

**REMARKS OF  
COMMISSIONER JESSICA ROSENWORCEL  
FEDERAL COMMUNICATIONS COMMISSION  
SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION  
COMMUNICATIONS, TECHNOLOGY, AND THE INTERNET SUBCOMMITTEE  
FIELD HEARING  
“CONNECTING URBAN AND RURAL AMERICA: THE STATE OF  
COMMUNICATIONS ON THE GROUND”  
LITTLE ROCK, ARKANSAS  
MONDAY, AUGUST 19, 2013**

Thank you, Senator Pryor, for your kind introduction. I am honored to speak at today’s hearing on the critical communications issues facing rural America. I also look forward to hearing the testimony from today’s impressive panels of witnesses.

I’ve been in this job for a little over a year, but I’ve worked on communications issues facing rural America for many years. I saw them when I worked down in the trenches as Commission staff and in the private sector. And I saw them when I had the privilege of serving the Senate Commerce Committee as Senior Communications Counsel. That is also when I had the tremendous opportunity to work directly with Senator Pryor. I was able to see first-hand how Senator Pryor fights for the people of Arkansas. I know he knows how important it is for all Americans—no matter who they are, or where they live—to have access to affordable communications. This basic truth was born out with Senator Pryor’s leadership in the passage of the Twenty-First Century Communications and Video Accessibility Act, which extends access to digital age communications to all Americans, including those with disabilities.

Today, I salute Senator Pryor for holding this hearing and for allowing us to hear directly from the people who work so hard to connect all Americans. We’ve made real progress on this front. Today, more than 80 percent of American households have access to broadband at speeds as high as 100 Megabits. The United States leads the world in 4G LTE wireless deployment. And our dedicated rural carriers have already brought communications to some of America’s hardest-to-reach communities. This has created new opportunities for jobs, education, healthcare, and social and civic engagement. We have made progress. We should be proud.

But laurels are not, in fact, good resting places. Because—as we have seen through a series of hearings convened by Senator Pryor—communications markets are changing at a breathtaking pace. Time marches on, technology advances, and there is work to do every day to make sure that our rural communities are not left behind.

So today, I would like to mention some FCC priorities that hold great promise for the connectivity for rural Americans and Arkansans: incentive auctions, and updates to our universal service programs, especially the E-Rate program and the Healthcare Connect Fund.

First up, incentive auctions.

It is no secret that the demands on our airwaves are growing. Look around and the reasons why are obvious. We are now a nation with more wireless phones than people. Add to this that one in five households now has a tablet computer. But this is only the tip of the proverbial iceberg. Because what is emerging is a whole new world of 50 billion wirelessly interconnected devices—the coming Internet of Things.

This means we are facing a seismic shift in the demand for our airwaves. To understand how we will manage this challenge going forward, it is useful to briefly look back.

For nearly two decades, the Commission has led the world with its commercial spectrum auctions. We have held more than 80 auctions, issued more than 36,000 licenses, and raised more than \$50 billion for the United States Treasury. Our efforts are a model for wireless providers and governments around the globe.

Going forward we have a new kind of spectrum auction on the not-too-distant horizon.

Courtesy of Congress and the Middle Class Tax Relief and Job Creation Act, the Commission now has the ability to conduct spectrum incentive auctions. This is different. We are now permitted to provide incentives to existing spectrum licensees to voluntarily return some or all of their airwaves in exchange for a portion of the revenue from the subsequent re-auction of those airwaves for new commercial uses.

This is a smart way to make efficient use of spectrum, which is a limited government resource. And this is instructive. Because across the board in communications we are going to have to look for new and creative ways to make use of scarce government resources.

But make no mistake, these auctions are an epic undertaking. They will require a special brew of economics, law, and engineering. Our rulemaking process is just underway. It will consume a lot of energy to do this well—and do this right.

It also will require a lot of good ideas from anyone and everyone with interest in spectrum. I know many rural providers are either already providing wireless services or are considering how to do so. The 600 MHz spectrum that will be available through this auction is

well-suited for rural applications. It has great propagation characteristics because it can cover vast distances with limited tower construction.

