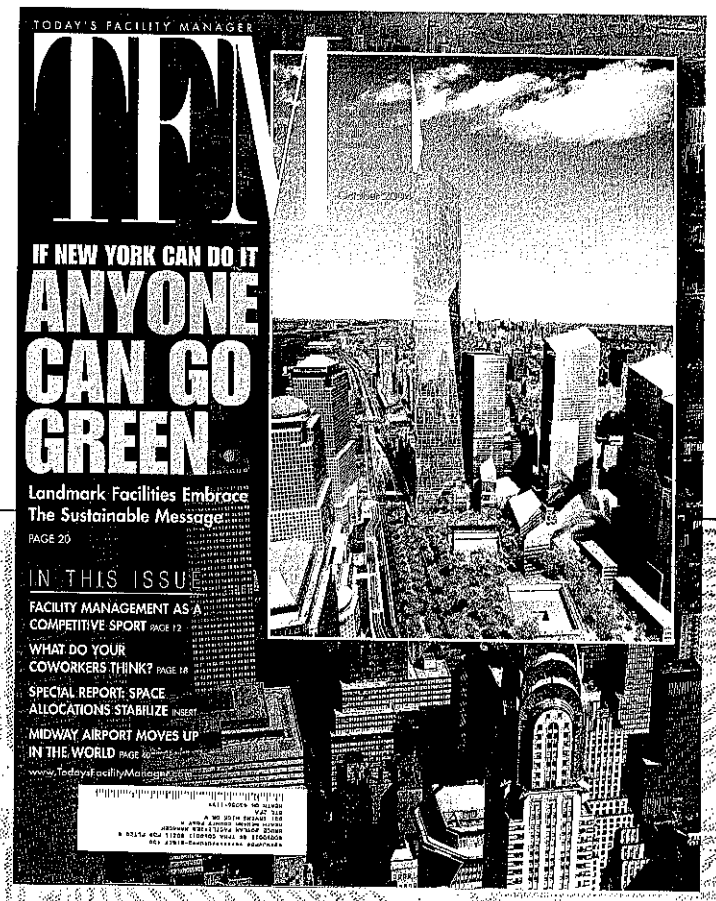

HNLCPA Shows How Wireless Works

Matt Stansberry

When you imagine a port authority, cities like New York come to mind. You think about big ships, ma or giant airport hubs. But a port authority is not an easy entity to define. The Heath-Newark-Licking County Port Authority (HNLCPA) is not located on a major waterway. In fact, there isn't deep water anywhere near Heath, OH—located 30 miles east of Columbus. The HNLCPA manages a former Air Force base—comprised of 877,000 square feet of building space—which houses various facilities for a number of defense related companies.

While the HNLCPA is a government entity, it receives no tax payer subsidy. Therefore, it operates like a private company. So when HNLCPA's Executive Director Rick Platt, and Senior Manager of Facilities Bruce Boylan assessed the organization's needs for a LAN and a utility monitoring system covering the 57 acre base campus, they selected a wireless solution that cost under $30,000 for the network and connective devices—less than 3¢ per square foot. The solution proved to be an inexpensive way to connect people in outer offices and remote locations to the network.

The HNLCPA has five critical utility systems—a water tower pump and four sanitary sewer lift stations. With the new wireless LAN, all of those utilities are monitored from Web browsers. There is also an alert system built into the utilities, so if certain levels are reached (for example, one of the pumps has a low pressure reading), alarms will trigger. The system also sends a text message alert to the cell phones of the facility staff. As a back up, the system can dial an analog phone.

In the past, if these critical systems had a problem occur, a flashing light would have gone off on the equipment. According to Platt, his team was relying on a totally visual alert system. "That was fine when this used to be an Air Force base. You had people here 24/7, and they all worked for the same employer. Now we still have people here at all hours, but they don't work for me. The people who noticed the alarms at 3 a.m. were outside of our facility management team, and that wasn't ideal," says Platt.

The HNLCPA wanted to update the system, but the cost didn't balance out. According to Platt, he had a quote at six figures to solve the problem, and it wasn't worth it. The monitoring system they eventually decided on was a $10,000 expenditure.

"The very day we got the site monitoring system working on our wireless network, it detected a problem on one of our sanitary lift stations. It was a problem that the visual alarm system would not have detected. So the system paid for itself the first day on the job. When we flipped the switch and found that problem, it could have become greater than a $10,000 problem," says Platt.

While this achievement is impressive, the port authority has more ambitious goals for the network. For instance, Boylan would like the next step to be monitoring HVAC software, now that the networking backbone is complete. "We'll probably go with a standard off the shelf software package from Trane, since we mostly have Trane equipment here," says Boylan. "The key is that the software must be compatible with the Cisco wireless network."

Platt would also like to implement PDAs into the facility management team's toolbox. With the new wireless network, a facility manager could use a PDA to access monitoring information, Web cameras, and topographical files from the databases.

"Some of the GPS products that are coming out now enable us to mark on a PDA where a water line is in real time when we're doing construction on a site," adds Boylan.

With a total of 350 acres, Platt eventually plans to expand the wireless LAN from the 57 acre base area to the outer regions of the campus and to develop wireless hotspots. While most tenants would not be able to use wireless hotspots to access the Web (because of the defense related nature of their industries), Platt hopes to implement hotspots in their conference and training center. "The facility can accommodate 240 people, but it currently doesn't have any Internet access. We believe that our wireless system is the lowest cost option to bring Internet access to the facility."

But why is wireless less expensive? How is HNLCPA saving so much on this network? With five critical utilities—sometimes over a quarter mile away from the next system—connecting through a standard network would require miles and miles of cable. But the cost for the wireless network was $16,500. The project proved significantly cheaper than cable. According to Platt, cable could have presented an additional maintenance cost from possible damage to buried lines.

"We could do a cabling job inside a building for about a dollar a foot with full distribution CAT5 cabling, not counting routers and distribution and patch panels," says Boylan. "But you can't equate that on an acreage point."

"If everything we did could be confined to a building, it might not make sense to do it wireless. But we're on a campus. For example, a lot of college campuses already have high speed data lines coming to their campus. But as they build new structures, they're using wireless technology because it's cheaper," Platt explains.

The contractor designed the HNLCPA's network based on the distances between antennas and line of sight. Then the contractor commissioned the network to ensure the equipment worked from point to point. If the signal didn't transmit, the contractor implemented repeaters that boosted the signal.

Today the facility management team at HNLCPA can monitor critical utilities, expand the network, and even monitor its facilities from home with Web cameras. But the real story has been the price point at which all of this was accomplished. □

Do you have experience with wireless? E-mail your comments to mstansberry@groupc.com. To read past "Tech To Watch" columns, visit the Web at www.TodaysFacilityManager.com.