TESTIMONY OF SHERYL ABSHIRE
CHIEF TECHNOLOGY OFFICER
CALCASIEU PARISH PUBLIC SCHOOLS
LAKE CHARLES, LOUISIANA

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Thank you, Mr. Chairman and members of the Committee. It is my great privilege to testify before this Committee once again about the importance of the E-Rate program to my school district, my state and the entire nation. For me, this is a particularly special honor as it affords me the opportunity to personally thank the Chairman for having the foresight to found this now 15-year-old program and the wisdom to advocate for changes that will modernize it and secure its long-term future.

My name is Sheryl Abshire and I have been the Chief Technology Officer (CTO) for Calcasieu Parish Public Schools in Lake Charles, Louisiana for the past 15 years. I have been an educator for more than 40 years, starting as a second grade teacher in 1973, working as a Librarian/Media Specialist during the 1980s, and serving as a Principal for two elementary schools during the 1990s. In 1998, I moved into my current role as my district's CTO, where I created and implemented my district's technology program and coordinate its annual E-Rate applications process.

This hearing today comes at a pivotal moment for the program. E-Rate has achieved its interim goals of providing at least basic connections to the Internet for all of our nation's schools and libraries, regardless of where they are located and the socioeconomic status of the communities that they serve. E-Rate supported networks have facilitated educational achievement, personalized and virtual learning courses, and online professional development for millions of students and teachers. And E-Rate supported

networks have allowed library patrons to gain access to employment opportunities and government services. However, unless significant steps to bolster the E-Rate are not taken promptly, I fear that the sun will set on this incredibly successful program.

I am here today to join my voice with the voices of Chairman Rockefeller and FCC Commissioner Jessica Rosenworcel in declaring the need for an E-Rate 2.0. In my view, any serious effort to change the program must start with increasing E-Rate's annual support for the long term. For years, my colleagues and I have shouted from the rooftops that E-Rate was in danger of evaporating because of escalating need for its support with no significant funding increase to match. Now, we stand on the threshold of internal connections support becoming extinct and telephone and Internet access support facing cutbacks. We cannot let this happen.

Just as important as more funding are new goals for the program. E-Rate needs to move beyond assessing whether a classroom or library has an Internet connection to determining whether that connection's speed meets the needs of users who seek to access and use the most up-to-date digital content, courses, resources, services and tools. Clear goals that do not meet that standard will not effectively chart E-Rate's into the future.

My recommendations on E-rate 2.0 arise from my long history with the program as well as in state and national education policy. Currently, I serve as a Board Member of the Consortium for School Networking, a non-profit organization that was instrumental in securing the E-Rate's passage. I have also participated in the refresh of the National

Education Technology Standards as a member of the International Society for Technology in Education, a large ed tech non-profit that was also deeply involved with the launch of the E-Rate. Finally, I just completed a four-year term as one of the K-12 education association representatives on the Schools and Libraries Committee of the Universal Service Administrative Company (USAC), which administers E-Rate and the other Universal Service programs.

Please allow me to give you a little background on my district and its network, why technology infrastructure matters to our district, how we paid for this all, and where we need to go from here.

Calcasieu and the Network

Today, Calcasieu is the fifth largest district in Louisiana, where nearly 5,000 employees educate more than 33,000 students, working out of 59 schools and 17 district office sites. Our district's wired network infrastructure supports 35,000 network devices over a Wide Area Network (WAN) connection that delivers broadband Internet access at 100 mbps. Our network is supported by a fiber optic backbone to all sites that is interconnected by over 1200 network switches and 65 virtual servers and 53 physical servers. The services that Calcasieu's network provides include:

- Internet resources
- Network storage
- Wireless access
- Student information systems

- Virtual learning platforms
- Voice Over IP (VOIP)
- Environmental controls
- Online testing
- Video security systems
- Access control systems (door entry)
- E-mail

Aside from our wired connections, Calcasieu's robust wireless infrastructure supports a network of 3000 wireless access points. As the number of mobile devices increases with the implementation of Bring Your Own Device and 1-to-1 initiatives, this wireless connectivity is becoming a resource that is required for student learning devices.

Why Technology Infrastructure Matters to Calcasieu

Why must Calcasieu have such a robust network? The answer is simple: unbelievable demand for online educational resources and the need to communicate. Overall, on any given day, peak usage of our network's infrastructure reaches 90-95% of its capacity with over 9,000 users accessing the network at the same time.

