



## CUSTOMER PROFILE

# WIRELESS SOLUTION ENHANCES FLORIDA SCHOOL DISTRICT'S ADMINISTRATIVE AND CLASSROOM SERVICES

## EXECUTIVE SUMMARY

### CUSTOMER NAME

The School District of Osceola County, Florida

### BACKGROUND

The Osceola County School District in central Florida wanted to boost the productivity and job satisfaction of its teachers, who still recorded student data on paper—an inefficient and time-consuming process. Therefore, the district provided teachers with laptops and rolled out a new online software suite, which streamlined and automated grading and attendance systems. Laptops gave teachers the ability to be highly mobile, moving throughout their buildings and grounds during the course of a school day. However, they needed a way to connect to the district's network to enter student grades, document attendance, and complete other vital tasks anywhere on the school campus.

### CHALLENGE

The school district decided that a wireless LAN would give teachers the ability to be mobile and online simultaneously. With this technology, teachers would be able to freely access the applications they needed any time, anywhere. Most schools, however, had very limited wireless capabilities and could not support a campuswide wireless LAN.

### SOLUTION

Osceola County turned to WLAN technology from Cisco Systems®. After an extensive pilot, the school district deployed Cisco® wireless access points to most of its schools. The implementation proceeded very smoothly, as the district's network infrastructure already was based upon Cisco technology. As a result, district administrators feel confident that their new wireless system will be able to expand as district needs and the network evolve in the future.

### RESULTS

Osceola County's 2500 faculty members now enjoy easy, secure, unfettered access to grading and attendance applications. They can work from almost anywhere on the campus, and report improved efficiency, productivity, and job satisfaction. Moreover, the school district is well-positioned to significantly expand its wireless network for additional applications. Already, faculty and staff are beginning to use wireless technology to enhance student instruction, deliver multimedia content, provide controlled access to the Internet, and enable affordable voice communications.

**The School District of Osceola County operates 49 schools serving a diverse population of 51,000 students in central Florida. Increasingly, the district has embraced high technology to give its faculty a high-quality work environment and its students a robust learning environment. Recently, the district deployed the Excelsior Pinnacle Gradebook, an application suite from Excelsior Software that automates grading, attendance, and other administrative tasks. But in order to take full advantage of the new software, the district needed to give teachers the same type of mobility that they had when they recorded their data manually in paper grade books.**

“Teachers needed to be able to access their grade books regardless of where they were in their schools,” explains Rosalind Riser, director of Media and Instructional Technology for the Osceola County School District. “During the course of a day, a teacher may move from a classroom to the library to the cafeteria to the break room. The teachers had to be able to do their work anywhere on campus and not be tied down to a single desk or location.”

This need for mobility wasn't limited to the grade book application. The school district envisioned a future in which teachers had all of the information they needed right at their fingertips—whether for staff development, faculty meetings, or classroom instruction. To this end, each teacher was given a laptop computer or, in some cases, a tablet computer with a built-in wireless card. But that provided only half of the solution. To achieve complete mobility, the district needed to wirelessly connect its teachers to the school's LAN.

“Certainly, the automation of our grade book was a chief motivating factor for distributing the laptops,” Roberto Rodriguez, the school district's director of Technology Services, explains. “But, in Osceola County, we have a much broader vision of how technology can improve the delivery of education. Wireless technology is playing a larger and larger role in how we see the future.”

The school system already had some limited experience with wireless computing. Several schools employed “wireless carts,” which teachers rolled into classrooms to transmit specific lessons and laboratory assignments to students. Students accessed the cart through wireless-enabled laptops. When the lesson was over, the teacher collected the laptops and rolled the cart from the classroom.

The wireless carts proved tremendously popular with both teachers and students. In fact, word quickly spread that the carts delivered a dynamic, compelling learning experience, leading more and more teachers to request their use in their classrooms. At about the same time, the district’s technology committee began a broader discussion of how wireless technology could boost systemwide productivity and efficiency, especially among the faculty.

“Within the committee, we started talking about our wireless needs, its deployment, and its cost,” Riser says. “So, we put together a three-year plan to make all the schools in Osceola County wireless.”

The technology committee has long had a good relationship with the district’s school board. It has nurtured this relationship by demonstrating how technology can improve education, create a more efficient, productive workforce, and cut long-term operational costs. When promoting a new project, the committee goes to the school board early and often, explaining the plan in detail. It then backs up its assertions with data on costs, products, timelines, and benefits. Board members are even offered one-on-one training so they can understand the technology and its advantages first-hand. As a result, the board has been highly supportive of the district’s technology deployments, approving and funding many projects.

“We definitely research our options before we go to the school board,” said Rodriguez. “We want the board to support us, so we have to be well-prepared and show them a definite return on investment. For the wireless deployment, we were able to show circuit consolidations and cost savings.”

