



## The Future of Campus Alerting

*Timely and informative alerts can save lives, unify response, stop rumors, and prevent panic*

*By Michael T. McKibben, Chairman & Founder  
Leader Technologies Incorporated, Columbus, Ohio, April 20, 2007*



Figure 1: A New Campus Anxiety<sup>1</sup>

The tragedy at Virginia Tech University on April 17, 2007 has school administrators across the nation looking for better ways to notify students, faculty, staff and even worried parents, friends, relatives and alumni about threatening situations. Security experts believe that timely notices to students and faculty, warning of a possible gunman on campus, might have lessened or even prevented the loss of life that followed.

Hindsight is 20-20. No one knows for sure whether any kind of alert could have prevented the scope of this tragedy. A lone, crazed gunman with no previous history of violence is impossible to predict. However, we owe it to the memories of the students and

<sup>1</sup> Stahler, Jeff. "Stahler." *Columbus Dispatch*. 18 Apr. 2007. 19 Apr. 2007  
<[http://www.dispatch.com/dispatch/contentbe/EPIC\\_shim.php?story=dispatch/2007/04/18/20070418-A8-01.html](http://www.dispatch.com/dispatch/contentbe/EPIC_shim.php?story=dispatch/2007/04/18/20070418-A8-01.html)>. Reprinted with permission of the author.

professors whose lives were lost to try and make sense out of the lessons learned, so that future lives may be spared the suffering so needlessly inflicted upon so many.

Security expert and former strategy executive in the Reagan White House, Bill DeGenaro of DeGenaro & Associates, points out: “Some Virginia Tech students said they would not have gone to their classes had they known a gunman was loose on the campus. In this situation, the principle being expressed is probably as simple as ‘being forewarned is being forearmed.’ Human beings are pretty creative when given good, preemptive information.”

While this white paper was being prepared, we supported a lockdown in a middle school in the greater Cleveland area. After a 59-year old woman wielding a knife was quickly disarmed, the school sent a 40-second **Leader Alert®** to 700 parents’ phones, informing them about the incident and allaying their fears.<sup>2</sup> This timely communication derailed panic and eliminated rumors, since the parents knew about the incident even before their children phoned them. Because parents were informed, calm prevailed, the school remained open, and classes continued.

**Split-second decisions mean leaders are not always going to get it right**

Alerting is fraught with complications and risks, according to John Ellinger, Senior Director of the Office of Information Technology at The Ohio State University. “If too many alerts go out too often, then the alerts lose their impact or are even ignored. On the other hand, if responsible people do not warn their constituents about impending danger when it is their charge to do so, then they are being negligent.” The conclusion here is that the use of alerting as a communications tool is as much leadership art as science.

**Campus Alerting Issues Checklist**

**Technical**

- Collecting and updating contact information
- Build or buy decisions
- Implementation and upkeep
- Scalability of equipment and networks
- Voice and data integration
- Contingencies

**Social**

- Need to know
- Concern over liability
- Need for reassurance
- Need for guidance
- Need for leadership
- Fear of making a mistake
- Curiosity
- Rumor control

**Policy**

- School policies on cell phones
- Guidelines for escalation
- Rules of engagement
- Lines of authority

**Regulatory**

- Privacy of contact information
- Network override authority

**Leadership**

- Responsible persons
- Message content and tone
- Incident priorities
- Organize response
- Frequency
- Flexibility to innovate

**Liability**

- System outages
- Incorrect information and instructions
- Mistakes in judgment
- Errors and omissions
- Receipt verification

Table 1: Campus alert system planning checklist

<sup>2</sup> Online: <http://www.leader.com/docs/LeaderPressRelease-LeaderAlert-04-27-2007.pdf>.

Alerting, especially voice alerting, has numerous technological and regulatory hurdles. Whom do you alert? Will those alerts be effective if school policy requires cell phones to be off in the classroom?<sup>3</sup> How do you collect telephone numbers? If a public institution collects this contact information, how can public disclosure of this private information be avoided when various federal and state freedom of information laws require disclosure? How do you manage and keep the contact list current? Who maintains the massive amount of equipment necessary to pump out a large number of alerts? Who pays to keep up this equipment? What is the capacity of the networks through which the alerts are being sent? Who should be given the authority to override normal voice and data traffic in order to open the channels to let alerts through faster?

With so many factors to contemplate before sending an alert, *who* decides to send an alert, *what* the message is, *to whom* it is to be sent and *how* it is to be sent become critical split-second decisions. Then, once those decisions are made, stakeholders must acknowledge that these decision-makers are fallible human beings. They are not always going to get it right. The risk and liability issues are obvious. What we do not want to do is place the alerting responsibility in a leader's hands and then second-guess them if they should make an honest mistake in judgment or action, as long as the mistake was not negligent or malicious.

