CUSTOMER SUCCESS STORY

NEW NETWORK HELPS SAN DIEGO SCHOOL DISTRICT IMPROVE TODAY'S OPERATIONS—AND TOMORROW'S POSSIBILITIES.

EXECUTIVE SUMMARY

CUSTOMER
- San Diego City Schools

INDUSTRY
- Education

BUSINESS CHALLENGE
- Replace outdated business systems with enterprise applications
- Centralize student data, which was scattered across 202 schools
- Improve internal and external communications

NETWORK SOLUTION
- Installed a Cisco converged IP network infrastructure in all schools and in district offices
- Deployed updated, enterprise-class business applications
- Implemented a pilot program to run IP telephony, XML productivity applications, and video applications

BUSINESS VALUE
- Converged IP network runs new business applications that improve productivity and efficiency
- Centralized student database enables faster, easier access to important information
- Infrastructure now in place to deploy a wide array of IP Communications technologies

San Diego City Schools installed a converged IP network from Cisco Systems, in order to run applications that boost productivity and centralize student data, while supporting advanced technologies to improve communications and student achievement.

San Diego City Schools District Map

BUSINESS CHALLENGE

California's second-largest school district, San Diego City Schools (SDCS) is the eighth-largest urban district in the United States, with 202 schools located across 200 square miles. SDCS has approximately 16,000 employees and some 7,200 classroom instructors to meet the education needs of its 136,000 students.

Being a large school district poses special problems that smaller districts don't have to face, according to Michael Casey, the district's executive director of IT. "For example, if we want to bring out a new application, we've got 60,000 to 80,000 hardware and software assets on our network," he explains. "The logistics behind working in a large organization are really challenging."

The district's mission has been "to improve student achievement by supporting teaching and learning in the classroom." But one of the most significant impediments to achieving this mission and improving the district's business processes was an outmoded data network.

"We had individually deployed business systems that did not have interfaces between, say, our human resources or finance departments, or within our student system," Casey recalls. "Our student system was old, and we had customized it so much, we could not upgrade it at all. Those applications could not support a modern business model. We needed to replace the systems, modernize our infrastructure, implement workflow, and have integration between the business systems as well.

"Our motivation wasn't to simply add technology; our motivation was to modernize our operations. To do that, and to run new business applications, we had to build the infrastructure to support them."

Casey was supported by the district's Superintendent of Public Education Alan Bersin, who wanted to gain the ability to compile and analyze data to track student achievement. With the existing system, each of the 202 schools had its own student information data at each site, and the district was not able to completely consolidate all of the data in its central office. Bersin and Casey also sought to improve the district's business systems, including human resources (HR), finance, payroll, and general ledger systems. "Our existing systems were anachronistic at best," says Bersin. "As a result, we were deficient in communications, including the movement of data around the system, and the movement of information from one side of the organization to the other on everything from best practices to basic financial and HR data. And that's a huge handicap from a productivity standpoint."

In 1998, San Diego voters passed Proposition MM, a US$1.5 billion-dollar bond measure that provided funds to update and modernize most of the district's schools. In 2001, a district task force recommended to the school board that a portion of the funds be used to replace the old network with one that would run IP Communications technologies. This new network would also run district-wide applications for the business side of education, to meet new reporting mandates that were being implemented by the state.

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— Michael Casey, Executive Director of IT, San Diego City Schools

NETWORK SOLUTION

The district invited 14 vendors, including Cisco Systems®, to submit competitive bids for the new data infrastructure. After reviewing these proposals, the district determined that a converged IP network based on Cisco® technology was the best choice for SDCS, and the school board approved the project and its funding in November of 2002. Since the district had so many sites, SBC, Vector Resources, IBM, and SAIC were selected to manage these multiple installations simultaneously.

Beginning in late 2002 through mid 2004, Cisco and the four vendors deployed the new network infrastructure. In one instance, during a district-wide router deployment in March, 2004, the installation actually went much faster than expected. "We put up 200 sites in less than 40 days, and that's an unbelievable effort," explains Casey. At the same time, SDCS transitioned from AT&T to SBC for wide area network services. Once the network was up and running, modern, integrated business applications were installed district-wide.

