

Technical Education Center Osceola (TECO)

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Wireless technology has become very popular in learning environments, and increasingly, Proxim products are the preferred choice. It is a great complement to be considered the best wireless solution by those who use it; however, it's a higher tribute to be chosen by those who are so wellversed and qualified in the discipline to teach it.

The Technical Education Center Osceola (TECO) is a workforce training facility in Kissimmee, Florida. This fall, the school commenced the Wireless Communication Technology Program, the first in the nation to address the need for highly-skilled professionals in the wireless field. Through a combination of industry-recognized courses (both theory and hands-on), students learn the most advanced wireless technologies as they relate to WAN, LAN, cellular, satellite, and ad-hoc networking. Graduates receive a Wireless Communications Engineering Certificate, enabling them to compete for starting salaries of \$40,000+ in high tech positions both locally and worldwide in this fast-growing, cutting edge industry.

MEETING THE NEEDS OF MANY

Since the program's goal is to turn out graduates who have skills that are in demand not only today, but in the future, the school's choice of wireless systems determines the success of the endeavor. In researching wireless systems for their new \$1.2 million training facility, TECO administrators kept their goals in mind.

The students require a system that:

- Is a state-of-the-art technology that is in demand today, yet employs a basic premise that is timeless.
- Is scalable to allow for tomorrow's innovations.
- Has both low-end and high-end capability to accommodate students at the beginning level as well as advanced curriculums.
- Is a widely accepted and recognized technology that will boost TECO students' employability.
- Is flexible and supports the numerous radio protocols on the market and in the workplace.

The school itself requires a system that:

- Is usable not only for student classwork, but also for teacher and staff use.
- Is cost-effective
- Is highly-reliable
- Is easily maintained

THE EXPERTS' CHOICE

TECO administrators challenged Northeast Data Inc. of Tunkhannock, PA, a consulting company specializing in multisite WAN/LAN design and installation worldwide, to search the market, recommend a system, then design and customize the installation of the best wireless equipment available. TECO felt

that Northeast Data's reputation for designing, installing, testing and maintaining site-tailored systems gave them the expertise to make the most-informed decision.

Michael Lione, General Manager, explained, "Only Proxim's Harmony line meets all of the demanding requirements of TECO's highly technical curriculum. This is a system that is not only reliable and scalable, but that supports every protocol that students need to learn. In addition, the Harmony system's advantages make it so popular that knowledge of this technology practically guarantees a student's success in the job market."

MEETING NEEDS TODAY AND TOMORROW

The Harmony family of products is state of the art now, and will remain so because of its scalability and versatility. Unlike rival wireless products, a Harmony LAN supports any radio protocol (including IEEE 802.11a, IEEE 802.11b, OpenAir, and 10 Mbps frequency-hopping), enabling the school to teach them all on the one system. As new technologies are developed, the Harmony system permits migration to new protocols without disturbing the existing installation.

According to Jared Greene, the lead instructor for TECO's Wireless Communications Program, it was this ability that sealed the decision to go with Harmony over the Cisco Aironet product they were also considering. "To keep our program credible and marketable, we need to teach the latest technologies – and a product that requires a complete LAN rebuild every time a new protocol is introduced is too disruptive for the students and too costly for the school. It is critical that we have a system that keeps up with the times and allows students to graduate with current skills no matter when they finish their studies." Of the 1050 hours of instruction in this comprehensive program, 300 hours are devoted solely to Proxim wireless technology.

Northeast Data recommended Harmony products, also, because the technology has a background functionality that can be extremely simple for the beginning student, yet enables the school to add on the high-end operations that the advanced classes require. While other wireless technologies necessitate the implementation of several different platforms to meet courses at every level, the one Harmony platform meets both simple and high-end course needs.

Because the wireless LAN is as fast and powerful as many cabled linkages, reliability is often superior to "wired" systems, costs much less than cabled LANs, and can be installed quickly without disrupting day-to-day activities, the school chose to install Harmony products for the school's own administrative tasks. Greene added, "We have great hopes for the program and expect to grow accordingly. We chose a system that would not only be best for instruction, but which could be upgraded and enlarged easily as the school expands."

PUTTING IT ALL TOGETHER

TECO's wireless network consists of 3 access point controllers running 9 access points that bring the network to four classrooms, each with 20 Proxim-enabled workstations. In addition, there are 46 computers set up in different lab and school areas. Six additional access points are scheduled for installation soon. The Harmony access points are uniquely void of all Ethernet electronics. Where a typical access point will cost between \$1300 to \$1800, the Harmony units run about \$500. Stripping the LAN of all redundant electronics in this way reduces cost dramatically while maintaining high quality and reliability.

The Harmony access point controllers are connected to a 8-server Microsoft Windows 2000 platform network via T-1 cabling. At times students use the primary network servers, however each classroom also has its own server that students connect to depending on the lesson. Subnetworks on these

classroom/lab servers allow students to experiment with different functions without the risk of degrading the main network.

As a training center for wireless communication technology, TECO considered many very unique requirements when choosing their system. Because the credibility and success of their entire business relies on their choice of wireless LAN, they took great care to research all options. "We feel very lucky that Proxim's Harmony meets our every goal. We didn't think we'd find such a system, and fully expected to make concessions. I believe we have a superior program that teaches a superior skill – much of that is attributable to Harmony," approves Greene. At this time, the TECO Wireless Communications Program is the only authorized Proxim training center in the world.



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