic, so it's amazing how fast that technology is changing and moving forward. The same network as I've mentioned that we've built allows us to offer an alternative to local exchange telephone service, delivering facilities-based broadband choice for telephone. Comcast offers Arkansas customers a digital voice service with a broad array of features and capabilities at very competitive prices. We have invested significantly to bring facilities-based telephone competition to Arkansas, and we are pleased to state that our products and services, digital video, high-speed Internet, and telephone are available to

100 percent of the homes that we pass. That concludes my testimony, and I would be glad to answer any questions.

[The prepared statement of Mr. Massaglia follows:]

PREPARED STATEMENT OF GARY MASSAGLIA, VICE PRESIDENT  
AND GENERAL MANAGER, COMCAST CORPORATION—ARKANSAS

Thank you Mr. Chairman. My name is Gary Massaglia and I'm the Vice President and General Manager for Comcast's cable operations in Arkansas.

We serve approximately 90,000 customers in the Little Rock and West Memphis areas of the state.

My comments today will focus primarily on our experience in offering Broadband to our central Arkansas customers.

Comcast has invested approximately \$60 million dollars in private capital without any government incentives to prepare our network to offer our customers the variety of products and services made capable by a complete Broadband network. This includes a \$6 million dollar state-of-the-art technical center currently being built in Little Rock. We've done this because there is a customer demand in the communities and the neighborhoods we serve.

And because of this investment, all of our customers have access to a myriad of products including:

- Over 250 all digital video channels; multiple High Definition channels with plans to offer many more as quality HD channels become available; over 8,000 different On Demand programs available for our customers to choose what they want to watch, when they want it and start and stop the programs at their convenience.
- Also, as a result of our Broadband network, Comcast customers can experience the best the Internet has to offer. We offer speeds up to 12 Mbps and a very video rich and easy to navigate Comcast portal.
  - What's interesting to think about is that just over 10 years ago, most Americans used dial-up access to the Internet and paid expensive per minute charges for service and received what today would be considered incredibly slow speed and very little content.
- This same network allows Comcast to offer an alternative to local exchange phone service, delivering real facilities based choice to consumers. Comcast offers our Arkansas customers a digital voice service with a broad array of features and capabilities at very competitive prices.

We have invested significantly to bring facilities-based telephone competition to Arkansas and we are very pleased to state that our products and services; digital video, high-speed Internet and our phone service are available to 100 percent of the homes we pass here in central Arkansas. Not one neighborhood is excluded.

Thank you and I will be pleased to answer any questions.

Senator PRYOR. Thank you. Mr. Gibson?

**STATEMENT OF DEAN GIBSON, VICE PRESIDENT,  
OPERATIONS, PINNACLE COMMUNICATIONS**

Mr. GIBSON. Thank you once again, gentlemen, for coming today. We appreciate your time and your effort in making it to our state. I just want to give you a perspective this morning from a family-owned telephone business in Lavaca, Arkansas. In Lavaca, we are a wireline company that has been in business since 1960, and we've been providing quality, we think, telephone services to those customers since that time.

We, today, service over 1,500 customers in rural western Arkansas. And I think two points I'd like to discuss today—one that has been covered quite a bit, the other one maybe that has not. I remember years ago my grandmother would work a switchboard in a home where she and my grandfather lived. And it was one of these things that I just grew up to know. But another thing I grew up to know was this term "carrier of last resort." And I think some-

where in all of this, we've got to remember the fact that during the early days of telephone, as an incumbent local telephone company, we provided service to everyone in our area. No one was left out. Our company, four years ago, decided that with the aging of our copper plant and the demand of the services, advanced services from the people in our community that we were going to deploy a fiber-to-the-home network in our entire exchange. And after three long years and more than 165 miles of fiberoptic cable in the ground, today, at the end of this year, every customer, all 1,500 plus, will have access to a fiberoptic network, which will allow them to have the state-of-the-art services that come, and broadband especially. No longer is dial-up acceptable to people, I don't think, in Arkansas and anywhere else. You might ask the question on how can they afford do that. And I answer that question by those three letters we've heard over and over today, and that's USF.

The Universal Service Fund has provided, along with a NECA of pooling, have provided us the ability to move forward and make this commitment in this investment into Arkansas. And with that, we want to say as Pinnacle Communications, maybe other rural companies, that we applaud the Joint Board's recommendation to put a cap upon the USF until it can be reworked and it can be updated to be something that services everyone who has the need. Like I said, we've been servicing customers in Lavaca since 1961. We depend upon a lot of things to make our business go.

One of that is service to the customer. The other thing is the fact that we rely upon the USF, and we want to see a long-term stable USF. We honestly believe that's a way to deploy broadband to the areas that are high-cost. And we, in closing, think that those customers in the high-cost areas deserve the same products and services that those in the low-cost, urban areas deserve. And that's our mission. Thank you.