What do Calcasieu's users access? For one thing, they use Calcasieu virtual learning system, which offers a rich learning environment conducive and supportive of today's students and educators**.** Beyond accessing content, today's students – and their teachers! – are also uber communicators and they make heavy use of the network for email. At

Calcasieu, all staff and students having access to email accounts and a total number of 35,000 email accounts exist on our network. Even more staggering, 250,000 emails are exchanged on Calcasieu's network each day.

Where is the proof that this network matters educationally? If testing is any measure, student test scores have improved dramatically with the advent of technology in Calcasieu and across the entire state. Between 1999, the year after the E-Rate began, and 2011, student subgroups that traditionally struggle on exams – students with special needs, low-income students and African-American students – saw their academic proficiency on state exams grow, respectively, by 31 percentage points, 26 percentage points and 26 percentage points. In Calcasieu, over the past five years, we have seen measurable progress in proficiency as well;

- English/Language Arts improved 6 percentage points – 71% in 2009 to 77% in 2013;
- Math improved 4 percentage points – 70% in 2009 to 74% in 2013;
- Science improved 4 percentage points – 68% in 2009 to 72% in 2013;
- Social Studies improved 4 percentage points – 71% in 2009 to 75% in 2013.

While all of these gains are not directly attributable to our network and the E-Rate, there is no question in my mind that technology and broadband access have played a significant role. Two examples from Calcasieu make this case well:

1. Frasch Elementary in Sulphur, a rural Title l school with over 50% of its students on the Federal Free and Reduced Price Lunch Program, immerses its students in a high-tech environment. Teachers and students have robust Internet access and

unlimited access to technology tools, hardware, and software. Perhaps most importantly, Frasch staff make ample use of just in time/job embedded staff development in the strategic use of technology to improve student achievement. As a result of this strong technology implementation, the school has experienced huge gains in student achievement over the past six years, with its School Performance Score growing from 108.4 to 121.8 points. Indeed, Frasch has grown to be recognized as an "A" school in the Louisiana accountability system.

2. Nelson Elementary School is an urban Title 1 school with in excess of 50% of their students on free and reduced lunch. In addition to its high poverty challenges, 17% of Nelson's students have English as their second language. Like Frasch, Nelson has sought to improve its academics with a strong technology program. Thus, every classroom is equipped with at least 10 iPads, a Promethean Board and a variety of other cutting edge technology and interactive tools. The school also has five ACTIVtables, two Laptop Labs and one Successmaker Desktop Lab. Parents are able to check grades online and view student assignments and student work via its online learning portal. The school library has a rich resource of e-books available online. Also like Frasch, this high tech model has yielded significant results: its 2012 state School Performance Score of 118.4 represents a 16% increase since 2008; it received a state designation as a school of Recognized Academic Achievement and a High Gains Award; and it has now been designated as a Model Inclusion school.

How Calcasieu built the network

Eight years ago, I testified before this Committee about how vital the E-Rate program had been in transforming Calcasieu from a technology backwater into a nationally recognized digital district. At that time, Calcasieu had received $4 million in E-Rate support to establish 100 mgps connections for the 11,000 desktop computers that we had then (about a third of what we have today). Back then, I indicated that the vast majority of these funds had been used to support plain old telephone service, cellular phone service, the installation and upgrade of a high-speed network to all of our 59 schools, and the bandwidth used by our compressed video services. Mobile wireless devices like tablet computers, which are proliferating in schools nationwide, did not exist then, nor did online assessments. I concluded my statement in 2005 by calling E-Rate "a blessing for my district" and stating: "Our students, teachers, library/media specialists and administrators have all benefited greatly from the distance learning courses, online professional development, and the wealth of Web-based material that the E-Rate has put at their fingertips. We continue to make significant progress academically in our schools, which, in no small measure, is helped by the E-Rate." Given all that has happened in Calcasieu since then, truer words I have never spoken.

In 2005, six months after I testified here, Hurricane Rita ravaged Calcasieu Parish and its public schools and tore apart much of the infrastructure that Calcasieu had spent eight years building. E-Rate supported infrastructure played a significant role in helping the district react quickly to the disaster, allowing the district's still operational internal networks and email system to make payroll for its more than 4,000 employees just days after the hurricane and facilitating communication and online learning amongst students,

parents and educators that Rita had scattered. However, the damage to the network we built was substantial.

