



The Dependable Choicesm

ABOUT EMERGENCY MASS NOTIFICATION

The mass notification product marketplace is full of vendors selling software that allows a user to send text message alerts to large numbers of cell phones, email addresses, pagers, and PDA's. In this method the user enters the relevant contact information of prospective end recipients into a data base. In an emergency the user can pull up desired recipients from the data base, enter a specific message and then "send" the messages to the recipients. What the software does when the send button is clicked is to begin the process of delivering the emails to the Internet, and the text messages to the various cell phone providers and paging providers. Originally designed for relatively small groups (1,000 or less) often receiving non emergency messages, these software products are now being marketed for very large group applications in emergency situations.

At first glance this looks like an answer to many mass notification problems. While these software systems have their place, **it is very important to look deeper in to this type of alerting and understand the significant limitations inherent in these systems.** The paragraphs below discuss the main issues:

1. Reliance on outside systems. The software simply sends messages to various third parties. The reliability of these third party systems at any given time is unknown and completely out of the users control. We have all had the experience of interrupted Internet and of cell phone call being dropped.
2. Slow delivery. Even under the best conditions, by that we mean the users network and all of the third party networks are operating at full speed, large batches of messages will take significant time to be delivered. It is not possible with current technology to batch out bulk text messages to cell phones and PDA's. It is still essentially a serial process. A small community can easily have 30,000 or more names in a data base that need notification. Larger communities may have 60,000 or more. In today's world of text messaging it is lucky if a major system can reliably send out 10 messages per second in a given geographic area. If we assume that a given cell system may have to handle 25,000 messages then that provider alone will take 25 minutes before the last recipients has received the message. That lag time does not include the software itself which has to batch and deliver messages to the providers. The bottom line is that under the best conditions with everything working perfectly one can expect a minimum of 30 minutes before a large batch of messages is delivered. In reality the world of wireless and Internet networks do not work at full speed all the time and can be very prone to overloading problems. The odds of having a large quantity of messages requiring over one hour to be delivered are very high.

3. Ongoing Data Base Management. For a software solution to have benefit it must have a relevant database of recipients. In the case of a university of 30,000 students for example, one can reasonably assume that between students, faculty and employees there will be a turnover of approximately 10,000 recipients per year. This will require the manual entry of 10,000 new recipients and the judicious deletion of 10,000 others. On top of this is the changes to existing recipients if they change phone providers or email accounts. Even systems that require the end recipients to opt in and enter their information themselves will still need the administrator to delete when they have left the area. If deletions are not kept current the data base will balloon in size over just a couple of years and dramatically slow the delivery process. The entire data base management has to be managed carefully and needs to be considered as a recurring cost when evaluating the price of a software solution.
4. Fractional alerting. When alerting recipients using text messaging or emails the user has no control over or knowledge of just how many people receive the message. Clearly, if an intended recipient does not open their email box or look at the text message they will not know of the emergency. If a professor has a classroom policy that all phones are turned off then no one in that auditorium will be alerted. If the emergency message is sent in the middle of the night it is very likely that few will see it.
5. Significant potential for hacking. The software programs that allow for mass messaging are available to anyone. It is a very real possibility that a malicious event could take place whereby a criminal develops a data base of recipients in a given area. False or misleading information can then be sent to large numbers of people that at best is a terrible prank or at worse is a foil to aid a much larger criminal act. If an institution educates their recipients that text messaging is their primary alerting tool then their intended recipients become highly vulnerable to a criminal hack.

The Ideal Mass Notification System

The ideal mass notification system for emergency use will have a well engineered primary system using installed devices at physical locations that deliver multisensory alerting with clear information SIMULTANEOUSLY. By using widely available digital messaging (commonly referred to as paging) in combination with carefully crafted client software, a reliable mass notification system can be constructed that fulfills the above described requirements. Digital messaging allows for fast transmission of the message to any number of fielded alerting devices that are located in and around a community. The client software allows for simple and intuitive delivery of alerts to these devices. As the emergency unfolds the user can then deliver updated information to the fielded devices at any time.

In addition to the ability to achieve the desired alerting results, paging also delivers the lowest possible system cost. This is due to the fact that paging technology is well proven, and has been in mass production for decades. While cell phones have cut into the market for traditional personal pagers, paging technology is still the fastest, most reliable and most cost effective communications link of choice for thousands of first responders nationwide.