[The prepared statement of Mr. Gibson follows:]

PREPARED STATEMENT OF DEAN GIBSON, VICE PRESIDENT, OPERATIONS,  
PINNACLE COMMUNICATIONS

My name is Dean Gibson and I am Vice President of Operations for Pinnacle Communications in Lavaca, Arkansas. Our company provides landline voice and Internet access to over 1,500 customers in rural western Arkansas. In the short time we have today, I would like to focus my comments on two points which I think are important to our discussion today.

My first point is *carrier of last resort*. Pinnacle Communications is a *carrier of last resort*; by that I mean as an incumbent local exchange company (ILEC), Pinnacle Communications is required to provide service to all customers within its exchange boundary. We have applied that policy not only to the telephone services we provide but to our deployment of broadband services. I guess it has just become 'a way of doing business'. If the person closest to the office can receive the service, why shouldn't the customer fifteen (15) miles out be able to receive the service? That is where the old phrase 'easier said than done' comes into play. About 4 years ago, we realized that our aging outside plant needed to be upgraded or replaced if we were going to continue to provide quality, reliable services. Customers in our most rural areas were demanding faster Internet speeds. Dial-up Internet was no longer satisfactory to them. Taking that into consideration along with the fact that Congress, the Governor, and the Arkansas Legislature were all looking for ways to get broadband services to the rural customers, we decided to replace our copper cable system with a state-of-the-art fiber system. It has been a long, tough road but by the end of this year (2007), we will have completed a 'Fiber-to-the-Home' rebuild of our Lavaca, Arkansas exchange. That means that *every* customer in our service area

will be able to receive not only exceptional phone service but high-speed Internet access. You may ask, "How can they afford to do that"? I am glad you ask because that leads me to my second point.

Our decision to make the investment in rural Arkansas, as a carrier of last resort, was based entirely on future NECA settlements and USF support, commitments we rely upon for our company's survival. The purpose of USF is to ensure that Americans in high cost rural areas have communications services comparable to those in low cost areas. *It was never meant to subsidize competition between multiple carriers all providing the same service.* Pinnacle Communications believes the recommendation by the Joint Board to put a cap on the dollars distributed to competitive eligible telecommunications carriers (CETCs) by the USF represents a necessary and responsible step as the FCC and Congress develop a long term solution to stabilize the fund. The Joint Board's recommendation will help bring run-away, excessive funding for CETCs under control, which is indispensable to modernizing the USF. And by the way, wireline companies like mine have had a cap *on the growth* on USF payments for years so we are not advocating something that we do not already have to abide by.

In closing, our company wants desperately to continue to provide our rural customers with the quality services they have been accustomed to since 1961, the year Pinnacle Communications first borrowed money from REA to provide telephone service to areas that, up to that time, had no service. We have undertaken considerable risks, investing in plant and equipment to provide broadband to customers no one else wants to serve because it doesn't fit their business plan. Rural customers in Arkansas and across America need *carriers of last resort* to insure that everyone has access to affordable broadband services. Those carriers can only survive if we protect the long-term viability of the Universal Service Fund.

Commissioner ADELSTEIN. First, I just want to commend you for building a fiber network out in rural Arkansas. I think that's fantastic, and I'm glad to hear that USF helped with that. Of course, it doesn't directly support broadband but we have a "no barriers" policy that allows you to invest in network that can carry broadband. I'm wondering, would it be helpful to you if Universal Service explicitly made broadband a supported service?

Mr. GIBSON. Well, I don't know. In our case, we could see an aging telephone network, and we still believed—because there are places in our service area, believe it or not, that are not serviced by a wireless telephone. And so not only were we allowed to use or able to upgrade broadband into these rural areas, but also the telephony, or the telephone usage, was also upgraded and provided to those areas. So I honestly believe that the USF can be a mechanism of which we can use to help deploy that into those areas.

Senator PRYOR. Ms. Zega?

**STATEMENT OF KELLY HALE ZEGA, STATE MANAGER,  
PUBLIC AFFAIRS, COX COMMUNICATIONS, ARKANSAS**

Ms. ZEGA. Well, I guess I get to wrap this up. One final welcome to Arkansas. We're just so pleased to be able to be part of this dialogue. And so I would like to share a few comments with you. I'm here today representing Cox Communications. And from Green Forest to Fort Smith, Cox Arkansas provides 99 percent of the communities we serve with state-of-the-art broadband fiber technology. Our customers experience a digital world that we believe is second to none in 64 rural and urban towns. And we invest over \$25 million of private-risk capital every year in Arkansas, expanding our bandwidth capacity, and our communications infrastructure, rendering the fastest Internet speeds available to residential and business customers. The philosophy of our 400 Cox Communications Arkansas employees is really to make a difference in the towns

that we serve. Annually, we provide more than 360 free cable connections to K through 12 schools, educational access channels valued at more than \$3.6 million, and we donate over \$1 million in air time every year to nonprofit organizations through PSAs. We don't just limit our consideration to deploying the best in broadband, though. We also are concerned with the appropriate use of that asset. One of the most significant things we do for our communities, truly relates to the grass roots implementation of our national program called Take Charge!, which is an initiative designed to increase customers' awareness and use of the parental controls and content-filtering tools now available for the cable, Internet, and telephone services found in the digital home. This program puts content management into the hands of the individual consumer, allowing them to set the guidelines that they deem appropriate for their own homes.