### **Effective Alerting is a Complex Problem**

This convergence of complex *social, technological, risk, liability* and *regulatory* dynamics helps explain why effective alerting has eluded first response professionals as well as academic administrators. We at Leader Technologies have been studying this subject intensely for years. We have invented and now patented unified communications technology called the **Digital Leaderboard**®<sup>4</sup> that is capable of making large-scale, hybrid voice and data notifications to recipients more efficiently and effectively. We specifically studied what, in the data world, are called complex, “many to many” relationships among the requirements of large-scale collaboration. We believe we uncovered and solved critical problems that have held back cross-platform integration. Our business challenge has been to determine the best ways to offer and implement our discoveries in commercially viable and sustainable ways. Past attempts to implement government-funded alerting systems, for example, have largely failed. The conclusion here is that bureaucracies, by nature, seem ill-equipped to run successful citizen alerting programs. Most such programs start off with great fanfare and then die without a whimper. Therefore, it behooves the commercial world to figure out a model that is profitable, and therefore sustainable.

Many alerting media are possible, but for various reasons, each has limitations. For example, *voice calls* – so that the recipient can actually hear first hand an authoritative person's information, instructions and perhaps reassurance – may not be answered if the

<sup>3</sup> Dounay, Jennifer. "Pagers and Cellular Phones on School Property." Education Commission of the States. Sept. 2004. 19 Apr. 2007 <<http://www.ecs.org/clearinghouse/54/44/5444.htm>>.

<sup>4</sup> U.S. Patent No. 7139761.

student is in class; in those cases the alert will go to *voice mail* and be listened to later. *Emails* are good but are increasingly getting blocked by spam filters and besides, most people are not sitting in front of their computers 24x7. *Instant messages* offer immediacy, but no uniformity of broadcast across user systems. *Word of mouth* is slow and inaccurate. *Websites* are good for near term immediacy, but not for urgent information. Not enough people have *paggers*. *Faxes* are declining in use. *Public address systems* are spotty and often unintelligible. Newer mobile phones use *SMS messages* and most college students do “texting” although that too may be turned off if the student is sitting in a classroom. Therefore, it appears that a **hybrid of voice and text message notices to people’s cell phones is probably the answer.**<sup>5</sup> Then, depending upon the incident, perhaps followed up by **emails and web sites**. Nine out of ten college students have a cell phone.<sup>6</sup> Nearly all cell phones today have text messaging capability and 74% of the Americans owning cell phones say they have gained valuable emergency help by using them.<sup>7</sup>

### **Real world disaster communications experience**

Our disaster response experience confirms the need for voice alerts first, then text and web support second. We supplied voice alerting capabilities to Pass Christian Harbor in Pass Christian, Mississippi on the Gulf Coast, just east of New Orleans. As Hurricane Katrina approached, Harbor Clerk Glover Hayden provided regular voice alert updates using our **Leader Alert®** service to his vessel owners, some 400 in all. He did this multiple times during the final weekend prior to Katrina reaching landfall. Accurate information and expert guidance proved vital for vessel owners who wanted to avoid inadvertently moving their vessels into harm’s way. The final chapter in this story is sobering. Mr. Hayden issued a mandatory evacuation order to his vessel owners on Sunday. On Monday, August 29, 2005 at about 10:00 AM, the eye of Hurricane Katrina passed directly over the harbor, totally destroying it. Nothing but pier posts was left visible. To our knowledge, Mr. Hayden’s vessels all found safe haven in time.

Then, on Tuesday morning we received a call from the office of the Chief of Staff for the Governor of Louisiana, Kathleen Blanco, requesting immediate support to help the state’s elected leadership, first responders, even federal agencies coordinate their disaster response after more than one million of the state’s phone lines went out. Thus began many months of intense work for us in supplying teleconferencing, web-based news bulletin boards combining documents and voice recordings, and call-in recording and listening capabilities. In short, we observed a state government response to the worst natural disaster

<sup>5</sup> 37% of working Americans are online (eMarketer & Wall Street Journal, 2003) while 98% of American households have phone service (US Census Bureau 2000).

<sup>6</sup> The Associated Press. "More Colleges Give Cell Phones an 'A'" CBS News. 24 May 2006. 19 Apr. 2007 <<http://www.cbsnews.com/stories/2006/05/24/tech/main1653702.shtml>>.

