



▶ Wireless Classroom

Emtec & Westwood help Woodbridge Township school district break down technology barriers with wireless networking.

Some of the historic school buildings in Woodbridge Township date to the late 19th century, but the level of instruction going on inside the classrooms is decidedly 21st century. An ongoing wireless networking initiative directed by Emtec, Inc., and Westwood Computer Corp. is providing students and teachers with continuous access to a wide range of cutting-edge digital resources for teaching and learning.

"We've made a commitment to preparing the students in our district for the central role technology will play in their lives," said Superintendent of Schools, Vincent Smith. *"The wireless network allows us to provide current and emerging technological resources to not only help students meet and exceed core curriculum standards, but also to prepare them for the world beyond the classroom."*

Using computers to enhance education in the classroom is nothing new. The 24 schools in Woodbridge Township have had computers and Internet access for many years. However, the district wanted to move away from the traditional computer lab setting and bring technology into every room in every school. Unfortunately, high-tech expectations initially met with old-fashioned construction constraints. The concrete and stone composition of many of the district's older buildings posed a significant barrier to traditional hard-wired networking techniques.

"Many of our schools were built in years ranging from 1888 to 1963. They were not designed for ripping up floors and running computer cabling," said Michael D. Esolda, Chief Information Officer for both the township and the school district. *"It would have been cost-prohibitive to hard-wire every classroom. Wireless was a more economical solution."*

Mobility Flexibility:

Wireless offers other advantages, as well. A wireless system paired with mobile carts of laptop computers minimizes the amount of space consumed by technology because rooms

don't have to be reconfigured to accommodate computer stations. Wireless laptops on carts can be brought into the classroom, removed and assigned to a student, and each student can begin computing at the desktop immediately. Mobile carts also allow the laptops to be shared among classrooms so that schools don't have to purchase a computer for everyone in school.

Yet, wirelessly connecting 24 schools and four administration buildings across the school district's LAN to the township's central datacenter represented a tall order for Esolda and his IT staff. Township and school district officials turned to their two longtime technology partners for assistance.

The township and school district have a unique technology partnership called a "shared services" program in which both entities have autonomous network operations that are tied into a central datacenter.

Emtec has been the primary supplier of IT services for the school district over the years, while Westwood has had a similar role with the township. The merger between Emtec and Westwood in late 2005 essentially created a one-stop shop for the district and the township.

"We had developed relationships with both companies individually, but together they really bring a lot to the table for us," said Lois Rotella, the school district's Assistant Superintendent for Instruction and Technology. *"It has particularly made deployments a significantly more streamlined process."*

Handling the Details:

To date, Emtec and Westwood have directed wireless implementations at 15 schools, with another currently under way. The project is partially funded through a Verizon-sponsored grant program called Access New Jersey.

“Woodbridge purchases all the necessary Cisco hardware through Verizon, but we coordinate all the purchases for them,” said Brenda Kasica, Emtec Account Representative. *“We conduct site surveys and then provide Verizon with an equipment list for all network switches and access points needed.”*

Then we put together services schedules for all the cabling, datacom and project management requirements. We receive the hardware, configure it and install it.”

During the site surveys, the Emtec-Westwood team uses a wireless laptop and access point to determine signal strength and map the location of all necessary wireless access points. Access points are placed to provide coverage not only in all classrooms, but in every room of the building — including cafeterias, auditoriums and gymnasiums. That ensures schools have the flexibility to conduct workshops and group presentations, if desired.

“We want coverage for every area, because you never know how room usage might change over the years,” said Esolda. *“An area that is used as a supply room today might become a special room for consultations or conferences in the future. That kind of flexibility is one of the advantages of the wireless solution.”*

Given the type of full-school access required for such a project, Emtec and Westwood must be extremely flexible with the work schedule. Engineering staff commits to working during off-hours and on holiday schedules to ensure minimal disruption during regular school hours.

“You have to have a lot of sensitivity when working in schools, so we try to do most of the work when school is not in session,” said Dave Donatiello, Senior Project Manager with Westwood. *“You always have to remember that this work is first and foremost for the benefit of the students, so we try to make sure we don’t interfere with the learning process. That’s why we prefer to do all the configurations offsite at our integration facility so we spend the least amount of time needed on site.”*

Positive Results:

Esolda said he has gotten only positive feedback from faculty, staff and students about the wireless initiative.

“The teachers love it because all their rooms are being lit up with technology they didn’t have before,” he said. *“They can create new instructional opportunities with interactive applications and improved research sources, plus they all have Web mail access, which improves parent-teacher communication. And the students love it because they’re getting assignments that are more fun and engaging, and they know they’ll be prepared for the technology they’ll be required to use at the next level.”*

Esolda said he looks forward to working with the Emtec and Westwood staff as they continue to extend wireless networking benefits to the remainder of the schools in the district.

“They are very professional and very efficient. On one occasion, they did five schools in one week and these are large schools,” he said. *“We look at them as in-sourced partners. That’s important to us because we need someone who understands our schools and what we do. They’re good listeners and good partners.”*

About Emtec: Established in 1964, Emtec, Inc. is a systems integrator that provides IT services and products to the federal, state, local, education and commercial markets. Our market leading value-based management methods, coupled with best-in-class IT technology, consulting and development services, address a wide range of specific client needs, as well as support broader IT transformation initiatives. Emtec’s service capabilities span the United States, Canada and countries around the globe.