Fortunately, the E-Rate was there to come to our rescue. Over the past seven and a half years, we relied on E-Rate support to rebuild our network and expand its reach. Using $14 million in E-Rate support received since 2006, we upgraded our network to serve more than three times as many devices as we were serving before Hurricane Rita and established a robust wireless network to support the burgeoning number of mobile wireless devices in our schools today. Specifically, E-Rate helped us defray the network costs for over 1,200 network switches and over 3,000 wireless access points. It allowed us to upgrade our wired infrastructure to broadband levels. Additionally, E-Rate support proved critical as we converted the district's telephone system to Voice Over IP (VOIP), which now includes over 1,300 VOIP phones and network storage for voicemails associated with all telephone extensions. Without E-Rate, we might never have recovered from Rita and could not have expanded our network to serve the district's learning and technology needs.

Where Calcasieu and E-Rate go from here

Even with E-Rate's incredible support and the high quality network in Calcasieu that it helped build and maintain, my job – and E-Rate's – in Calcasieu is far from completed. Calcasieu's need for still more bandwidth far into the future is readily apparent. Right now, we are preparing for online academic assessments, requiring even greater levels of bandwidth, which will be arriving as soon as next year in Calcasieu and Louisiana.

Moreover, in the wake of the tragedy at New Town in Connecticut, we are stepping up our technology security measures, installing video security systems and door entry systems, both of which require reliable network connectivity. Finally, our students and teachers are interacting with new and valuable online educational content, services and tools each day, all of which place still greater bandwidth demands on our network. Thus, our need for E-Rate goes on.

Unfortunately, Calcasieu's need – as well as the nation's need – for more E-Rate support is colliding with the reality of E-Rate's inadequate funding. The program's $2.25 billion annual cap was set back in 1998, well before tablets and smart phones existed, and is simply insufficient to meet school and library demand some 15 years later. Indeed, this year's estimate of program demand -- $4.986 billion – is more than double available funds. Based on my experience, that demand is actually lower than actual need as many districts forego applying for Priority 2 services as they know they have almost no chance of receiving support. Even more alarming is the fact that the growth in Priority 1 services demand – a 10% increase this year alone – is leading to de facto elimination of Priority 2. Experts expect that the increased demand for Priority 1 services this year, $260 million more than last year for a total of approximately $2.7 billion, will likely lead to no available funding for Priority 2 internal connections services. And if the trend of increasing demand for Priority 1 holds true next year, even Priority 1 applicants may have to receive reduced discounts.

We cannot allow E-Rate to slowly expire. I agree with Chairman Rockefeller, FCC Commissioner Jessica Rosenworcel and the President that we need a plan to put E-Rate back on track – an E-Rate 2.0, if you will. For me, that plan starts with more funding. And when I recommend more funding, I am not talking about a one-time surge that, when it ends, returns E-Rate to current funding levels. In my opinion, we need a permanent increase in the E-Rate's annual cap that, at a minimum, meets current demand. Additionally, I believe that the FCC should consider establishing a regular look-back period, perhaps every five years, to assess whether the program's funding levels adequately meet demand.

Aside from more funding, I agree with Commissioner Rosenworcel that bandwidth targets are an important piece of E-Rate 2.0. When the program began in 1998, we only measured the fact of classroom and library connections and were thrilled when virtually all schools and libraries achieved some sort of Internet connection. However, a low-bandwidth connection 15 years ago does not begin to meet the immense bandwidth needs entailed by the explosion of online content, assessments, tools, services and communications present in today's classroom. For E-Rate 2.0, I believe we need to set well-reasoned, achievable bandwidth goals for classroom and device connectivity that reflect the needs of modern education. I think it vital that these goals be based on data and that they take into account the different needs and demands of rural, urban and suburban schools and libraries. Like E-Rate's funding level, I support periodic reappraisals and adjustments of these bandwidth goals.

Conclusion

I thank the Chairman for holding this hearing on this most important subject and look forward to supporting his and the FCC's efforts to protect and preserve the E-Rate program. Calcasieu, Louisiana and the nation are fully behind the E-Rate.