

Inova Solutions Helps Virginia Tech Acquire Instant Emergency Notification Capability

OnAlert™ LED displays play integral role in emergency notification plans on college campuses

The Need for a Multi-modal Emergency Response Strategy on College Campuses

In recent years, Americans have witnessed staggering growth in intensity and frequency of campus violence, including the tragedy at Virginia Tech on April 16, 2007. Coupled with countless other emergency situations, such as weather and natural disaster-induced trauma, the need for a notification system to effectively and instantly communicate vital information to campus communities has grown exponentially.

Many campus law enforcement and emergency management personnel have taken the first steps in addressing the need to unify communications strategies. Experts agree that, in order to be effective, a holistic mass notification strategy must be both multi-modal and reliable. A mixed media approach to emergency communication has been proven to garner a higher degree of effective response than a one-dimensional approach. For example, supplementing audio alerts with visual alerts is an important step toward creating a comprehensive mass notification program.

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Many campus-wide communication strategies have only emerged in recent years, and have yet to be perfected. Failure to utilize multi-modal systems, from SMS/text messaging and email messaging to sirens and visual alerting media, can create dangerous holes and limitations in a unified emergency response strategy. Consider the following limitations of a one-dimensional mobile device approach:

- Most cell phone towers are ill-equipped to handle the tremendous influx of incoming and outgoing communication traffic as a

A Profile of Virginia Tech

- Located in Blacksburg, Virginia
- 29,000+ full-time students
- 1,300+ full-time instructional faculty
- Largest full-time student population in Virginia
- Main campus includes more than 130 buildings, 2,600 acres, and an airport

Executive Summary

Virginia Tech has taken a proactive approach to providing the best possible multi-modal emergency notification coverage to its campus community. Using its innovative VT Alerts system as the backbone, and Inova Solutions' OnAlert LED displays as one of the many modes of communication, Virginia Tech has taken great strides in ensuring the protection and safety of students, faculty, and staff.

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result of an emergency situation. In some cases, a spike in demand on the wireless communication infrastructure can delay message transmission times by up to two hours.

- Large buildings, especially academic buildings, are notorious for poor mobile device coverage. In some cases, the use of mobile devices is even prohibited during lectures.

To address these limitations and move toward a holistic solution, many campus safety officials are implementing visual alerting solutions as part of their communications mix.

The Need for a Comprehensive Emergency Notification System at Virginia Tech

Prior to implementing a comprehensive emergency notification system, Virginia Tech was faced with a common problem among higher education institutions of all sizes – how to communicate an emergency message across a campus community as quickly and efficiently as possible.

Virginia Tech's existing emergency response plan included email and SMS/text message modes of communication, but there were critical "soft spots" in the plan when it came to instant notification. Utilizing their current communications mix, officials had limited methods to reach students and faculty in captive spaces, such as classrooms and hallways.

With existing communications assets unable to fill the gaps in their emergency notification strategy, Virginia Tech embarked on a process to thoroughly research alternative modes of communication. Officials concluded that other communication modes, such as PA systems, would be unreliable in instantly reaching the campus community. The decision to purchase and deploy Inova Solutions' OnAlert LED displays for instant emergency notification was clear.

Inova Solutions' OnAlert LED Displays: A Core Component of VT Alerts

Inova OnAlert is a visual communications system that processes and displays customized messages on bright and visible LED wallboards. The displays normally show time and date information, and draw attention with audible alerts or color changes when an emergency message appears. The displays have a wide viewing angle and can be clearly seen from more than 100 feet away. In the Washington Metrorail system, these displays were among the few remaining functional communication devices in Washington, D.C. following the terrorist attacks of 9/11, offering informational and directional messages that led passengers to safety.

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In August 2008, Virginia Tech selected OnAlert displays to be part of its “VT Alerts” system. VT Alerts is comprised of a variety of methods by which the university can quickly contact students, faculty, and staff in the event of a campus-wide emergency announcement or important message. VT Alerts includes a multi-modal mix of SMS/text messaging to mobile devices, calls to home, office, or mobile phone numbers, email notification, and LED displays in classrooms.

The VT Alerts system is designed to cycle through all points of contact for a recipient until confirmation of receipt is received. For example, students may rank their top three preferred methods of message delivery, and VT Alerts will attempt to contact students through their preferred or quickest method of delivery. The benefit of augmenting such a broad-reaching delivery mechanism with LED displays is threefold:

- In emergency situations, students, faculty, and staff without ready access to mobile or networked devices will receive instant notification.
- LED displays are powered by the network through Power-over-Ethernet (PoE) technology. This means that consolidated, uninterrupted power supplies keep the displays connected and broadcasting even in the event of a power interruption.
- Mobile devices provide instant notification of emergencies when

wireless providers’ networks are clear. In the event of a flood of messaging through a single provider network, message delivery has been shown to take up to two hours. LED displays counteract this delay by providing truly instant notification.

Creating Value Every Day

Virginia Tech installed more than 200 OnAlert LED displays just prior to the commencement of the 2008-2009 school year in general assignment classrooms and other high-traffic locations. Full deployment of the LED displays was completed within 60 days of the purchasing decision. The university is currently reviewing possible installation of additional message boards in other campus locations. Virginia Tech included the addition of electronic message boards in general purpose classrooms following its comprehensive internal review of the events related to the April 16, 2007 tragedy.

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When an important message is posted to the LED message boards, a brief audible tone and message color changes draw attention to the boards and indicate urgency. When not utilized for emergency messages, the electronic boards display the current date and time, adding value to the university's investment.

In October 2008, Virginia Tech conducted its first campus-wide test of its emergency notification system since the installation of Inova Solutions' OnAlert LED displays. During this multi-modal test, Virginia Tech was successful in communicating to a vast majority of the campus community instantly. Inova Solution's OnAlert LED displays throughout the campus were activated instantly, while other modes of communication, such as SMS/text and email messages, took up to 20 minutes to deliver.

A Proactive Approach to Multi-modal Emergency Notification

As the need for efficient instant emergency communication has grown over the past few years, Virginia Tech has taken a proactive approach to providing the best

possible multi-modal coverage to its campus community. Using its innovative VT Alerts system as the backbone, and Inova Solutions' OnAlert LED displays as one of the many modes of communication, Virginia Tech has taken great strides in ensuring the protection and safety of students, faculty, and staff. Inova Solutions is committed to its partnership with Virginia Tech, and is proud to play an integral part in protecting the lives of the largest full-time student population in Virginia.

About Inova Solutions

Since 1984, Inova Solutions has been helping schools and universities, hospitals, manufacturing facilities, call centers and others communicate vital real-time information. To learn more, visit www.inovasolutions.com or call 1.866.686.8774.