BUSINESS VALUE

Casey and his team have been pleased with the new scalable, IP network. "Our new system is a centralized architecture with Web-based user interfaces, which has eased the impact at the desktop level, and increased the return on investment on the new applications. We simply wouldn't have been able to run them on our old network." With the new network, the district now had the infrastructure in place to improve communications between district employees, parents, business partners, and other interested internal and external community members.

A school site was devoted to test Cisco IP Communications solutions and Extensible Markup Language (XML) applications, with the idea that a successful pilot would result in deployment at more schools in the future. “We’ve got high-end bandwidth available to every school site, so we’re able to deploy high-bandwidth solutions such as voice over IP [VoIP], video conferencing, or online video professional development,” Casey says. “We’re just exploring these technologies, but we can potentially see huge benefits.”

Solutions and applications currently being tested by SDCS include:

- **Cisco IP Telephony**, to provide centralized communications. “This would enable the district to be able to get one message to 1,000 people without making 1,000 phone calls,” explains Sue Mangiapane, a Cisco Fellow who spent 18 months on site at SDCS. “In 2003, when fires ravaged the San Diego area, it was a challenge to reach 15,000-plus employees in a timely manner via a telephone tree, rather than through an automated mechanism. IP telephony would enable the district to update that list of contacts, forward calls and messages as needed and make sure all of that information was accurate and online.”
- **IP paging and intercom systems**, which allow messages to be broadcast to the speakers inside classroom IP phones, for more targeted, efficient communications.
- **XML applications**, which can help teachers and staff be more productive and efficient. “We’re looking into the feasibility of using XML applications to support and supplement our student information system,” adds Casey.
- **Cisco IP Video Communications**, which improves information access and communications, and saves both time and money. The district is exploring the use of video on demand (VoD) to provide online staff training, to broadcast seminars and school board meetings, and to deliver advanced placement and honors courses to students across the district. VoD also enables important information to be archived for deferred reference, and ensures that this data is constantly available and accessible.
- **Cisco IP Video Surveillance**, to safeguard students, teachers, campuses, and district property. “This pilot system is IP-based, so administrators could access the surveillance video and control the surveillance cameras from anywhere, at any time,” says Mangiapane.
- **An online portal**, to make these new technologies easily available to users both inside and outside the district.

District administrators have also been pleased with the return on investment (ROI) on the new network. According to several external studies, SDCS will save more than $5.5 million over the next five years by deploying IP telephony, and an additional $5.5 million by using IP video for interactive training. But Casey and his team are focused on the benefits of IP telephony that go beyond cost savings. “It’s not about saving five cents on a phone call; it’s about improving communications to our employees and our staff. That’s where the real return comes in.”

NEXT STEPS

With the new network in place, and the pilot IP Communications and XML applications programs currently undergoing a successful trial, the district is poised to take full advantage of its technology investment, both in improving communications and in boosting student achievement. “What we’ve committed to is that all of the new schools we bring up will only be on IP, because that’s a big cost savings over a traditional phone service,” explains Casey.

A large part of a successful deployment will require district staff to enthusiastically embrace the new technology. “This is a culture that tends to resist change,” notes Casey. “If we can accelerate the focus on the culture change the technology should bring, both in the way people think about their jobs and in which business practices are designed and engineered, only then will we see the leap in productivity that underlies the initiative.”

Regardless of the pace of any future technology deployment, SDCS can count on a solid partnership with Cisco for any assistance along the way. “Cisco did a great job of helping us design a network that would meet our needs,” says Casey. In addition, Cisco provided excellent continuing technical and customer support to the district. “Cisco staff devoted a lot of engineering time to help us learn how to manage and maintain the new network, and participated fully in the knowledge transfer required to allow us to successfully use the new network and associated technologies.”

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