Our seriousness about helping families navigate the top technology that we provide extends beyond our Take Charge! website, the PSAs that we run, the Internet safety workshops, and partnership that we have with The National Center of Missing and Exploited Children. Cox has also begun forging local, meaningful partnerships with regional law enforcement agencies in support of Internet Crimes Against Children investigative units through two technology grants recently through Cox Communications to support specialized equipment and training. The Fayetteville Police Department has identified, apprehended, and seen multiple Internet child predators successfully sentenced. Each time the news of arrests of this kind becomes public, we know the financial investment that we make to support the ICAC program means that dozens or more young people will be safer from exploitation.

Our employees are proud to know that not only is Cox Communications bringing the world into our customers' homes through our products, but we're also giving critical support to the people who help make that world a little bit safer. Thank you so much for the opportunity to make these comments, and I would be pleased to answer any questions.

[The prepared statement of Ms. Zega follows:]

PREPARED STATEMENT OF KELLY HALE ZEGA, STATE MANAGER, PUBLIC AFFAIRS,  
COX COMMUNICATIONS, ARKANSAS

Mr. Chairman, Senator Pryor, Commissioners Copps and Adelstein, I appear before you today on behalf of Cox Communications. We welcome this dialogue on the The State of Broadband in Arkansas.

From Green Forest to Fort Smith, Cox Arkansas provides 99 percent of the communities we serve with state-of-the-art broadband fiber technology. In short, our customers experience a digital world that is second to none in 64 rural and urban towns. We invest more than 25 million dollars of private risk capital each year in Arkansas expanding our bandwidth capacity and communications infrastructure, rendering the fastest Internet speeds available to residential and business customers.

The philosophy of our 400 Cox Communications Arkansas employees is to make a difference in the towns we serve and in which we live. We provide more than 360 free cable connections to K-12 schools, educational access channels valued at more than \$3.6 million every year, and annually donate over \$1 million in airtime to nonprofit organizations through the broadcast and production of public service announcements.

One of the most significant things we do for our communities relates to the grass roots implementation of our national program *Take Charge!*, an initiative designed to increase customers' awareness and use of the parental controls and content fil-



tering tools now available for the cable television, Internet and telephone services found in a digital home. This program puts the content management of television and Internet into the hands of the individual customer, allowing them to set the guidelines they deem appropriate for their own homes.

Our seriousness about helping families safely navigate the technology we provide extends beyond our information-packed *Take Charge!* website, public service announcements, Internet safety workshops and partnership with the National Center for Missing and Exploited Children. Cox has also begun forging meaningful partnerships with regional law enforcement agencies in support of Internet Crimes Against Children investigative units. Through two initial technology grants from Cox to support specialized equipment and training, the Fayetteville Police Department has identified, apprehended and seen multiple Internet child predators successfully sentenced. Each time the news of an arrest of this kind becomes public, we know the financial investment to support the ICAC program means dozens or more young people will be safer from exploitation. Our employees are proud to know that not only is Cox Communications bringing the world into our customers' homes through our products—we're also giving critical support to the people who make that world a little safer.

Thank you for the opportunity to present these brief comments and I would be pleased to answer questions you may have.

Senator PRYOR. Thank you. This wraps up our statements, and I appreciate all the witnesses for trying their best to stay within the time limits and time constraints that we have. I have a few questions, and I think the Commissioners may have a few questions as well. Let me, if I may, start with you, Mr. Gibson. You mentioned this idea of carrier of last resort. I guess I have a couple of questions there about the idea of carrier of last resort for broadband. That idea includes this concept that no matter what happens at the end of the day, your company has to provide telephone service for people who live in that area.

Mr. GIBSON. Correct.

Senator PRYOR. Do you think that we should adopt a Federal policy that there should be a carrier of last resort status for broadband? Are you willing to go that far? And also you talked about the USF, and basically—essentially you said that you could not have done your investment in the fiber network without USF dollars. Sounds like you just didn't have the revenue locally, to do it because you had to draw from USF to do that, and how important that is, so if you could comment on both of those.

Mr. GIBSON. You know, as we've talked today, a lot of people have said that we're moving from the dial-tone age to the broadband age. And if that is in fact the case, in 1960 when I was only providing telephone service—as a child, my parents were providing at that time service, I guess, to the area, we felt the need for a carrier of last resort so that everyone not only had electrical service, but that everyone in my service area had telephone service. If we're going to move from the dial-tone age to the broadband age, I can see there would be a tie there between those two. And maybe there is a need for there to be someone to provide service to those that are the farthest out that are the highest cost that some of these other wireline people have talked about today that are in the rural mountains and the other areas. So I'm not sure that's not a good idea.

