

ABS Deploys Cisco IPT and IP/TV Technology for Virginia School District

Executive Summary

Background

Virginia's Floyd County Public Schools had outgrown its aging media management system. There were not enough phones and voicemails for the staff who needed them, managing video needs was time consuming, and teachers could not receive calls outside of school office hours which posed a safety concern.

Challenge

Existing technology and media centers were housed in school libraries, several of which were being re-built in new locations, and cabling would not reach many of the new buildings. All work would have to be done outside school hours so as not to interrupt classroom time.

Solution

Cisco Premier Partner ABS patched the existing solution for the current school year, then put in a new system the following summer. IP telephony solved the cabling problem, saved the schools money, and provided advanced technology for future applications.

Results

Teachers are communicating more effectively with parents and are accessible outside of school office hours. Office office and library staff are freed from delivering messages and tracking video carts and can spend their time more efficiently serving the students.

Floyd County Public Schools operates five schools serving 1,800 students in Southwest Virginia in the Blue Ridge Mountains. The school district had a media management system for voice, video and data, but demands were outgrowing the aging system: there were not enough ports to provide a PBX phone and voicemail for all of the staff who needed them, and the library staff was spending too much time managing the school's video needs: changing tapes and rolling video carts from classroom to classroom. The biggest concern was with safety and security: all incoming calls were routed out of the front office, so if teachers were in their classrooms after 3:30 or over the weekend, no one could call into them.

"This was a failing system that we nursed along for awhile," said Linda Petrie, director of instruction and technology for Floyd County Public Schools. "If a part broke, we literally had to mail it off to be refurbished. It disrupted instruction and, unfortunately, soured many people on technology."

To make security matters worse, the district's most remote elementary school had no cellular phone service. A cell tower did not serve the area's sparse population, so if an emergency occurred that forced the faculty and students out of the building they had no way to contact anybody.

"Before school started last year, nothing worked," said Petrie. "The network was not configured correctly and we were dead in the water. The first day of school was only two or three weeks away."

Understanding Dynamics of K-12 Education Key to Success

Petrie approached three different systems integrators to bid on a new system for the five schools. Only Cisco Premier Partner ABS offered to come in and patch things together so the district would have something working by the first day of school. Then, come summer-time again, ABS would tear it down and rebuild it from the ground up and install a full converged solution. The school district entrusted ABS with patching together its communications network for the school year, and entrusted it to deploy a new system between June and August the following summer.



“K-12 is our biggest vertical market,” said Chris Zettervall, vice president of business development for ABS. “Regardless of the school, there’s a need for a depth of engineering talent. While another firm may have a couple of engineers qualified to deploy converged solutions, we have five or six.” Zettervall offers further advice for firms looking to be successful in the K-12 market: “You really have to understand the nature of how school districts operate. You can’t just show a product and tell them they should buy it. There are lots of different people involved—teachers, administrators, principals, school board members, parents, a superintendent. You need to understand the dynamics of the entire district and offer division-wide solutions. Also, unlike a corporate environment, the budget is not flexible and there are not other pools of money to pull from to make enhancements. It must happen on budget and be deployed when the schools are closed.” Because Zettervall and ABS understood the dynamics at Floyd County Schools, they could effectively explain to each group how the technology would benefit them. This was critical, according to Petrie.

“Teachers are the end users of much of the technology, yet they’re often not in on the decision-making,” she said. “ABS could really articulate for teachers, and all of the different groups, a comfort level. They worked with finance to wring everything out of every dollar while deploying a quality product. They presented to the school board and put it terms everyone could understand, and that’s so important to educators. All of this took extra time on ABS’ part, and it made me feel that we had dedicated team members and a close partner.”

Also important was that ABS understood working outside of instruction hours so as to not disrupt classroom learning.

“All of our work was done in the afternoons or over weekends,” said Zettervall. “That’s part of understanding the nature of schools. Not disrupting classroom time is critical.”

The existing de-centralized technology was a challenge for county technicians—sometimes difficult. If one of them was working at that most rural elementary school, they couldn’t be reached on their cell phones, so office secretaries had to comb the campus to deliver the messages.



Another challenge was the existing video management system, which was located in every library or media center and was the technology heart of each school.

“We had started a massive renovation of all five schools, and four of them were getting new libraries,” said Petrie. “Some of the wires wouldn’t reach over to the new buildings so we needed a new solution. Running the wires around all over didn’t seem effective to me. Chris came up with a cost-effective solution to help us with the library problem and that’s when we were sold on IP.”

School Districts Invests in New IP Technology

“When it came to funding the project, we explained to the board, yes, there are upfront costs, but we have to do something anyway and we’re building all these beautiful new libraries,” said Petrie. “It came down to—do you want to put money into old technology or new technology? Do you want to amplify a system that there are no parts for, or do we look to the future?” The Floyd County school board is supportive of technology and listened to teachers’ concerns about safety and security with after-hours phone calls. It realized that a staff member rolling carts down hallways and changing videotapes could be more productive doing something else. Also, the five schools would be able to share resources. Instead of buying multiple videotapes or DVDs for each elementary school, the district could buy one copy and everyone could easily access and share it through the IP network.



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With funding in place and the district sold on ABS’ recommendations, Chris and his team planned for the major installation work that would happen the following summer. ABS recommended upgrading the network infrastructure to support Layer 3 switching at all of the locations, and replacing the traditional voice and video solutions with a Cisco IPT and IP/TV solution. They also recommended the district deploy dual IDS appliances and new server and desktop sensor technologies to complement their existing firewall.

Well-Planned Deployment Improves Staff Communication; Enriches Student Experience

Thorough, careful planning, and ABS’ strong relationship with local and regional Cisco teams, both featured prominently in a successful deployment for Floyd County Public Schools.

“We’re an advanced technology partner and one of the go-to partners in Southern Virginia,” noted Zettervall. “We leveraged our good relationship with Cisco to make things happen, such as getting loaner equipment when something was backordered. It was very much a team effort.”

Zettervall said no amount of careful planning eliminates the unexpected, but that’s where ABS’ engineering talent came in. It offered global solutions to keep things on track and on budget. ABS customized the entire solution for the video piece, brought up all the handsets, enabled teachers to access videos, the network remains secure and stable, and that rural elementary school now has remote wireless connectivity via their new IP phone system by utilizing exterior Cisco Access Points and wireless IP Handsets.

But Petrie reports the greatest benefit is “security for our teachers.” Among other advantages is unified messaging for all teachers, which improves communications with parents, and frees up the office staff from writing and delivering messages.

“Technology will continue to play a bigger part with our special education and English as a Second Language students, as well as students in poverty,” noted Petrie. “When a teacher can go to a computer and project a certain image, it gives students experiences and prior knowledge they wouldn’t otherwise have, and that builds learning and comprehension.”



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