

A Holistic Approach To Campus Critical Communications

The importance of leveraging multiple communications channels during emergencies.



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Introduction

Recent incidents are causing a timely evaluation of the alerting needs of schools and universities throughout the country. Appropriately, a great deal of attention is being focused on being able to send alerts to the mobile devices of faculty, staff, students and their parents. Not only do the vast majority of students carry mobile phones, they typically are the one communication device that is accessible to them at all times. The ubiquity of mobile phones provides a key part of a campus notification strategy, but must be viewed in the context of a comprehensive approach to campus preparedness and emergency notification.

Many campuses and school districts are under prepared to handle a mass notification in the event of imminent security issues or hazards. Moreover, when an alert is issued, there is the challenge of communicating response and preparedness instructions to diverse student, faculty and parent communities.

A true mass notification system involves much more than text messaging or public address systems or a text messaging platform. An effective system involves an integrated response capability via diverse communication channels to reach as many people as possible, by as many ways as possible.

A holistic approach to campus emergency communications involves entire, integrated systems rather than isolated parts. A complete crisis communication plan must look at multiple communication channels to reinforce and augment messages sent to mobile devices. The communications plan should incorporate capabilities that are flexible enough to adapt to an all hazards approach.

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| • <i>Emergency notification</i> | • <i>Police & Fire emergencies</i> |
| • <i>Campus closing information</i> | • <i>Hazardous materials</i> |
| • <i>Weather alerts</i> | • <i>Community notification</i> |
| • <i>Volunteer Mobilization</i> | • <i>Missing persons</i> |
| • <i>Health & medical alerts</i> | • <i>Public safety warnings</i> |
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The complete plan must also address information sharing with off-campus first responder resources to ensure rapid and intelligent responses to intra and inter campus incidents. As discussed below, the capabilities of **SpectraRep AlertManager™** and the **SquareLoop Mobile Alert Network™** go far beyond the SMS messaging systems that are being evaluated by many schools.

A Multi-Faceted Campus Alerting Environment

In evaluating the needs for emergency notification, incident response, and continuity of operations, it also is important to identify how best to send those messages through multiple means of communications to provide reinforcement of the alerts and to further increase the number of people who receive this often time critical information.

Ideally, this will include simultaneously sending the information to mobile phones, personal computers, on campus digital signs and electronic displays, campus radio and TV stations, public address systems, sirens, email, web pages, etc. Even more ideally, this will involve providing authorities with a single point of entry to activate and distribute a consistent message across these diverse communications media.

Additionally, there is the critical element of getting these messages – and related information – to off-campus public safety agencies (police, fire, EMTs, etc.). The response to many emergencies often involves multiple organizations, and the ability to deliver information to those organizations quickly and accurately will ensure their ability to respond to these events without the need for multiple and perhaps inconsistent communications.

SquareLoop and SpectraRep have developed an integrated solution that addresses the needs of emergency communications of campuses to achieve all of these goals.

Bringing it All Together

The first component to addressing the complex environment is having a centralized access point to manage the communication process and control messages across all of the platforms. SpectraRep **AlertManager** provides a common interface to multiple communications channels through the Common Alerting Protocol (CAP), an open standard interface protocol for all-hazards emergency messaging. AlertManager can be a starting point for a multi-faceted campus emergency communications strategy.

AlertManager provides a unique dual-use capability: the system can be used for emergency alert origination, and can also serve as a public information system to provide multimedia information, updates and news briefings to the extended campus community, public safety agencies, broadcasters, news rooms and others.

As an emergency alert origination platform, AlertManager can launch emergency messages through mobile phones, email, desktop computers, digital signs, and other outbound warning systems though its use of the Common Alerting Protocol (CAP). The system provides a common interface to control each of these communications channels.

As a public information system, the system can provide a continuous flow of critical information. The system enables the origination of text, audio, and video messaging, accompanied by multimedia and other resource attachments, such as video feeds, maps or other critical information to the campus community as well as first responders.



