

BIRDVILLE ISD: CREATING AN INFRASTRUCTURE FOR CHANGE— AND A PARTNERSHIP FOR SUCCESS.

CUSTOMER SUCCESS STORY

EXECUTIVE SUMMARY

CUSTOMER NAME

- Birdville Independent School District (ISD)

INDUSTRY

- Education

BUSINESS CHALLENGE

- Closing the “achievement gap” in student learning through advanced technology
- Meeting the education needs of an economically-disadvantaged student population
- Overcoming annual budget cuts and limited access to funding
- Replacing outdated, multi-vendor network infrastructure

NETWORK SOLUTION

- Installing Cisco converged IP network infrastructure in both new and existing buildings, to support IP Telephony, a wireless network, media retrieval system, video to the desktop, and a digital content server

BUSINESS VALUE:

- Infrastructure upgrade will enable Birdville ISD to provide a better learning environment for students on all different levels
- IP Telephony will improve communications, increase safety and security, and boost productivity

Texas-based Birdville Independent School District (ISD) recently became a Cisco Breakaway School District, and is currently installing a Cisco converged network in its schools, to support a wide range of education technologies that will improve student achievement.

BUSINESS CHALLENGE

Birdville ISD is a large district located in Tarrant County, Texas, an urban/suburban region that includes seven cities near Ft. Worth. The district employs some 1,500 teachers and 1,100 staff members to serve the education needs of 22,000 students. Currently, Birdville ISD operates 31 schools, and is building a new elementary school, which will open in August 2005. “Our mission is to be in partnership with all of our communities to encourage educational excellence, dedicating our resources to encourage all students to be productive citizens and lifelong learners in a global society,” states Dr. Stephen Waddell, Superintendent of Schools at Birdville ISD.

Like all districts across the U.S., Birdville ISD has sought to close the achievement gap in student learning, despite shrinking budgets and tighter access to funding. “We’re having to do more, but we’re having to do it with less,” notes Dr. Waddell. At the same time, the changing demographics in the region meant that more and more of its students were coming from economically-disadvantaged backgrounds, as evidenced by the increasing numbers of free and reduced lunches. The recent trend toward greater accountability and adherence to standards further stretched the district’s already-scarce resources. And many of its school buildings were over 50 years old, and would

require extensive renovation or replacement in order to meet the education requirements of the 21st century.

Dr. Waddell saw that implementing the latest technology could enable Birdville ISD to overcome many of its education challenges. However, this was hampered by the current network infrastructure, which was over 7 years old. “It was made up of a hodgepodge of different brand-name equipment,” says Julie Wallace, the district’s Executive Director of Technology and Information Management Services. “We would try to run digital video content, but it would freeze on the desktop. We had to run T1 lines to every school site, even though we already had fiber-optic cable to connect all the schools. Frankly, we’d maxed out our infrastructure; we couldn’t possibly add one more thing to our network.”

Other technology limitations that the district suffered included:

- Few electrical outlets
- No closets
- Not enough HVAC in classrooms, to ensure uninterrupted power
- Only one hot network drop per classroom (requiring a “daisy chain” of cable for adding additional computers)
- A data center that couldn’t accommodate growth



NETWORK SOLUTION

Both Wallace and Dr. Waddell agreed that a network infrastructure upgrade was in order. “I had a lot of experience with Cisco in the past, and I knew they had a really wonderful solution for us,” recalls Wallace, “Cisco has the latest technology and very high product quality. And a Cisco network is scalable, which is really important to us, because down the road, we can just add to the network, instead of replacing it.”

Cisco representatives joined Birdville ISD’s IT department in performing a technology needs assessment, walking through every single district building in the process. Once all the required network components had been identified, Cisco provided the district with several options for a network upgrade. The network that Birdville ISD approved includes:

- **Cisco Catalyst 6500 Series and 4500 Series Switches**, to build the core infrastructure and provide secure, converged services from the data center to the network edge
- **Cisco 2600 Series Routers**, another infrastructure component that offers flexible network configurations, a variety of security options, and a range of high-performance processors
- **Cisco PIX Firewall**, to provide a strong multilayered network defense that tracks all authorized communications and prevents unauthorized access.
- **Cisco VPN 3030 Concentrator**, the core component of a secure, scalable Virtual Private Network for administrators, staff, and teachers
- **Cisco Security Agent** (for 6,000 desktops), to identify and remove all known and unknown network security threats
- **Cisco IP Phones (2,500+) with Cisco Call Manager 4.0**, the call processing component of an end-to-end IP Telephony solution
- **Cisco Unity Voicemail**, allowing teachers, administrators, and staff to listen to voicemail messages or read them as email text
- **Cisco Emergency Responder**, which identifies the location of emergency 911 callers
- **Cisco 1200 Series Wireless Access Points**, enabling schools to deploy a secure, high-performance wireless network

