

Greenville County Schools

EXECUTIVE SUMMARY

CUSTOMER NAME

- Greenville County Schools

INDUSTRY

- Education

BUSINESS CHALLENGE

- Raising education standards to boost academic achievement
- Improving access to resources while dealing with funding cuts
- Replacing outdated, inefficient technology
- Creating a reputation for excellence in education that would attract companies to relocate to the area

NETWORK SOLUTION

- Installed a converged IP network based on technology from Cisco Systems in 70 new and refurbished schools, to support IP telephony, IP video, IP videoconferencing, and a wireless network

BUSINESS VALUE

- New network saves the district money, through fewer networks and servers to maintain
- Improved access to technology and instructional programs provides equal education opportunities for all students

Greenville County Schools is currently installing a converged IP network from Cisco Systems to improve education standards, save money, enhance communications, and support the latest instructional technologies.

Business Challenge

The largest school district in South Carolina, and one of the state's top employers, Greenville County Schools ranks 62nd in size among school districts in the United States. Currently, the district is made up of 95 schools and centers of all sizes, with some 4,700 teachers instructing nearly 65,000 students in grades kindergarten through 12th grade. The economically diverse student body comes from a mix of urban, suburban, and rural areas.

Like other large districts today, Greenville County Schools is continually adding more students. "We grow at the rate of about a school a year, adding 800 to 1,000 new students annually," according to Lonnie Luce, the district's deputy superintendent of schools, and former executive director for technology. This growth stems largely from the community's economic transition from textile-based manufacturing to a more corporate environment, as several large multinational companies have recently opened offices in the region. "The whole community is trying to improve economic development and attract companies with high-paying jobs," adds Luce. "And high standards in education are critical to attracting them."

Greenville County Schools currently enjoys a well-earned reputation for outstanding student achievement. "Our students score as well as or better than other students across the nation," notes Oby Lyles, the district's director of communications. The district's education goals are to:

1. Raise the academic performance of each student
2. Insert quality personnel in all positions
3. Provide a school environment that's supportive of learning
4. Effectively manage and develop necessary financial resources
5. Improve the community's understanding and support of public schools

Recently, however, a number of obstacles have impeded the district's progress toward achieving these goals. An economic slowdown forced the district to lay off teachers and tighten its operating budget. Classes became overcrowded as a result of the growing community population, and the district had to place many students in temporary classrooms. And since many of the district's schools are located far from its offices, teachers and staff had to spend extra time traveling long distances for meetings and training.

Improving Student Achievement and Community Value Through Network Technology.

From an IT perspective, Greenville County Schools was constrained by disparate information systems and aging technology equipment, resulting in:

- **Poor data retrieval and accuracy.** With separate servers and databases at each school, as well too many people entering the same data, accessing data was time-consuming and difficult. “Teachers need to know what the test scores are this year and how they can improve next year,” Lyles says. “We have a good curriculum with standards and pacing guides, but real-time access to this data was weak.”
- **Outdated communication systems in every school were difficult and expensive to maintain.**
- Slow T1 infrastructure and few computer drops resulted in **restricted communications and Internet access.**

Network Solution

To address these concerns and strengthen the district’s academic reputation, the community passed a US\$1 billion-dollar bond measure in 2004. This provided the funding to completely rebuild or refurbish 70 Greenville schools within four years. “It’s one of the biggest building campaigns in the country, and has set a national standard,” Luce states. “We were investing all this money, so we wanted to make sure we put in state-of-the-art equipment.” Since the district had already standardized on routers and switches from Cisco Systems®, administrators sent out a request for proposal (RFP) to Cisco®.

The Cisco proposal included:

- **Cisco Catalyst® 6500 Series switches** to build a converged IP network infrastructure, with Cisco firewall service modules to provide robust network security.
- **Cisco Catalyst 3550, 3560, and 3750 fixed-configuration switches**, which deliver enterprise-class network services.
- **Cisco Catalyst 2651XM routers**, another network infrastructure component, featuring a modular architecture for easy expansion.
- **Cisco IP Telephony solution**, including an IP phone on every teacher’s desktop.

- **Cisco Unity™ Unified Messaging solution**, which delivers e-mail, voice, and fax message to a single inbox, for more productive, convenient communications.
- **Cisco IP video and IP videoconferencing**, to connect classrooms with resources from around the world, and enable teachers and staff to conduct remote meetings.
- **Cisco Aironet® Wireless Network**, to provide secure remote access throughout the district.

After the district accepted the Cisco proposal, installation of the new converged network began in February, 2004. Currently, the upgrade is underway in all 70 campuses, with the IP Telephony deployment proceeding ahead of schedule. “In terms of IP Telephony, we’re averaging about two schools a week, and will have about 50 schools by the end of the school year,” Luce says. “We’re in the first year of our three-year plan, but will finish in two.” Once all schools are online and the building program is complete, every student will have equal access to the latest technology in new or refurbished facilities.