The system can also provide interoperability between campus security and local police. A common interface can allow each emergency operations center (EOC) to have visibility into messages being generated for the broader community. This facilitates the dissemination of consistent and non-duplicative messages.

By using standards-based approaches, this solution can provide an integrated means of communicating consistent alert and warning messaging across a diverse array of communications systems:

- Mobile Phones
- E-Mail and Desktop Applications on Personal Computers
- Telephone Call-Out / Auto Dialers
- Campus Radio and Television
- Digital Signage, Electronic Displays and Message Boards
- Digital Sirens and Public Address Systems

This holistic approach can be used across the multiple communications environments in use today across campuses including:

Mobile Phone Communications

For mobile phone messaging, the **Mobile Alert Network** is the ideal platform with many unique features including:

- **Geographically target messages based on current or past location –** Geographic targeting is especially valuable for large campuses where it can be difficult to ensure that all individuals in the area are contacted. While many are focused on the tragic campus events of April 2007, it is crucial to consider the broad range of threats that campuses may face now and in the future. The ability to deliver messages based on past location will be invaluable for meningitis outbreaks, pandemic responses, and other public health incidents to help minimize the impact of these incidents. This is a powerful differentiating factor that no other solution can offer.
- **Special sender-defined alert tones and vibrating cadences ensure messages get noticed, and acted upon.** – Students are using their phones for more advanced communication than the general population. The special alert tones will ensure that critical messages are not ignored. The unique vibrating cadences is of special interest to schools with large populations of hearing impaired students and staff.



- **Longer message text with embedded graphics provides instructions, not just warning** – The Mobile Alert Network enables campus security officials to provide needed information and specific instructions so that recipients can take immediate action without the need to seek additional information from other sources.
- **Multi-language support** – Campuses are increasingly populated with students from around the world who speak various languages. The **Mobile Alert Network** allows students to select their preferred language and allows school administrators to send out multi-lingual alerts to students and their parents.

The **Mobile Alert Network** is not only used for student, faculty, staff and parent notification, it also has day-to-day utility for campus security to dispatch officers and send updated information that impacts the lives of the community.

Personal Computers (Email and Desktop Alerting)

Reaching the campus community via e-mail and desktop applications are other powerful assets. Alerts, bulletins and updates can readily be sent to e-mail lists of people or organizations to be notified for any type of event. Email notifications can be sent to any or all recipients.

The **ActiveAccess™** personal computer notification software enables the dissemination of information to Internet connected desktop and notebook computers. The desktop software sits in the system tray until activated during an emergency. A window then pops up on the computer screen providing detailed emergency instructions and links to resources on the web if available.



ActiveAccess provides real time geographically targeted weather notifications, radar images, and other resources. The system also provides universities an avenue for non-emergency communications such as program updates, campus events, student activities and guides, sporting news, faculty information, and more.

- ActiveAccess has a unique capability to support campus-wide preparedness by providing a dynamic resource for the campus community to be aware of how to prevent, mitigate, prepare for, and respond to hazards.
- It provides a key supporting technology to provide the campus community with education about threats to their safety and property, and to ensure they are engaged in preparedness and prevention measures, trained in basic emergency response skills, and knowledgeable about practical steps to take before, during, and after an incident.
- The desktop software provides a convenient portal to various campus web pages, resources and applications. The portal can provide ready access to campus emergency preparedness information, community disaster education content, localized weather forecasts, and emergency information.
- The portal can also include content such as campus events, sports information, and so forth, providing additional value to the campus community even beyond emergency notifications and preparedness.

Telephone Call-Out

In addition to text and graphical messaging to mobile devices and computers, the system also has the capability to interoperate with telephone dialing systems. The AlertManager system enables the transmission of audio announcements (recorded or live), and supports text-to-voice conversion for play-out over outbound telephone call-out systems. Because the system is standards based, it can interface with many types of third-party telephone calling capabilities.