The second part, the USF question that you had is the fact that we couldn't have done it. And we can't sustain it without the USF. If we want these type of services in the rural areas, then there will have to be some help, because those people would pay hundreds

and hundreds of dollars a month to provide the facilities in those areas that we're trying to deploy. And so I think everyone in the room would agree that without some sort of help, whether it's tax incentives or USF money or whatever, that it just won't get done. It just won't, because I can tell you their business plans just won't work it out. There's not a business plan today without an extreme cost to those customers. And that would work.

Senator PRYOR. It's like Mr. Ashcraft said, the last group is the most expensive one. It's easy to come up with a business plan to provide the service in an urban or densely-populated area. But the further you go out, the harder it is to make it work.

Mr. GIBSON. And you know the case about that is, Senator, is the fact that we've spent our money up front. We spent our money. We made the commitment to the people in our communities, and we spent it. And now we rely upon the reliability of that fund to sustain us. And it is, someone mentioned earlier, that it's not only putting it into the ground, it's not only getting it to the house, it's maintaining and keeping that updated to make it effective.

Senator PRYOR. Mr. Waits, let me ask you if I may. You gave some statistics about access that people in your geographical area have access, and they were very strong statistics, but one question I have is the actual adoption by your customers of those services that you offer. And I'm not trying to get into your company's private information or whatever that may be if it's aware that they did this for proprietary, but I am curious about access versus adoption rate generally, and your thoughts on why some people do not access those services. Is it an affordability issue? Is it just a lack of interest issue? If you could talk about that.

Mr. WAITS. My short answer is yes, but would have to say that in really rural mountainous areas—like low income areas like Boone County and Newton County, as I mentioned before, out of the 6,500 access lines that we have and we can make available broadband to 90 percent of them. Our take rate there is probably on the order of 15 percent. Now—

Senator PRYOR. So 15.

Mr. WAITS. Fifteen percent. Now anecdotally we think that's because of low computer ownership, computer literacy. That number has grown, by the way, considerably in just the last 12 months—12 to 18 months, there has been a big spike in DSL demand in those rural areas. Part of it is because there is a different demographic moving into these areas. They're actually growing in the sense that there are people moving from California and other places that want to get a different quality of life in these beautiful mountainous areas around Jasper and the Buffalo River. In east Arkansas, anecdotally speaking, we have 98 percent availability in some of the poor Delta towns, and once again, 10 to 15 percent take rate there. In our cable TV areas, we have 100 percent availability on those we pass and a take rate's probably closer to 40 percent in those areas I can only guess at why I think, there, too, it is dependent upon those areas that have a different socio-economic makeup, lower incomes, lower level of education, typically translated into lower penetration levels for broadband access. But also a very, very high penetration levels for digital TV ironically, being a very cheap form of entertainment.

What we believe though is that there is going to be dramatic change as the delivery of video services evolves over the public Internet. And that entertainment and access to broadband are going to be more and more synonymous. So whatever it is today, we believe it is going to change dramatically or has at least that potential. I'm sure cost is a factor, but I suspect that the demographics, age of the people in these areas and little education in these areas are a part of the factor.

Mr. GARDNER. Senator Pryor, if I could, just to add to that. I can give you some color about our penetration into Arkansas. We cover about 73 percent of our customers in Arkansas. It's a little bit below our national average. It's a less dense state, about 11 access lines per square mile in our property, 28 percent of all of our lines.

So those penetration rates are pretty good, but our experience is it definitely gets to be an affordability issue. As you look at the Nation and the fact that about 50 to 55 percent of our consumers have broadband today, the fact is when you get into this second group, the second 45 percent, you're looking at people who have lower income levels, more challenge from a credit perspective. We've tried repeatedly to make some adjustments to make that more accessible to this group of customers that we need to reach. And I think that's going to be a big issue, and we talk about that a great deal in our testimony, on the affordability issue.

Dr. LOWERY. I want to make a pitch for the fact that we're thinking traditionally about this, and the healthcare stuff hasn't even begun to hit this yet. And as it does, then it changes the demographics dramatically, because now, you're in a situation to where it's not as much about entertainment, it's not as much about computer stuff which old people will probably never do. But they do need health care and they need to have nursing visits in their home, they need to have their medicine adjusted in their home, and these sort of things are right on the doorstep. We're on the doorstep of this stuff, and then the demographics and the economics of the whole things change by this, I think.

Senator PRYOR. Mr. Ford, let me ask you. You mentioned something. You told us to think about three different things, and one of them was mobility in broadband. Could you elaborate on that a little bit? I know we are very limited on time, but could you elaborate on that a little bit, what you mean by mobility in broadband and the way you see the industry moving, technology moving?

