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Campus Chooses Ethernet/IP Alarm Monitoring System

Overview

More than 4,800 undergraduate and 2,000 graduate students live on this tri-campus university complex located in the mid-Atlantic area. The students' safety and security is essential to the school's facilities services department, whose job it is to ensure quick response to the emergency needs of the campus community.

A life safety challenge

Responsible for the life safety and security systems in about 130 academic, residential, fraternity and sorority, and athletic buildings, this campus facilities services department oversees and maintains an alarm transmission and receiving system that connects all of the buildings' fire and security systems to a central dispatch center at the campus police department. Installed in the mid 1990s, the previous Keltron alarm monitoring system transmitted alarm signals using direct-connect copper wires that had connected the campus for more than 40 years. When the technology became generally available, the university established a robust fiber network to which most campus building systems migrated, leaving little more than the alarm monitoring system on the aging copper infrastructure.

> *"The Keltron system is highly reliable because it combines industrial strength hardware with the newest technologies."*
>
> Life Safety Technician

Time for new technology

By 2005, the facilities services department recognized that the university would either need to invest additional funds in the existing copper plant or find a system that would transmit campus alarm signals using the now well-established Ethernet/LAN network. To ensure the campus an optimal new system, the department managers began researching their options. In addition to an Ethernet signaling system, they also considered a wireless radio network, but ruled it out due to costs and the campus' mountainous topology. They determined that using the existing campus fiber backbone was the most cost-effective and efficient way to make the technology transition.

Key requirements

The university sought several specific capabilities from a new system:

▼ The ability to enable a phased transition over a time period would allow the facilities services staff and dispatchers to achieve a substantial level of comfort. The system had to transmit and accept signals from both the existing copper infrastructure as well as the new Ethernet network.

▼ As with most colleges and universities, cost was a factor in the university's choice of systems. Any system that leveraged existing equipment investment could help the facilities services department minimize expenditures.

▼ To meet the needs of the dispatch center operators and to become operational within the university's time frame, the new system had to be easy to install and easy to use.

▼ Critical life safety equipment required zero down time and unfailing reliability.

▼ System security was of vital importance to the university's IT department. The network is configured to facilitate zoned access to the network that prevents campus-wide system failure. Any campus-wide system had to be able to be configured to operate within working zones if a local zone shut down occurs.

▼ The system had to enable remote programming from the facilities services office at a mountain-top campus to the system head end, which is located on the main campus in the valley.

The Solution

In 2010, the university purchased the Keltron LS Net Ethernet Signaling System with the Keltron LS 7000 Life Safety Event Management System from a local Keltron dealer, a full-service life safety and security systems company. The new system integrates easily with the existing Keltron receiving system, data gathering panels and EST3 panels. The plan was to bring the security system online using the Keltron Ethernet signaling system and transition the fire alarm system with its addressable requirements over the following months. Facilities services combined with the university's IT department to ensure that the campus Ethernet backbone would effectively support the system's small bandwidth usage and remain fully operational for an acceptable time period during a commercial power outage.

Important benefits for the University

In addition to meeting the University's many requirements, the Keltron system provides unique and innovative functionality that benefits system administrators, dispatchers and maintenance staff. "The dispatchers enjoy the easy-to-use Keltron LS 7000 software," noted the Assistant Director. "Their mission critical job needs the dispatch function to be accurate and clear. They appreciate the system's ability to add real-time, online notes about incidents directly to the history database, passing on information from dispatcher to dispatcher and shift to shift and not losing critical data." Another feature that improves the dispatch experience is the Keltron LS 7000's 19-inch touch-screen computer with its mouse and touch-keypad. The University's administrators welcome the ability to reference history by point, facilitating access to information needed for reporting for the Campus Fire Safety Right-to-Know Act, included as part of the Higher Education Opportunity Act.

Important to both the installing service company and to the facilities services department is that the system is easy to install and integrate. It enables the campus command center to monitor a wide range of different panels including chemical monitoring, security and access control as well as fire. "The Keltron system is highly reliable because it combines industrial strength hardware with the newest technologies," said the university's life safety technician.
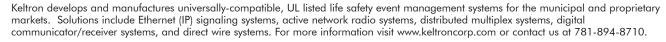
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Assistant Director of
Facilities Services

Future plans

As with most colleges and universities, this university has plans for constant expansion and needs a system that can adapt and scale for other future expansion. The next version of Keltron LS 7000 software will enable the staff to use e-mail to notify technicians of specific troubles. The university's Keltron system is capable of monitoring all existing and future card access, security, fire, chemical suppression and chemical monitoring panels, fire pump controllers and door-prop alarms throughout the entire tri-campus complex.

Keltron develops and manufactures universally-compatible, UL listed life safety event management systems for the municipal and proprietary markets. Solutions include Ethernet (IP) signaling systems, active network radio systems, distributed multiplex systems, digital communicator/receiver systems, and direct wire systems. For more information visit www.keltroncorp.com or contact us at 781-894-8710.

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