Concurrently, BellSouth and CSI Charter are installing fiber optic cable to connect all of the district’s schools and offices. “We used some E-Rate dollars to fund a large portion of it, and our state CIO’s office helped, too,” Luce adds.

Business Value

At those schools where the network and IP Telephony solution have been deployed, the district is gaining the benefits of:

- **Improved access to data**, as servers are now consolidated. “We used to have a library database at every school, and we’d have to drive out to the school to update each individual server,” Luce recalls. “We’ve consolidated our 84 servers back to one database server and one front-end server at the central office. It saves a large amount of time and cost in maintaining servers.” This consolidation has also improved student learning, as simplified access to student data enables teachers and principals to quickly identify subject areas where an individual student is strong or weak.

- IP phones in every classroom, with Cisco Unity Unified Messaging, allowing phone calls to classrooms to be redirected to a voice mailbox, preventing interruption to classroom instruction, “The IP phones have really facilitated communication flow at school, and teachers are returning parent calls the same day,” says Luce. With unified messaging, e-mail can be checked over the telephone and voice messages can be checked on the Internet.
- Videoconferencing, which overcomes the large distances between Greenville’s central offices and schools. “When you’re dealing with 800 square miles, it’s very difficult to bring everyone together in one place,” states Lyles. “Videoconferencing gives us the ability to reach out to various schools and departments to send messages or conduct meetings.”
- Distance learning, where students can access lessons from a community resource—Roper Mountain Science Center—without having to travel to and from the site. “The Center has a computer lab, a natural science hall, a butterfly garden, and an observatory,” explains Jeff McCoy, the district’s interim director for Instructional Technology. “Along with accessing lessons, we can connect to the telescope there and actually broadcast images to classrooms via videoconferencing.”
- IP video streaming, through coaxial network cable in all classrooms. “This allows teachers to pull up video clips on subjects they might be teaching, and it could be an hour or two long, or a minute long,” McCoy notes. “So, for example, they can show a 90-second clip on the Boston Tea Party, instead of an entire video on the Revolutionary War.”
- Wireless connectivity, through mobile computing labs with access points and laptops on rolling carts. “The laptop carts have been very successful,” McCoy says. “Eventually, we want

all our students to have access to wireless technology, whether they’re at break, at recess, in the cafeteria, in the library, or in the classroom.”

- Enhanced classroom instruction, through a variety of applications and tools. “Many teachers use data projectors and laptops to project their PowerPoint notes onto a screen,” explains McCoy. “Our elementary schools have interactive boards which display a computer screen, and students can manipulate it just by touching the screen. Our middle schools and high schools have interwrite pads, which allow the teachers to control the computers from wherever they’re standing, then pass the pad around if they want to. For example, a teacher can start working on a math problem on the board, then pass it to a student to complete it.”
- Easier management, through the ability to maintain and service computers centrally. “We can do a lot of things just over the WAN through remote control,” Luce says. “Technicians can solve PC issues from our central office, instead of driving all over the district. If they spend half their day on the road, they’re not productive.” Applications can also be deployed centrally to all schools, to give all students equal access to them.

The new network’s return on investment has proved to be another bonus. “We’re saving about \$400,000 a year by using IP telephony instead of traditional private branch exchange [PBX] systems,” says Luce. “So that’s funds that we’ll be able to put into the instructional programs. Also, we went from 5,000 phone lines down to just a few hundred, which saved more than \$4,000 a year just on the phone bill, not counting the costs of maintaining a PBX at 100 different sites. And since we get our Internet through the state, now that the backbone is there, it costs a lot less money.”

“It’s great to work directly with a vendor like Cisco, who has the resources to go in and look at our specific problems, and can team up with us to develop creative solutions.”

Lonnie Luce, Deputy Superintendent of Schools, Greenville County School District

Next Steps

As the network deployment and school rebuilding program continues, district officials are excited about what the future holds.

Administrators are particularly pleased with the IP video solution. “Soon, students will be able to have any instructional program they need, and teachers will be able to have any professional development they need—all at the touch of a finger.”

Part of this bright future includes a successful ongoing relationship with Cisco. “It’s great to work directly with a vendor like Cisco, who has the resources to go in and look at our specific problems, and can team up with us to develop creative solutions,” notes Luce. “And the Cisco sales team is always out there looking at the future, helping us get to where we need to go.”

For More Information

To learn more about Cisco network solutions for schools and districts, visit www.cisco.com/go/education.

This customer story is based on information provided by Greenville County Schools, and describes how that particular organization benefits from the deployment of Cisco products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

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