Mr. FORD. Yes, sir. I'll be very brief. I think if you look at the questions that we're dealing with today, which is not only accessibility in terms of how do you get facilities in place to reach the consumer, but also provide a bandwidth speed that is appropriate for at least certainly most of the applications that are envisioned for usage today. You're going to see that the cheapest way to deploy broadband is actually through mobility.

Now, the USF is going to have to get resettled. No one's arguing that. When you start to look at what's it really going to cost to provide the next generation of services to rural America, over the next five to ten years, you're going to see that the wireless business is going to be able to provide several hundred "K" data speeds. They're never just physically going to be able to give a hundred

megabytes, so you have to be careful about getting kind of caught up in a definition like that.

But we will be able to provide several hundred “K” of data speeds to the most rural areas in the state. And what we’re trying to fight through right now is what is the right way to take care of commitments to last provider status. And also so that everybody can know that the investments that they’ve made in the wireline business, and this group has all run great wireline businesses across the state. We are blessed. This is kind of the Mecca of rural ILEC companies in the country, and the best-run one in the country is the one Mr. Gardner runs. But the smaller carriers in Arkansas have long histories of a hundred years plus of being able to provide great service here. I think as you look forward, there is a place for protection of their money in USF for the investments that they’ve made. And I think there is also a place particularly because wireless customers now provide almost a third of the Fund.

Well, they don’t provide it through wireless service because they don’t use wireless service, they provide it as a customer of wireless. So customers are moving to wireless. And I think they’re going to expect that subsidy to flow back into the products that they were originally funding the USF from in the first place. And how we wrestle through that is frankly going to take someone with your kind of demeanor that doesn’t get emotionally caught up in it and doesn’t make it partisan to kind of wade through the “puts” and “takes” of how you come up with legislation around that and regulations in the FCC, they propagate, to make sure that nobody gets blown up and that the customers actually get the benefit of what we’re all talking about.

Senator PRYOR. Did you have a question?

Commissioner ADELSTEIN. It’s a follow up to your question. I think that this is just the kind of dialogue that’s needed to bring this group together to talk about an issue of such urgency for the future of the state or all of rural America really. Given this group, among the questions you’ve talked about affordability, we have a certain two themes going through today: There’s availability and how to get it to everybody. And if you do get it out to them, affordability—how do we make sure they can afford it. And what strikes me as a major concern is that if it is more expensive in rural areas, that is a major hurdle where you already have greater poverty issues in the rural part of the state. If the price of broadband is more expensive there, then that’s sort of a double hurdle, and I’m concerned about that. Dominik and I last night talked a little bit about what’s going on in the Delta and some of the problems that you’re having even building out let alone getting people to be able to afford broadband. I’m just curious. Are the prices higher in rural Arkansas than in the urban parts where there is more competition and it’s cheaper to serve and what can we do about that?

Mr. MJARTAN. I can comment a little bit on the pricing. We’ve looked at some prices, for example, in Helena/West Helena the rural area in Phillips County and the prices are about the same as in the more urban areas for the larger providers. But the challenges that we’re seeing is with some of the satellites and that’s maybe what Mr. Ford was talking about in some of the more mo-

bile broadband access Internet via satellite, it's really cost-prohibitive.

So there are some options like that that would be available to a community like Lakeview, Arkansas, but it is cost prohibitive. And we have a lot of experience with low income programs and various asset-building programs. So we have, an idea of what an average family in the Delta can afford to spend a month and when we were looking at the options, we realized very few of them would be able to afford a \$40 a month subscription fee or even \$20 a month, might be cost-prohibitive. Commissioner Adelstein, any other thoughts on pricing and what we can do to make sure prices are—

Mr. WINNINGHAM. I'm sorry. But if I could say, we're only talking about two dimensions of a problem that's got at least three dimensions to it. We could put broadband into the home and organization—of every home and organization in the state, and we would not get the blessings that we want for our state from that. We need to prepare this state to make the most of broadband. We're in a global economic competition with the rest of the world. I have a brother-in-law in his late seventies—there is no age limit, by the way, on the blessings of broadband—in his late seventies. Five years ago I don't think he had ever touched a computer. Now, he's an avid eBay user.

And it's because he had somebody in the family that understood that he could get something at a better price. We need to not only show the people of Arkansas. And broadband is not like a road or it is a little more like electricity. If you want to run electricity to my house and I'd never heard of it before, I don't really care, especially if it's going to cost me money. But if I can understand that it will make the lights stay on after dark, then I can become interested in that. If grandparents can understand that they can communicate with kids in college, if businesses can understand that they can market outside of Arkansas, outside of the United States—if we can prepare people, then we'll get the blessings that we need for the state.

And if we look to—we have a lot of intellect, a lot of understanding of this technology in our state in the form of EAST labs and high school students that grandparents will come to listen to talk about this kind of thing, but preparation is the big part. If we can make people understand the value of it, there will be a lot more broadband around right now. Preparation is the key, and that's got to be followed by deployment, and affordability is also essential.

