

High-Tech Emergency Notification Systems One Year after Virginia Tech

(As Written for the Rothstein Disaster Survival^[TM] Newsletter)

There has been a tremendous proliferation of High-Tech Emergency Notification Systems since the tragedy at Virginia Tech in April 2007. Representatives of a number of colleges & universities that I have spoken with have recently implemented some type of mass notification system and most everyone appears to be pleased with their systems. This article will review some of the key factors that should be considered when selecting a system. I will also note key limitations of these systems – some of the points that the system vendors often do not highlight.

Limitations of Low-Tech Systems

Low-Tech Emergency Notification Systems such as Alarms, Sirens, Intercom Systems, Telephone Calling Trees, etc. all have serious limitations. Telephone Calling Trees can be used for mass communications but they are slow, subject to message error and even complete breakdown from 'missing links' or the failure of general voice communication systems. Alarms and Sirens (used to communicate a facility evacuation or an emergency lockdown) are fast and can be designed to alert everyone on campus who is in a dangerous area but they are poor in providing detailed information and ineffective outside of their audible range. Intercom systems are reasonably fast and can communicate detailed information but are generally limited when providing information to people in multiple buildings, people on campus grounds and people off campus. Nearly all Low-Tech Emergency Notification Systems are used for outbound messages, the capability to receive inbound calling ('two-way communicating') is either limited or nonexistent.

High-Tech Systems to the Rescue

High-Tech Emergency Notification Systems are automated mass notification systems that can deliver detailed messages fast and accurately. Communications can be made to a wide range of communication devices including phones (landline, cell & satellite), computers (email & instant messaging), PDA, Blackberry, and other.

High-Tech Emergency Notification Systems combine message speed, coverage and detail to a greater level than any of the Low-Tech Emergency Notification Systems. During emergency events, individual communication infrastructures often fail. The ability of High-Tech Emergency Notification Systems to utilize multiple communication infrastructures is another important advantage over Low-Tech Emergency Notification Systems.

High-Tech Emergency Notification Systems can also target special messages to individual groups, such as sending a special message to initial responders only. Some, but not all, of these systems have the capability to receive inbound calling. This feature is important during an emergency to confirm that key initial responders have received the message.

High-Tech Systems Limitations

In spite of all the advantages, High-Tech Emergency Notification Systems are not a panacea. In my opinion, the greatest area of concern is with the limited ability of High-Tech Emergency Notification Systems to wake up resident students and others in the middle of the night. There is also the limitation of reaching students who, for some reason, refuse to sign up for the service. Another area of concern is that the cell phone is the most likely device through which a student will receive an alert and sometimes cell phones are turned off.

When selecting a High-Tech Emergency Notification System, there are several factors or features of the system that may limit effectiveness. Particularly for larger institutions, the 'call capacity', essentially the overall speed of the system to deliver the message, may be a serious limitation. To be effective, emergency information must be communicated immediately. Some of the more basic systems utilize only voice communications – while communication with the most popular student device (cell phone) is available (by voice-mail but not by text message), the system is vulnerable to a breakdown of the general voice communication infrastructure. Ease-of-use and system cost are also important factors; there are other factors to be considered as well.

The 'Perfect System'

College and university campuses encompass a very wide variety of environments. Typically there are multiple buildings with different infrastructures and a wide range of densities between rural and urban campuses. No single system can possibly be best for every environment and the importance of communication redundancies requires the use of multiple systems.

While there is no such thing as a 'Perfect System' it appears that the 'Best System' is a blend of High-Tech and Low-Tech systems. A good High-Tech Emergency Notification System coupled with adequate Low-Tech Alarms and Sirens appears to provide effective communications for all types of emergency events regardless of when they take place.

For example, if a hostile intruder or tornado threat arises in the middle of the night (when High-Tech Emergency Notification Systems are only marginally effective); a Low-Tech Siren can wake everyone. Once awakened, individuals can then access their favorite communication device and receive detailed information via the High-Tech Emergency Notification System. Thus the best features of High-Tech and Low-Tech Emergency Notification Systems are combined.

In Summary

While unfortunate, there is no doubt that the need for effective mass emergency communications is a necessary part of campus life. Although this very brief analysis is not by any means all encompassing, it should give the reader a start on the process of evaluating and selecting the most appropriate overall system(s).

Douglas M. Henderson, FSA, CBCP
President, Disaster Management, Inc.
1531 SE Sunshine Ave.
Port St. Lucie, FL 34952
doug@disastermgt.com
(772) 337-2985