Second, universal service. More than a year and a half ago, the Commission took historic steps to update its high-cost universal service fund and intercarrier compensation system. Though it predated my arrival at the Commission, I commend my colleagues—past and present—for their effort. They refocused the high-cost universal service system from last century’s technology on the broadband and wireless challenges of this century. They put it on a budget. And they increased accountability throughout.

But as I’ve said before, I worry that our reforms to the high-cost universal service system are extremely complex. I fear that this complexity can deny carriers dependent on them the certainty they need to confidently invest in their network infrastructure. So when opportunities arise to simplify our rules in a manner that is fiscally sound, good for rural consumers and bound to inspire investment—we should seize them.

Recently, we have done just that. We did it when we adopted changes to our regression model to provide rate-of-return carriers with additional flexibility to meet our new limits. We did it when we adjusted our rules to distribute a second round of incremental support from first phase of the Connection America Fund for price cap carriers. We should be willing to make further changes when doing so simplifies our rules, does not break our budget, and brings better service and more investment to rural communities—Arkansas included.

Third, the E-Rate program. The E-Rate program may not be as well known as our high-cost universal service program, but it has done mighty things to connect both rural and urban schools and libraries across the country. As the nation’s largest education technology program, it has connected 95% of schools and libraries to the Internet since its inception in 1998. But the job is not done. Because we are quickly moving from a world where what matters is connectivity to a world where what matters is capacity. Already, year-in and year out, the demand for E-Rate support is double the roughly \$2.3 billion the Commission now makes available annually. Moreover, the agency’s own survey indicates that 80 percent of schools and libraries believe that their broadband connections do not meet their current needs.

Let’s be honest. Those needs are only going to grow. School administrators are facing tough choices about limited bandwidth in the classroom. How to divvy it up, what grades and classrooms get it, and what programs they can run on it. This means that without adequate capacity our students are going to fall short. They will be unable to realize the full potential of digital learning. That’s a serious problem.

But this is not just a matter of getting schools and libraries connected; it's a matter of our global competitiveness. Welcome to the world that is flat. Knowledge, jobs, and capital are going to migrate to places where workers have digital age skills, especially those in science, technology, engineering and math—or STEM fields. In fact, the Bureau of Labor Statistics tells us that here at home over the next five years we will have over 1 million STEM-related job openings. STEM jobs are growing at a rate three times faster than all other occupations. And even opportunities outside of STEM will be increasingly digitized, and students in Arkansas and every state will need technology skills to become competitive in the worldwide workforce.

But we fail our students if we expect digital age learning to take place at near dial-up speeds. A recent Harris survey found that roughly half of E-Rate schools access the Internet at speeds of 3 Megabits or less. That is too slow for streaming high-definition video and not fast enough for the most innovative teaching tools. Add to this that in the United States, out of 42,000 high schools, only 2100—five percent—offer computer science courses.

Contrast this with efforts underway in some of our world neighbors. They are pouring resources into these subjects, into schools, and connectivity. For example, in Singapore 100 percent of schools are wired with high-speed broadband. In South Korea, 100 percent of schools are also connected to high-speed broadband. With so much capacity, an effort is underway to transition all students from traditional textbooks to digital readers in 2016. In Uruguay, through a national program, nearly all primary and secondary schools have been connected and every primary school student has access to a free laptop. Uruguay also has revamped its secondary school science and math curricula adding robotics and national math competitions.

For now, we can recognize that these countries are smaller than the United States. They have different cultures. They have different education systems. But we can still take from these examples that improving broadband capacity to schools for digital age learning must be a national priority. If we fracture this effort and leave it to every local school jurisdiction we will miss opportunities for scale and savings. Yet in the end the point is a simple one. Access to adequate broadband is not a luxury—it is a necessity for our next generation to be able to compete. Just like in my day you wouldn't have a classroom without a blackboard, today we shouldn't have a classroom without broadband.