Mr. GARDNER. If I could on that affordability issue, across our footprint, which I said earlier was 16 states, there are not huge differences, Commissioner, in prices from a more urban area to a more rural area, maybe \$19.99 on the low end in our markets to \$29.99, \$34.99 on the high end. So I think it gets much more to this affordability issue as you'll see big differences in average income across those markets.

Senator PRYOR. Did you have something you wanted to add?

Mr. WAITS. I did. The vehicle we used for many, many years to keep rates and services comparable between urban and rural areas as mandated in the Telecom Reform Act of 1996, was some form

of cost averaging, and we're averaging across urban and rural areas. I think we all have seen the USF or other forms implicitly do that. So if you want to maintain that comparability in services and rates then some form of averaging continues to be required. This idea of a obligation of last resort that we had that we inherited also came with it an exclusive right to serve. And so there may be an option there to reinstate some exclusivity in terms of support and response for some obligations to serve. And that might be a way to more predictably and more reliably enact some form of rate averaging.

Commissioner ADELSTEIN. As long as there is an influential member of Congress here, I think it goes outside the FCC but I learned recently, talked about, if you get broadband to everybody and they're not ready for it, it's not going to make a difference. I learned recently that somewhere in South Korea they provide a computer to anybody for—if they're low income, they go to their local library, and for a dollar or two a month, they can rent a computer. And how much of an issue is it in the lower income areas, people that don't have computers at all, and should the government do more to get computers in the hands of people so they can take advantage of the broadband that is available.

Mr. WINNINGHAM. It's a big issue, again, that the person, the student who has broadband in the home has got several hours a day to use that. The student who has to go somewhere else has got an hour or two if they can get to one of the computers. But there is a difference between computer education and broadband education. Computer education is—you have to have it. But broadband education is what you really have to have to see this state and this Nation spring forth the way it needs to.

Senator PRYOR. Did you have a question?

Commissioner COPPS. Well, this is something you just mentioned that is really going to be a priority of the Connect Arkansas, that is the broadband education.

Mr. WINNINGHAM. Yes, sir. What we need is we need broadband, not just at the end of the street, we need it at the other end of the cotton field if somebody lives there. But we need to help that person understand how to use it. If they don't do that then the demand won't be there. These folks won't be able to provide someone to maintain it. The story just gets worse and worse. But if you prepare people ahead of time, once you've used broadband, it's hard to get loose from it.

Commissioner COPPS. I don't want to open up any other subjects, but I just would like to make a general comment. A number of people have mentioned comprehensive reform of the Universal Service system, and I think we get in the mind-set where we think, well, this is taking so long, it's never going to happen. But I'm a member of the Universal Service Joint Board, and I think these issues are being teed up. I think there is tremendous support on the Joint Board for including broadband in the Universal Service system. I think there is a wide-spread support to look at a rational cost and reimbursement system and doing something in the identical support rule that is there. Chairman Martin has expressed an interest in reverse auctions. I'm not going to ask about that, because that would take us a long time. But all I want to say is I think that

these things have a possibility of being teed up sooner, actually, rather than later. And I would just like to solicit your ongoing input and your ongoing comment to our offices at the FCC on all of these issues as they become teed up in the months ahead.

Senator PRYOR. Well, listen, both of our Commissioners have to catch planes this afternoon, so I know that a few of you want to have just a few moments to mix and mingle with them. And I want to thank them for coming to Arkansas. It's taken two days out of their schedules, very, very busy schedules, as Scott Ford mentioned a few moments ago. But thank you all for being here. We really enjoyed having you here in the state, enjoyed hosting you, and I hope you will always consider this your second home, and always know that you're welcome back and we want to help in any way we can.

The other thing on housekeeping I just want to say is that for all of you all who have prepared written testimony that will be made part of the record. We will leave the record open for seven days in case someone wants to add something. I noticed some maps, etc. We can include those in the record. If you want to do that, we'll leave that open for seven days. And also if anyone wants to add some written comments on some of the discussion you've heard today, it will be open for seven days, so if you want to go back and work on some of that.

I would say that some of the take-aways that I have is that from our statements today is that our students and our state know that expansion of broadband in Arkansas is essential, that we need to think big, that we have tremendous opportunities for broadband in this state, in this country, whether it's health-related matters, whether it's information, education, just general quality of life, economic opportunities.

We have tremendous opportunities here in this state and in this country, in rural America, to utilize broadband in a very, very positive and productive way. We need to look at changes in the USF, and look at funding mechanisms to make sure we can get broadband out there, if there is access. And as we've said, it's more complicated than just an access question.