Because funds for technology were so limited, Cisco also offered Birdville ISD a variety of options to explore. “They immediately

became our partner in helping us identify funding sources, as well as identify partnerships with other companies that would help us get the solution we need,” notes Wallace. “We’re currently applying for some of the E-rate monies that are available for projects like these.” The district is also in the process of putting a technology bond to a community vote.

BUSINESS VALUE

Currently, Birdville ISD is proceeding with Phase I of its technology upgrade; an end-to-end deployment of the new Cisco converged network, which will take approximately two years to complete. In Phase II, all buildings in its 31 existing schools will be retrofitted, and the infrastructure will be built into Walker Creek Elementary, the district’s 32nd and newest school. The deployment will involve a great deal of cabling and electrical work, including new core switches and routers.

Once the foundation has been installed, the advanced technologies will go on top of it, as part of Phase III. “We want to be able to deliver voice, video, and data to the desktop,” says Wallace. “We’re hoping that if we can just provide students and teachers with the current technologies, it will make learning interesting, engaging, motivating, and relevant.”

These advanced technologies include:

- **IP Telephony**, which will replace the district phone system and provide a phone in every classroom, to increase security and improve communications between every school and classroom, as well as between parents, students, and teachers
- **IP Videoconferencing**, which will extend both the reach of the teachers and the depth of the curriculum, through virtual field trips, connections to classrooms across the globe, and more, while also enabling convenient professional development for teachers
- **Wireless connectivity**, which will turn classrooms and common areas into mobile labs, and will lay the groundwork for each student to have their own laptop in the future
- **IP video on demand**, for a more available and easy-to-manage media asset retrieval system
- **IP-based video monitoring**, for physical security
- **Network security technologies**, including intrusion detection, remote access to the network, virus protection, and Web filtering



“Technology gives us more ability to reach our kids at levels that they will want to be reached, to design lessons that are meaningful and interesting to them, to open the world up to them, and to be challenging and exciting.”

—Dr. Stephen Waddell, Superintendent of Schools, Birdville Independent School District

This upgrade will benefit Birdville ISD’s IT staff, as well as its students and teachers. “We’ll save money in operational, support, and staffing expenses,” notes Wallace. “Right now, we’re trying to support a multitude of different brands, which is a nightmare. We envision that the money we save will be able to go right back into the classrooms.”

How have the district’s teachers and staff adjusted to the new network upgrade and the renewed emphasis on infusing technology into the curriculum? “What we’re doing right now is providing staff training for every single employee in our district,” states Wallace. “It’s part of their contract, which sets technology standards for all new teachers. All employees will need to demonstrate that they meet these standards, or they will no longer have a job with the district. We have 121 workshops scheduled, and we’ve already seen an impact in employee skill levels.”

NEXT STEPS

As the new network infrastructure is deployed, the future is looking brighter for Birdville ISD, as its focus can now be placed completely on its students, so they can become productive citizens. “To provide an appropriate education in the 21st century, we need to design meaningful, interesting, challenging work that engages all our kids,” notes Dr. Waddell. “We need to have the tools that really turn our students into active participants in the learning process. They do remarkable things when they’re interested in what they’re doing. And technology gives us a great dimension for that.”

Through all the challenges of providing the best-quality education for all its students, Birdville’s IT staff, administrators, and board members know that they have a solid partnership with Cisco to rely on. “We’re comfortable not only with what Cisco brings to

CUSTOMER SUCCESS STORY

the table today, but knowing that, as technology changes, we're always going to be at the forefront, and always going to be on top of the latest and greatest," says Kelly Hancock, President of the School Board. Wallace agrees that the Cisco partnership has benefited—and will continue to benefit—the district. "Cisco is in this for the long haul, and they've really helped from the very beginning in implementing this project. I think that in the future, we're going to have a pristine network that's scalable and reliable, with no barriers—where everything and anything is possible for our students"

FOR MORE INFORMATION

To learn more about Cisco network solutions for schools and districts, call your local Cisco representative or Cisco Certified Partner, or visit www.cisco.com/go/education.

This customer story is based on information provided by Birdville Independent School District (ISD), 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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