<sup>7</sup> Rainie, Lee. Cell Phone Use. PEW INTERNET & AMERICAN LIFE PROJECT. Washington D.C.: PEW/INTERNET, 2006. 1-13. 19 Apr. 2007 <[http://www.pewinternet.org/pdfs/PIP\\_Cell\\_phone\\_study.pdf](http://www.pewinternet.org/pdfs/PIP_Cell_phone_study.pdf)>.

in the history of the United States. I have written a white paper on this experience titled *Heroes in the Storm*.<sup>8</sup>

### Future School Choice Checklist – Alerting System?

Will the presence of a robust university's alerting system become a deciding factor in school choice in the future? It seems likely, as it should be. Effective alerting makes sense. Besides being a useful and efficient communications and safety tool, it is good insurance.

I have three daughters attending three different universities. One attends an Indiana University affiliate in Scottsdale, Arizona; another attends DePaul University in Chicago and another attends The Ohio State University here in Columbus. My eldest son graduated from Harvard University in Boston and enters medical school at Case Western Reserve University in Cleveland this summer. As a concerned parent, I want to know that school administrators are doing everything in their power to make sure my children are safe and secure while under their care.

### Staying out of harm's way

Maynard Anderson, former United States Deputy Undersecretary of Defense for Security Policy and United States representative to NATO, and now an organizational consultant warns: "The chances of encountering a threatening situation on today's college campuses are high, unfortunately. It might not be a shooter; it might be the bird flu pandemic, terrorist activity, or something as mundane as foul weather. Further, stopping a lone, crazed shooter intent on destruction is probably impossible. In those cases, the best we can hope for is fast response from law enforcement in their action to keep it from getting worse."

Whatever the threat might be, we want to know that the administrators of those schools are capable of timely communications with our children so that they will not inadvertently be put in harm's way. Equally important are the security and well being of the faculty, staff and visitors.

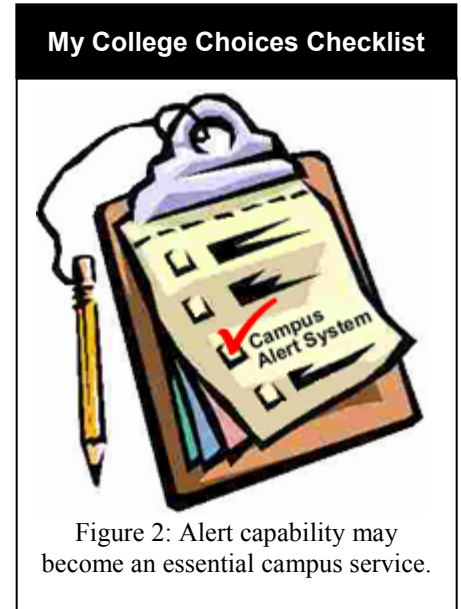


Figure 2: Alert capability may become an essential campus service.

Read about use of Leader Alert® in a Cleveland-area middle school lockdown. Visit [www.leader.com](http://www.leader.com) and click on Newsroom.

<sup>8</sup> McKibben, Michael T. "Leader White Paper - Heroes in the Storm." Leader Technologies Incorporated. 25 Oct. 2005. [Leader](http://www.leader.com/docs/Leader_White_Paper_-_Katrina_-_10-27-05.pdf). <[http://www.leader.com/docs/Leader\\_White\\_Paper\\_-\\_Katrina\\_-\\_10-27-05.pdf](http://www.leader.com/docs/Leader_White_Paper_-_Katrina_-_10-27-05.pdf)>.

### Stages of notification

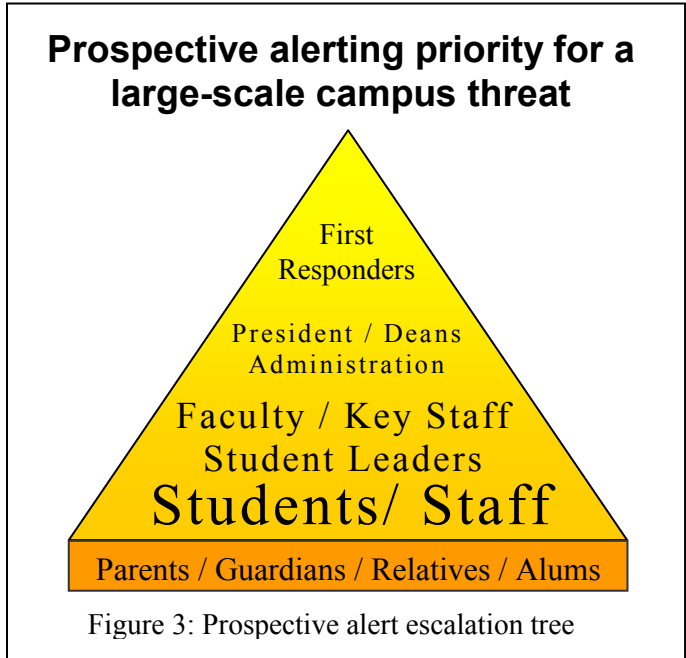
Putting the technological hurdles aside, how should alerts happen? Our research indicates that alerts about an evolving threat will probably occur in stages. And, different groups will be called first, depending upon the type of threat. This is socially as well as technologically practical. Socially, one only wants to escalate a notice broadly when the threat cannot be contained by a few, because otherwise, unnecessary anxiety is created.