The other thing is—I think that Commissioner Copps said in the very beginning—is we need a national strategy. We can't really do this just in a vacuum or just think, hey, this idea might be good. Let's try that idea—might be good. We really need to sit down, all of us, the people in this room, members of Congress, the FCC, the President—all need to sit down and work through a national strategy. We've talked about those statistics, how the U.S. is losing its position globally. That's not acceptable. And we have to acknowledge that's not acceptable and do something about it. You all, I appreciate your comments. I appreciate your preparation, your time, for being here. This has been a very informative and productive hearing. And, again, I want to thank everyone for participating. So, in lieu of the gavel, I once again gavel the closing with my BlackBerry. Thank you.

[Whereupon, at 12 p.m., the hearing was adjourned.]





## A P P E N D I X

PREPARED STATEMENT OF HENRY G. HULTQUIST, VICE PRESIDENT,  
FEDERAL REGULATORY, AT&T

Policymakers have before them an opportunity to bring one of the 20th century's most important telecom policy initiatives—universal service—into the 21st century. During the last century, Federal and state universal service programs and policies largely succeeded in making narrowband voice telecommunication services available in rural areas across the country. Federal and State policymakers now face a new challenge: to maintain the commitment to affordable basic service in an increasingly competitive and technologically sophisticated marketplace while also encouraging investment in the broadband and wireless networks necessary to provide the services that consumers and businesses require today.

As recent Congressional hearings made clear, there is growing consensus that the existing Federal universal service fund (USF) high-cost support mechanisms are deeply flawed. There is almost an equally strong consensus that further extending broadband and wireless deployment into rural areas is a critical national policy goal. However, simply adding broadband and wireless to the USF mix without fundamental reform of the high-cost support regime will only increase the strain on this already broken system and doom to failure efforts to promote additional broadband and wireless infrastructure investment in rural areas.

Rather than adapting the current high-cost mechanisms to achieve its broadband and wireless deployment objectives, AT&T has urged the FCC to address broadband and wireless deployment needs directly and outside of the current mechanisms. AT&T has recently proposed broadband and wireless pilot programs designed specifically to promote network investment in rural areas quickly while also, and critically, enhancing our understanding of whether and/or how best to use USF to support this objective over the longer term. The proposed pilots are modeled after the FCC's rural healthcare pilot program and would utilize the expertise of both Federal and State regulators to create a streamlined and focused initiative that could be operational within a year. While both pilots are important to the future of USF, this testimony will focus on the broadband pilot.

### **The AT&T Rural Broadband Pilot**

AT&T has proposed that the FCC establish a two-year Rural Broadband Pilot Program to support deployment of broadband infrastructure in underserved rural areas. Under the Pilot, applications would be submitted to the FCC and State Commissions and funding would be distributed to approved applicants to support new capital investment in infrastructure necessary to provide consumers in such areas access to advanced telecommunications and information services. Participation in the Pilot Program by providers would be purely voluntary, with providers free to choose whether to apply for funding based on their own evaluations of the final program requirements. The key features of the AT&T Broadband Pilot fall into the three steps outlined below.

#### **Step 1**

The FCC would determine in advance the fundamental parameters of the Pilot such as the available funding, geographic scope, supported service, definition of underserved, and other eligibility criteria.

*a. Funding:* The FCC would specify the Pilot funding level, such as \$1 billion per year for 2 years and the source of funding. (AT&T, which is one of the largest contributors to the Federal USF, recognizes that the size of the fund may need to increase to meet all the goals policymakers have outlined.) Providers whose applications are chosen for support will receive a one-time grant of funds to cover their proposed project.

*b. Providers:* The Pilot would be open to all service providers that are capable of providing the supported service. Providers would not be required to be ETCs

to apply for Pilot funding but would be required to meet certain Pilot requirements and thus to become a Broadband Eligible Provider or BEP.

*c. Geographic Area:* The general area eligible for Pilot funding should be identified by the FCC and should be based on rural Census Block Groups. The FCC should define “rural” as that term is used in the 2000 Census.

*d. Underserved:* The FCC should issue a standard definition of “underserved” for use by states in evaluating applications. Underserved should be defined as areas where the supported service is not *substantially available* to households within the rural service area for which the applicant seeks funding. The FCC would also establish a specific criterion or other measures for determining “substantially available,” such as, for example, that 85 percent of the households in the service area do not have access to the supported service.

*e. Supported Service:* The FCC should define in advance that the supported service is broadband Internet access service that meets the definition of “Advanced Telecommunications Capability” as set forth in Section 706 of the 1996 Act. The FCC should also define other parameters such as minimum downstream and upstream transmission capability, as well as any other applicable service parameters.

*f. Eligibility Requirements:* The FCC should identify basic eligibility requirements that all applications for funding must meet, such as: financial qualification criteria; deployment schedule that does not exceed 2 years; commitment to provide service at an affordable rate; commitment to provide supported service throughout the application area for a minimum of 5 years following completion of project; information that indicates the project area is “underserved”; and type of facilities and equipment, and resulting coverage, that will be deployed.