Emergency Alert Broadcast for Campus Radio, TV and CATV

AlertManager has the capability to connect the campus radio and TV stations in times of emergency. AlertManager is a robust technology platform for enhanced Emergency Alert System (EAS) communications. It brings these powerful public notification capabilities to campus radio, television and community access (CATV) and other video systems for on-campus emergency notification. AlertManager delivers information for automated and/or manual display of emergency alert text, graphics and audio over campus television systems, and audio over campus radio stations.

Emergency notifications can be effectively delivered into campus CATV/MATV systems from AlertManager by using systems such as **Chyron's ChyAlert-2CH**, a two Channel Video Emergency and Security Alert System. This system is optimized for use with CATV/MATV systems in any public facility where television signals are widely distributed to all TVs and video displays.

These systems can be readily configured for a display system or integrated into an existing video infrastructure. Graphic, text and audio may be displayed on a single TV screen or broadcast throughout the campus.

Digital Signage and Electronic Displays

A comprehensive approach can also integrated solution for delivering emergency information to public and private video displays. AlertManager interfaces with digital signs through relationships with companies such as Chyron, the leading provider of broadcast graphics solutions such as the **ChyTV™** digital signage solution. The related **ChyAlert™** solution supports video display of emergency messaging from the AlertManager emergency notification system. Audio playout of emergency messaging can also be supported through the ChyTV platform.

By integrating video information display systems like **ChyTV**, any facility or public space with electronic displays are able to receive and display emergency alerts, bulletins and graphics, including public safety information, weather alerts and other critical public announcements.



Digital Sirens and Public Address Systems

AlertManager enables the activation of multiple types of siren, indoor and outdoor public address, alarm and announcement systems. The standards-based approach used by AlertManager enables activation of indoor and outdoor speaker and alarm systems such as those provided by Acoustic Technologies Inc. (ATI), providing alarm tone notification and emergency voice instructions for emergency warning and notification.

Other Web-based Communications Systems

Through the use of the open standard CAP interface, AlertManager provides a single interface to reach multiple communications platforms including RSS feeds for web posting, web portals, etc.

Interoperability with Campus & Off-Campus Systems

SquareLoop and SpectraRep are committed to open standards solutions to provide interoperability with a wide range of software systems typically used in many public safety emergency operations centers. This can be done internally if public safety entities use Alert Manager, or externally through the CAP interface with a range of third party emergency management applications.

Single Registration

Through a simple subscriber registration page, students, faculty, staff, and parents can register for alert notifications to their mobile phone, personal computer and email system. The subscriber registration system can be integrated into existing campus systems such as LDAP directories for authentication. Additionally, with

partnerships with mobile phone companies, campus mobile phone programs can be integrated with the Mobile Alert Network to provide automatic enrollment for life-threatening messages via mobile phone.

Conclusion: An Integral Part of a Campus Incident Command System

In the event of a crisis, it is essential for campus personnel to understand their role within the institution as well as with other responding agencies. Campus Incident Command Systems (ICS) allow for quick and effective resource commitment and minimal disruption to the normal policies and procedures of responding agencies. The ICS management system integrates facilities, equipment, personnel, procedures, and communications into a common organizational structure.

This unified approach to Campus Critical Communications can enable and enhance numerous key tasks being performed under the ICS:

- Timely and effective alerts, updates and instructions to students, faculty and staff (on and off campus, in the classroom and outdoors).
- A channel for communicating information and instructions to family and other interested parties.
- A system to communicate with campus emergency responders, faculty, staff and administration.
- A means of keeping off-campus public safety and law enforcement agencies informed and in-the-loop.

This comprehensive approach to Campus Critical Communications enables many of the core operations within the ICS. It provides the capability to provide reliable communications to campus emergency responders, which could include and or all of the following: Campus Police; Local Police; Paramedics/EMTs, Physical Services, Environmental Health and Safety, Student Services, Residential Services, and others. The capabilities outlined in this approach can greatly enhance the ability to keep the extended campus community aware and informed, while easing the communications and information burden on campus authorities.

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