Technologically, the capacity of different phone systems for simultaneous messages varies. Disasters are by nature unpredictable, so you want your first alerts to go out to the *most responsible people* in a descending hierarchy. This helps ensure that even if a phone or data system eventually overloads, at least the leadership knows about the threat and can get creative with further alerts down the communications chain. We observed Louisiana’s leadership become tremendously resourceful with whatever information they had, day by day.

With an unfolding disaster like Virginia Tech, the first people to notify are campus leaders: first responders, president, deans, faculty, key administrators, key staff, and student leaders. Once these people are alerted, you can widen the circle of those alerted until a sufficient saturation has occurred. Rarely will it be necessary to alert an entire student body, much less parents, guardians and alumni. However, when that is necessary, you don’t want to be told that you never planned for this capacity.

With a quickly neutralized threat like our customer’s experience yesterday at the Cleveland-area middle school, the parents were alerted immediately. One proactive 40-second voice alert to 700 parents was sufficient to allay fears and prevent panic. It is well known among school administrators that without such information, rumors and misinformation spread quickly and parents *will* act to remove their children from a perceived threat. In such circumstances, schools have needed to shut down for days to restore order. One quick, informative voice alert prevented these costly consequences and let the parents know that school leaders had acted responsibly and effectively.

An alerting system that can handle anywhere from a few up to tens of thousands of alerts is technologically sophisticated. Historically, alerting system architectures have been



fixed in their capacity and functionality. Leader has devoted almost ten years of intensive research and development to overcome this problem.

The Pass Christian Harbor example described earlier is case in point. Harbor Clerk Glover Hayden instituted a staged escalation of notices up until he eventually issued the mandatory evacuation notice in a calm, collected, and totally professional manner, factually and devoid of panic or anxiety.

Today it is possible to have a web-managed voice alerting system capable of alerting all the students, faculty and staff at Virginia Tech. Would it have made a difference in the outcome of the tragedy? Perhaps. No one can know for sure. The shooter might have succeeded in spite of the best alerting. Administrators can only do their best, and then leave the rest to human ingenuity.

However, pundits agree that people in harm's way, and those in a position to warn them, want and deserve the best alerting system possible. In this precarious world, while no one can guarantee the safety of our children in a given situation, we still strive to do what is best and most reasonable to protect them. Alerting systems like our **Leader Alert®** and others help inform those who are under threat, and so gives them their best opportunity to avoid or manage a dangerous situation.

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#### **About the Author**

*Mike McKibben is the Chairman and Founder of **Leader Technologies® Incorporated**, a web software company that specializes in integrating voice, video & data across existing application systems to enhance collaboration & decision making. Leader products and services include teleconferencing – **LeaderPhone®**, web conferencing – **Leader Meeting®**, and alerting – **Leader Alert®**. Leader provided a simulated emergency conferencing and alerting environment for Terrorex '04 in Las Vegas that was sponsored by the U.S. Department of Homeland Security, Boeing and the U.S. Department of Defense. More recently Mr. McKibben co-hosted the Ohio Homeland Security Initiative at Ohio State University to bring together existing, working technologies to assist the first responder community in getting effective, scalable solutions implemented sooner rather than later. In early 2006 Leader created **Leader Dialog™** to provide innovative new communications services to large numbers of people, partially in response to what Leader learned in supporting the State of Louisiana's Hurricanes Katrina response. The underlying unified communications software engine for Leader's products, **Digital Leaderboard®**, was recently awarded a patent – U.S. Patent No. 7,139,761. Learn more about Leader at [www.leader.com](http://www.leader.com). You may contact Mr. McKibben at [mmckibben@leader.com](mailto:mmckibben@leader.com), or at Leader Technologies, 614-890-1986.*

For more information, contact:



#### **Leader Technologies® Incorporated**

921 Eastwind Drive, Suite 118  
Westerville (Columbus), Ohio 43081  
(614) 890-1986 voice  
(614) 864-7922 fax

[www.leader.com](http://www.leader.com) | [www.leaderphone.com](http://www.leaderphone.com)  
[www.leaderdialog.com](http://www.leaderdialog.com) | [www.leadermeeting.com](http://www.leadermeeting.com)

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