Midwest College Deploys Low-Cost RTLS for Emergencies

The RF Technologies security system consists of pendants affixed to desks and podiums so that instructors can discreetly send a Wi-Fi-based alert to campus police.

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Tags: Security and Access Control

Sep 22, 2015—A Midwestern community college has selected a solution to bring wireless alert-sending technology to its hundreds of faculty members as school starts this fall. The solution, a version of the HelpAlert real-time location system (RTLS) from RF Technologies (RFT), consists of Wi-Fi-based RFID tags strategically mounted under tables and podiums so that instructors can summon help in the event of an emergency.

The school has a large, 50-year-old campus with approximately 15 buildings and hundreds of classrooms, and it selected the RFT solution to provide a level of security without having to install wires. The HelpAlert RFID tag transmits a signal via the school's existing Wi-Fi network, and HelpAlert software—in use by campus police—identifies the emergency's location, tracks when it was responded to and stores data regarding the nature of the call.

The college installed a HelpAlert RTLS pendant in each classroom, typically mounting it under a desktop.

The college wishes to remain anonymous, according to the school's CIO, in part because it is keeping its security system discreet. Concerned about the multiple school-related violent acts discussed in the news during the past year, faculty members had been approaching the school leadership requesting that each classroom have emergency-call technology, such as phones.

The college has an IP-based telephone infrastructure, and the CIO says putting hundreds of additional phones onto that system would be extremely costly. Therefore, the idea of installing more phones was rejected. The school also looked into wired panic buttons and talked to network provider AT&T about putting in place wireless panic buttons that operate via the cellular network. However, he notes, that would have required the school to sign up for an additional data plan from the network provider—something that would have been too costly. "That led us to a wireless panic system that could be used with our existing [Wi-Fi]

platform," he says.

The school met with RF Technologies, which offers a HelpAlert RFID tag in the form of a pendant that an individual can wear on a belt or with a lanyard around the neck. The pendant has a button that a staff member can press, thereby causing the device to transmit a signal over the Wi-Fi system. HelpAlert software operating on a school's database can then identify where the pendant is located and display an alert, send a text message or sound an audible warning.

Providing each faculty member with his or her own pendant was unrealistic, the CIO explains, because there are a large number of employees, many of whom work part-time or teach only for a few semesters. Instead, the school began working with RF Technologies on a system that would assign a pendant to a classroom, rather than to an instructor. The college acquired about 350 pendants and installed them discreetly in classrooms where they could be easily accessed by instructors. Although the devices aren't visible to the rest of the class, faculty members were trained to quickly locate them during an emergency. Most are mounted under a podium or an instructor's desk.

If an urgent situation develops—such as a potential fight between students or a health emergency—a staff member simply reaches for the pendant and briefly pushes the button. The pendant then transmits its unique identifier, which the area Wi-Fi nodes capture and forward to a school server where RFT's HelpAlert software is running. The software captures the transmission, determines the classroom in which it originated and displays an alert on the monitors where the software is running in the campus police's dispatch room. Police dispatchers can view the classroom in which the emergency is taking place, and thus send a nearby officer to that location.

Upon arriving at the scene, the officer determines the nature of the emergency and then, once the issue has been resolved, presses the pendant again to indicate that the problem has been addressed. The officer then calls in details about the emergency to the dispatch center. Dispatchers access the software and input the officer's ID number and other details regarding the call into the HelpAlert software, thereby creating a permanent archive of that event.

If the emergency is of an extreme nature, such as a student with a weapon threatening others, the instructor presses the button and holds it for a longer period of time. He or she can also press it multiple times to indicate to the police that the call is extremely urgent.

The system was taken live this fall at the beginning of the academic year, according to the school's CIO, who says he hasn't heard from police regarding how often it has since been used. Regardless, he adds, the value is in the peace of mind it offers instructors.

The CIO says that during this summer's annual instructor briefing, held before the start of classes, the school's leadership described the technology that had been installed during the summer break. He recalls that the instructors burst into applause.

Security or police officers can access an app on either an iOS or Android device, in order to view the location of an alert while traversing the campus. However, the school is not currently using that app.

The HelpAlert software can provide analytic data indicating the kinds of emergency calls that have been made, how long responses take, and where or when calls are most often placed.

RTF has offered the school-based Help Alert Pendant solution since 2011, says Mark Gallant, the company's senior director of marketing and product management. The majority of implementations use a combination of both mobile and fixed pendants, so as to provide the broadest safety coverage possible. "Fixed pendants can be a cost-effective and very easy-to-deploy panic-button solution, as they use existing Wi-Fi and no cabling or wires are needed," he states. "Just place the pendant and set its location on the system map—done."

With the mobile version, pendants are assigned to individuals, who carry them while on campus. The technology identifies a particular pendant's location based on the Wi-Fi node that receives its alert transmission.

"Since launch [of the product in 2011], we continue to expand the solution-set with new features that are requested by schools, as well as hospitals," Gallant says. "Our new location-based video capability, released earlier this year, is one recent example." The video capability is a function within the software that enables security departments using the technology to view footage

from the camera nearest to the area where the alert was triggered. The Midwest college is considering using this capability as well, but that would require the installation of additional cameras in the hallways outside of classrooms.