Osceola County considered several vendors as it sought out the best-in-class wireless solution. According to Riser and Rodriguez, Cisco Systems was the obvious choice right from the start. First, the district already had extensive experience with Cisco equipment, as its network infrastructure is based on Cisco equipment. Over the years, the school system’s IT professionals have been impressed with the network’s performance and reliability, as well as with Cisco service, support, and stability. Moreover, they knew that a Cisco WLAN would integrate easily with the existing infrastructure. Finally, they understood that Cisco offered a complete line of solutions, which would prove invaluable as the district expanded and enhanced its wireless network.

After a successful pilot, the district began installing wireless technology into most of its elementary, middle, high, and alternative schools. When complete, this deployment will include about 700 wireless access points, consisting mostly of Cisco Aironet® 1200 Series access points. These devices will provide wireless access throughout the school buildings, as well as for some outside areas, such as bus loops and playgrounds.

“In the past, we used to go from vendor to vendor,” said Rodriguez. “But now we’ve changed completely to Cisco because it is simply the best. The equipment is solid and reliable, and the company is committed to constant improvement.”

## **MOBILITY AND MORE**

Due to its new wireless network, the Osceola County School District has achieved its principal aim: maximum teacher mobility. Today, teachers throughout the district carry their laptops with them, connecting effortlessly to the wireless LAN. Therefore, they’re able to access their applications and data—and do their work—from almost anywhere on their schools’ campuses.

In addition, compelling computer- and Internet-based lessons are expanding in the classroom, thanks to the wireless network and the increased use of mobile carts. In the past, teachers often had to usher students to separate laboratories, where computer-based lessons usually were taught. Taking pupils to the labs wasted class time and created tremendous disruption for both teachers and students.

“The faculty has been simply thrilled with their new mobility and with the functionality of the overall system,” Riser says. “When we started our deployment, and the teachers began to experience the benefits of wireless computing, we couldn’t install the access points fast enough for them.”

To provide maximum system security, the school district has deployed the Cisco PIX<sup>®</sup> 525 Security Appliance and the Cisco VPN 3000 Series Concentrator for virtual private network (VPN) connections. Osceola County makes extensive use of VPNs so that network segments are safeguarded. The district furthers secures its data through 128-bit encryption.

“Excellent security is vital for any wireless network, especially one in which sensitive information, such as student data, is transmitted,” Rodriguez says. “We’ve taken numerous steps to ensure that our security is solid.”

One of those vital steps: a well-developed, highly visible security policy, which is posted in every classroom. It lists the rules for WLAN use and the consequences for breaking its terms.

“The posted security policy is an important part of our best practices for our wireless network,” Riser explains. “It explicitly states in writing how we expect both our teachers and our students to behave when they use the system. These rules are widely known—and followed—in Osceola County.”

## **NETWORK OF THE FUTURE**

Based on its success, the Osceola County School District has ambitious plans to expand its wireless LAN and extend the network’s functionality. The district currently is considering numerous wireless projects. All of these projects will further boost the efficiency and productivity of the school system’s faculty and staff, while enhancing its educational mission and reducing its long-term costs.

- *Wireless phones*—A wireless phone pilot is now in its second year in one high school. This pilot employs Cisco 7900 Series IP phones, which are being used to provide maximum mobility. With these phones, school administrators can make and receive calls from anywhere on a school’s campus, an important capability for personnel, such as assistant principals, who are frequently on the move. Wireless phones also help ensure the physical safety of staff and students, as users can stay in constant contact while attending to emergencies and other problems. Lastly, IP phones can dramatically lower communications costs when compared to a traditional, circuit-based phone system. The school district deems its wireless phone pilot as highly successful and plans to release the technology soon to additional schools.
- *Enhanced, intelligent wireless management*—Osceola County plans to pilot the Cisco Wireless LAN Services Module (WLSM), which simplifies deployment and management of wireless networks, while providing the industry’s fastest, most secure campuswide roaming system.
- *Wireless video projection*—At one high school, the school district currently is running a pilot project to test the usability of wireless projection. If deemed successful, this technology may be offered to other locations.
- *Streaming video*—The school district would like to extend streaming video to desktops, laptops, and wireless carts. Osceola County teachers believe that streaming video is a great way to enhance lessons. Currently, though, they can only stream video by special request, since the extensive download must take place at night. The district would like to allow its teachers to stream video during the day and on-demand.
- *One-to-One Initiative*—Through the One-to-One Initiative, the district envisions putting laptop computers in the hands of public school students. When funds are made available, Osceola County is interested in providing laptops for students, which could mean a substantial expansion of wireless use throughout the district.

“We’re definitely committed to wireless technology and what it can do for us,” concluded Riser. “We see the possibilities for our wireless network as practically endless.”

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