We are at a crossroads. We have a choice. We can wait and see where the status quo takes us and let other nations lead the way. Or we can choose a future where all American students have the opportunity to gain the skills they need to compete, no matter who they are, where they live, or where they go to school.

For my part, I believe that it is time to compete. It is time for E-Rate 2.0. We need to protect what we have already done, build on it, and put this program on a course to provide higher speeds and greater opportunities in the days ahead.

So I am especially pleased that last month, the FCC began this process with a rulemaking. There are two issues I believe deserve our immediate focus if we want to see E-Rate 2.0 up and running fast. We need to focus on setting capacity goals and simplifying the application process.

First, E-Rate 2.0 must be built on clear capacity goals. By the 2015 school year, every school should have access to 100 Megabits per 1000 students. Before the end of the decade, every school should have access to 1 Gigabit per 1000 students. Libraries, too, will need access on par with these capacity goals. Capacity goals will create scale for content and device providers that will help bring the potential of digital learning to all schools. And the spillover effect for this kind of broadband in local communities is substantial. Building Gigabit capacity to anchor institutions like schools and libraries is the ticket to Gigabit cities and the ticket to digital education and economic growth.

To get to these goals, we need to take a hard look at the existing program. We need to collect better data from each of our applicants about what capacity they have and what capacity they need. Then I think we can make adjustments to how we prioritize funding to ensure that schools shorter on capacity get greater access to support.

As part of this hard look, we should phase down the estimated \$600 million we currently spend on outdated services like paging and free up those funds for more high-capacity broadband. But growing this program is about growing national infrastructure and enhancing educational opportunity for the next generation. It is a conversation we need to have, because it is where we need to invest now.

Second, we need ideas from stakeholders far and wide about how to simplify the application process. I can tell you from my experiences speaking about E-Rate during the last several months that nothing gets applause like the promise of simplifying the process. I hope we can take a fresh look at how the complexity of our existing system can deter small and rural schools from applying. To this end, in our rulemaking we ask about the feasibility of multi-year applications. This could substantially reduce paperwork and administrative expense. We also ask how to encourage greater use of consortia applications. This could mean greater scale and more cost-effective purchasing. I think these are good ideas. We should be open to others—especially from those who know the challenge of filling out these forms year-in and year-out.

So let's seize the powerful combination of broadband, plummeting device costs, and increasing opportunity for cloud-based educational content. Let's work together to reboot, reinvigorate, and recharge the E-Rate program for the 21<sup>st</sup> Century.

Lastly, we are working to connect rural healthcare institutions through the Healthcare Connect Fund. Telemedicine is no longer a dream for the distant future. It is here and now, and it can be an integral part of modern medicine. More than 5 million Americans had their medical images read remotely last year and 1 million Americans currently benefit from remote cardiac monitoring for implantable devices. In hospitals, a full 10 percent of all intensive care unit beds now use telemedicine in some form. Add to these numbers the tens of thousands of mobile health applications available on smartphones—and you quickly get the picture. Technology is changing the nature of medicine and the way it is practiced in communities in urban areas, rural areas, and everything in between.

All of this is impressive. But the best is yet to come. Imagine how telemedicine can help keep local bonds strong in rural communities by fostering aging in place. Imagine how it can reduce the costs and risks of patient transport. Imagine how it can link rural patients to specialists in urban areas. The Commission has already contributed to the success of telemedicine by across the board increasing access to wireless and broadband networks that support a range of new health IT applications. And this year, for the first time, we make funding available under our new \$400 million Healthcare Connect Fund. Under the program, eligible health care providers can apply to receive funding to cover 65 percent of the cost of either broadband services or healthcare provider-owned networks.

We hope that with our updated Healthcare Connect Fund, we can continue to work with our federal partners in other agencies to make sure that our efforts are always in concert. And we hope that we can work with our state partners to ensure that state medical licensing policies can foster, rather than hinder, the potential for telemedicine to improve medical care in the digital age.

Thank you to Senator Pryor for organizing this hearing. I look forward to hearing from the witnesses about connecting rural and urban communities in Arkansas.