## Step 2

Interested providers would submit applications to the relevant State Public Service Commissions who would determine eligibility based on FCC-defined parameters.

*a. Application Frequency:* To minimize administrative and transaction costs, applications for the Pilot could be accepted and processed in one round prior to the start of the first program year.

(That is, the FCC would identify winning applicants for both funding years prior to the first year, but disburse no more than \$1 billion in each program year.)

*b. Application Process:* An interested service provider submits an application to the relevant State Public Service Commission in which it identifies a specific rural area that it believes is “underserved” by broadband and for which the service provider seeks funding to deploy facilities to provide the supported services. The provider presents a project proposal, amount of new capital investment for which funding is requested, and supporting documentation.

*c. State Review:* States are responsible for (1) verifying that the area covered by the application meets the FCC’s definition of “underserved,” and (2) determining that the application meets all other FCC-defined eligibility requirements. States have the local knowledge to verify whether the applicant-identified service area is underserved and this simple process is a time and resource efficient method of targeting funding to rural areas that are in most need of support. States could use various methods for such verification including putting applications out for public comment.

## Step 3

States would submit all qualified applications to the FCC which conducts the final review and selects a single provider in each geographic area in which applications were submitted.

*a. Application Ranking:* If the Pilot is oversubscribed, the FCC should rank applications by number of households to be served and give highest ranking and higher priority to projects that result in the greatest number of households receiving the supported service. Deployment timelines may also help guide the ranking process with preference given to shorter time to market.

*b. FCC Review Criteria:* The FCC should establish general selection criteria in advance of the Pilot launch. These criteria will be used by the FCC to guide its selection of applications that will receive funding, especially in the event a service area has multiple applications or the Pilot is oversubscribed. To enhance the learning from the Pilot, the FCC should fund a variety of projects (large and

small) and in different regions to achieve some geographic balance and maximize experience with broadband deployment in disparate topographies.

*c. Number of Grants:* The FCC should limit funding to only one provider in any particular area even if more than one provider applies for funding. If only a single application is submitted for an area the Commission should not be compelled to grant funding if the application does not meet the selection criteria.

In a final step, the FCC should report on the results of the Pilot and launch a proceeding to consider whether the program or some modified version should be continued. AT&T believes that the Rural Broadband Pilot Program can have a measurable impact on broadband deployment in underserved rural areas while at the same providing both Federal and State policymakers with valuable real-life information on how to effectively support broadband deployment in rural areas. Equally important for rural America, establishing both the Broadband and Wireless pilots will help clear the way for fundamental reform of the existing high-cost support mechanisms and thus ensure that the Universal Service program can meet the challenges of the new 21st century telecommunication landscape.

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#### SUPPLEMENTAL MATERIAL PROVIDED BY DAVID BURDICK

Commissioner Michael Copps asked me a question about how many libraries in Arkansas are still on dial-up Internet access. The State Library provided me the following information:

As of January, 2007, 10 (ten) libraries were still on dial-up, 137 were on DSL, and 38 were on cable. It is unknown how many are on dedicated 56k lines. The rest are on T-1 or partial (386) T-1 lines.

There are 7 libraries which do not have Internet access at all.

In the discussion there were comments made, particularly from James Winningham and Sam Walls, which said something like: "Kids need access at home because libraries close . . .", and "We need to get a computer and Internet access into the hands of all Arkansans. . . ."

As a librarian, I agree with both statements, but I also know that the Public Library will need to offer services to those who don't have access. People have had the option to buy books for a few hundred years now. But Public Libraries still circulate millions of books because people either can't afford, or wish not to spend their money on books.

Public libraries offer all types of services to *anyone* and *everyone* who walk through the doors. Most libraries allow people to use the computer workstations regardless of whether or not they live within the Library's jurisdiction. In Pine Bluff, we allow anyone to use the computers.

Two years ago Hurricane Katrina hit New Orleans and the Mississippi Gulf Coast very hard. In Pine Bluff, as in many public libraries throughout Arkansas, our public computers were used by Katrina victims to communicate with relatives, find lost loved ones, file FEMA forms, and in at least one case, a Lawyer who came to Pine Bluff, keep a business going. We also set up a wireless network to allow people who had their own laptops access to the Internet.

We serve travelers who are passing through. We serve people who just moved into the community. We serve students from the two local colleges. We serve those who come to the library from the nearby Salvation Army. A large number of people don't own a computer or don't have Internet access, but there are those who just want to come to the library to use our resources. For instance, there is a elderly man who can afford his own computer, who can afford Internet access, who comes in two or three times every day. I asked him once why he didn't just buy his own computer, and his reply was, "Dave, I just enjoy coming in and seeing all the friendly people who work at the library, and the people who are using the computers in the lab. I just enjoy the company. . . ."

There will always be those who simply don't own a computer, or even want to own a computer. It is my belief that public libraries will be offering computer services for a long time to those who simply don't have access any other way.