

CAT 6 cabling saves college money

Changes in student needs prompts move to flexible, high-speed network connectivity.

Like many colleges and universities, Walters State Community College (WSCC) has undergone dramatic change since it was founded in 1970. WSCC serves 10 eastern Tennessee counties located in the foothills of the Great Smoky Mountains. Over the years, as the area's population grew, WSCC built four principal campuses, a public safety training center and an agribusiness center. Today, the school serves nearly 10,000 students.

To accommodate the lifestyle of today's students, WSCC offers courses on its campuses, at numerous satellite classrooms throughout the

gent, the director of communications services at WSCC. "All of our classrooms and labs are wired, which provides instructors with unlimited flexibility in developing course content and interacting with their students. Classrooms can connect with outside educational vendors via the network for additional course content.

"All of our students can log into special virtual classrooms, which allows them to interact with instructors and fellow students, view grades, turn in homework," he adds. "Classes that are recorded at one site are delivered the next day at another site. So students who miss a class during normal hours can attend it later by watching a recorded video."

"One of the college's goals is to provide facilities and equipment that complement high-quality academic programs and services," says Eddie Stone, chief information officer at WSCC. "And by utilizing and upgrading technology, the college has increased accessibility to its programs and services by developing new delivery methods for classes."

CATEGORY 6 IS THE CHOICE

Managing a constantly changing user environment was one of the key considerations when Sargent installed a Category 6 preterminated network cabling system when redesigning his primary communications room. With a preterminated solution, the cable is cut to specified lengths, terminated and tested in a quality-controlled environment.

Sargent decided to use HellermannTyton's RapidNet solution, which features proprietary bundled cable (six high-performance Category 6 UTP cables bound with a Kevlar binder) cut to customer-specified lengths and patented cassettes to make faster, more reliable installations. Sargent installed Category 6 RapidNet in a panel-to-panel application that allowed for use of the cassette-to-cassette configuration. The cabling has been independently tested to exceed Category 6 requirements and meets the proposed 10GBaseT standard.

"We were looking for something that would be very flexible—easy to install and expand, easy for



Joe Sargent, director of communications services at WSCC, inspects one of the wiring closets serving the school's varied network.

10-county area, over television broadcasts and on the Internet. These choices continually challenge the IT staff to maintain a state-of-the-art data and communications network. All campus facilities are connected to multiple T-1s located on the main campus, and all IT services—including Internet, phone and videoconferencing, as well as video course content—are provided via the network.

"Our port count has grown tremendously and our biggest issue is bandwidth," offers Joe Sar-

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moves, adds and changes—and a solution that would provide us with quality and reliability,” says Sargent. “The college is in the process of implementing a new ERP system that requires a major redesign of our communications room. Moving all that equipment involves pulling and terminating a lot of new cable.”

Sargent prefers using in-house staff to work on the network and a preterminated solution greatly enhances productivity. HellermannTyton had estimated that RapidNet could reduce installation time by 75% compared to traditional cabling systems, but in Sargent’s application, installation time was reduced by more than 90%.

Managing a constantly changing user environment was one of the key considerations in installing a Category 6 preterminated network cabling system.

“What amazed us about the system was how fast we could install it,” explains Sargent. “In an equivalent, traditional installation, we’d have had to carry in six boxes of cable, pull those cables to length, measure the length in the room and pull them up along the ladder rack system. Because we need 24 lines, we’d have to

repeat the process three more times. Once we would have all of the cables bound, bundled together and secured to the ladder rack system, we’d have to go back and install the patch panels on both ends and make the terminations. This would have taken about four hours to complete. Then, finally, we’d have to spend even more time cleaning up the mess from the terminations and the cutting of cabling and wires.

INSTALLATION IS EASIER

“With RapidNet, it’s much simpler,” he adds. “You bring in four boxes at a time, lay them on the ground, pull a unit of the cable out of the box, start it at your origination point, pull it through your ladder rack system into your rack, install the two patch panels and then install the cassettes. They’re easy to snap into the faceplates and just as easy to pull back out if you need to. It took two of us only 20 minutes to install 24 lines, including carrying up the hardware.

“The factory terminations come tested and provide reliability beyond our self-terminations,” he adds. “We do a good job, but the preterminations work much better.”

Because RapidNet is a bundled-cable, plug-and-play cassette system, it is easy to remove and reuse. “Where significant cost savings come into play is when you consider future moves, adds or changes,” says Sargent. “You don’t throw the system away when your needs change. You can

easily remove this system, save it and reuse it in the future. And because it comes with a wrap that binds the cables together, it is much easier to manage the cable in the wire tray or ladder rack system.”

Certification was another aspect of the system that was important to WSCC. “RapidNet provides us with a certified Category 6 solution,” Sargent offers. “Every port is tested. When we snap the cassettes into the faceplates, we know they’ve been terminated, tested and certified. We know it’s a completed job and we can move forward to connecting our hardware.”

A lifetime product warranty and a 25-year system warranty on the installation are also important to Sargent. “We need to make sure that a manufacturer stands behind its product. We have limited funds and can afford to buy things only one time,” he says. “If we buy into low-quality solutions that nobody backs up, we’re wasting our money.”

A recent report on population growth from the Tennessee Advisory Commission on Intergovernmental Relations and the University of Tennessee estimates that the population of the 10 counties WSCC serves will increase by up to 48% in the next couple of decades. This growth will inevitably lead to more changes at WSCC and even greater demands on the network. Sargent is confident he has the flexibility to adjust the network quickly and cost-effectively to meet the needs of his dynamic college environment. □