NOTIFIER®
by Honeywell

Campus Safety **Magazine Editorial**

FOR IMMEDIATE RELEASE
Media Contact: Beth Welch, 203-484-6202 or beth.welch@honeywell.com

UNIVERSITY NOTIFIES THE MASSES

Time is of the essence when disaster looms. Weather-related tragedies and terrorist activities of the past decade have created increased demand from public and private stakeholders for a reliable means of communicating critical information to large groups of people. This emergency communications (a.k.a. mass notification) concept has received heightened attention from facilities personnel particularly in the military, educational and commercial/industrial sectors.

Systems Assessment and Risk Analysis

According to Paul Parrish, Towson University's environmental health and safety officer, "The issue of emergency communications came up at Towson when someone asked how we can expect to communicate with students and staff in an emergency."

Towson University encompasses more than 40 buildings, covering 328 acres within the town of Towson, 15 minutes outside of Baltimore, Md.

"When weapons of mass destruction or the possibility of a hazmat incident came up, we had to ask ourselves if we could realistically notify the staff and student population of an emergency situation in time to make a real difference," says Parrish. "It was about the same time that the Virginia Tech shooting took place. This placed our ECS (emergency communications system) project on a fast track."

On April 16, 2007, a lone shooter killed 33 and injured 15 on the Virginia Tech campus in what has been touted as the worst killing spree in the United States during peacetime.

At the time, Towson utilized a text messaging system to alert students, staff, parents and others. While such alerts proved to reach a good portion of Towson's population, university officials understood it was not a comprehensive solution.

"We also have an outdoor public address system consisting of five [speaker] towers. University Police recently installed them on select buildings to provide adequate campus-wide coverage," says Parrish. "But we realized that this was not enough. We also needed emergency communications inside our buildings."

The university already had standalone fire alarm EVAC (emergency voice/alarm communications) systems in half of its buildings. However, these systems operated independently, requiring users to be located within each building to activate communications.

According to Parrish, it was obvious the EVAC systems were not an effective option when faced with an immediate threat, such as a tornado alert. Hazardous spills and other hazmat-related incidents involving a nearby, major highway was another concern driving Towson's ECS initiative.

Looking for guidance, Parrish approached the school's current fire protection contractors, Fireline Corporation.

"I asked Fireline's project manager, Mark Reedy, if there was any way to connect these EVAC systems together so we can make announcements from a single location on campus. He looked into the technical details and came to the conclusion that it could be done," says Parrish.

Integrated, Economic Approach

Per Towson's specifications, Fireline worked to design a combination fire alarm/ECS with one point of monitoring and control. Making use of the individual fire alarm EVAC systems succeeded in saving the school a substantial sum of time and money.

"Reedy's firm installed the in-building ECS needed, which also are part of our campus-wide fire alarm system. Where the police department is responsible for the outdoor speaker system, I'm responsible for the emergency communications/fire alarm system," says Parrish.

Twenty of the schools' buildings are equipped with Notifier EVAC systems featuring standard pre-recorded messages and microphones for authorized users to provide real-time announcements. Systems in seven of the buildings categorized as high-rises also include firefighter phones that enable first responders to communicate directly with each

other.

Currently, Fireline is upgrading the remaining school buildings to include ONYX Series EVAC systems from Notifier. Once complete, all buildings' systems will feature both fire alarm and emergency communications protection, all of which will be tied together for centralized, campus-wide control.

In retrofit applications similar to Towson, capitalizing on the strengths of existing fire alarm communication and notification technology can deliver intangible benefits not common to alternative ECS offerings:

- Supervision – These systems are self-monitoring, meaning immediate alerts are sent to central monitoring station personnel any time an issue that could compromise system functionality is detected (i.e. loose wire, detector tampering, etc.).
- Survivability – Many of today's fire alarm network technologies comprise distributed intelligence, which can help to assure functionality during a catastrophic event. As a result, if one part of the network is damaged, the remaining components continue to operate properly.
- Intelligibility – Clarity of communications is critical (indoors and outside) increasing speaker volumes can many times distort the message. Proper ECS design takes background noise, room size and acoustics into consideration, while incorporating visual notification such as LED signage and special-colored strobes.
- Testing Requirements – Per NFPA (National Fire Alarm Association) code, all commercial fire alarm systems, in both public and private facilities, are to be tested and properly maintained on a semi-annual basis. Failure to do so typically results in the loss of occupancy permits.

Systems Unification and Control

The marriage of new and existing systems on one network, allowing for complete monitoring and control of all campus systems was key to Towson's ECS plan.

Utilizing NOTI-FIRE-NET network technology, Reedy has been able to tie different EVAC systems throughout the campus together. Connectivity between individual

buildings has been accomplished using the university's existing, campus-wide Ethernet network—another considerable cost saver.

An ONYXWorks graphic workstation located at the university police department provides school officials with a common point of command and control. Here, campus security and safety personnel can view all system events and maintenance alerts as well as issue critical instructions to specific areas or groups of buildings. Much like a public address system, this central workstation also allows for day-to-day announcements to be made.

Towson's campus-wide network facilitates easy integration of similar systems during future campus expansions. The Internet's worldwide reach make it possible for Towson to connect and control other fire alarm/ECS on a local, regional and global basis.

Evolving building codes and public expectations continue to pressure for better, more comprehensive ECS within all facility types. It's important for security directors and others in positions of responsibility to consider future ECS needs prior to performing a major building systems renovation, especially when upgrading fire alarms.

According to Parrish, "It's better to upgrade to EVAC technology now, as opposed to traditional horns. So when emergency communications are needed, the transition will be smooth and cost effective."

SIDE BAR: Mass Notification Standards

As part of a broad effort to effectively deal with the threat of terrorism, the DoD (Department of Defense) developed a standard for the design of mass notification systems, titled Unified Facilities Criteria (UFC). Applicable to all DoD installations domestically and abroad, UFC calls for the use of new and existing fire alarm EVAC (Emergency Voice/Alarm Communications) systems to be utilized as the platform of all mass notification systems. Consequently, facilities personnel are expected to collaborate with experienced fire protection engineers on ECS design. Chief reasons for this combo fire alarm/ECS approach, sited within the UFC document include fire protection's history of proven reliability and substantial cost-saving benefits.

The DoD standard was made possible through a collaborative effort between the U.S.

Air Force and the NFPA (National Fire Protection Association). In June 2009, the NFPA established similar requirements under Chapter 24 of its NFPA 72: *National Fire Alarm and Signaling Code,* 2010 version. Referring to an MNS as an Emergency Communications System, the new NFPA code spells out rules for the design, installation and testing of these systems within public and private sector facilities.