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Preparing for the Big Disaster

Communication elements that render an institution "well prepared" to manage events during a disaster.

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Preparing for the Big Disaster

Communication elements that render an institution "well prepared" to manage events during a disaster.

This paper focuses on emergency communication to large groups in communities with college or institutional campuses; its objective is to help those in emergency management "manage to outcomes" by strengthening performance in emergencies. The ideas and conclusions presented here are drawn from the March 2012 Em2 Roundtable Conference on the topic.[1]

A problem for our communities is that not all emergency managers are well prepared to ensure effective communication during an emergency or disaster. While it's clear that not communicating effectively can make a bad situation worse, the emergency management community is only in the learning stages of this discipline; only recently have emergency managers begun sharing ideas and experiences on what succeeds and what fails in emergency communication.

Three central issues substantively impact whether emergency communication works or fails:

- Message Content.
- The mix of communication technology deployed to deliver messages.
- Advance coordination by varied emergency response institutions and personnel.

In emergency management, some confusion is inevitable; but by controlling these three things, errors and confusion in public communication can be minimized. While emergency management participants are for the most part familiar with the importance of communication during an emergency, and while much of what we talk about here is already known, examining the *process* of mass emergency communication by focusing on the interaction of these three core issues illuminates and clarifies the essence of successful practice.

These three elements work *together* to produce effective communication that succeeds. If any single element is absent or insufficient, communication can fail.

In March 2012, a jury found Virginia Tech negligent for waiting to warn students about a gunman during a 2007 campus massacre that left 33 dead.

-- **Campus Safety Magazine**, March 14, 2012

"Emergency communication management is in the infancy stage of its growth curve. Virginia Tech's information *mismanagement*, lawsuits, and other consequences were the tipping point triggering the process of focusing on and ramping up emergency communications."

 - **Peter Harrod**, *Rolf Jensen and Associates*

Defining Safety Through Dialogue

1.   **Creating *Effective* Emergency Messages**

The message is the essence of emergency communication.
Effective mass-communication messages are affected by a
number of factors, including information origin, how it flows into
the emergency command center, how its veracity is measured,
the stage of the crisis, and how decisions are made about what
information must be released, to whom, and when.

Communication has two sides:

- Gathering *reliable* information.
- Disseminating *pertinent* information.

WHEN A CRISIS OCCURS, WE MUST KNOW WHAT TO SAY, HOW AND WHEN
TO SAY IT, AND TO WHOM

A crisis is like a living organism: it grows, changes, and evolves. It
has a beginning, middle, and end. Because emergencies are dynamic, what emergency managers say,
the wise timing of announcements, and the audience, and information needs all change as the event
unfolds over its lifecycle.[2] This is why emergency mass-notification messages and key communications
among response teams must be created by persons with requisite skill and experience, and access to
planned resources.

Message creation occurs under the Public Information Officer's authority and management. All
emergency response participants (local governments, departments; campus administrations) must
ensure clarity on who controls the messaging. There is no room for confusion or disputes about this
critical role. Each organization responsible for participating in emergency response activities must be
perfectly clear about this. Questions to resolve carefully in advance include:

- ✓ Is the PIO, or someone under the PIO's direction, in charge of
  creating key informational or instructional statements? Are team
  participants suitably briefed on who is in charge of published
  statements?
- ✓ Is the task of crafting messages assigned to someone with the
  requisite skill or experience in communicating essentials and
  discerning what's pertinent?
- ✓ Does the message writer produce clear, effective, accurate, and
  persuasive communications?
- ✓ What message-creation procedures are in place if the person in
  authority (PIO) is not there?
- ✓ What's the hierarchy for message management, and are all
  individuals in the hierarchy well trained in crafting emergency
  messages?
- ✓ Is the PIO hierarchy well defined?

**What is an
Emergency/Disaster?**

"Disasters are the final exam for
a community, when they have
not even taken the course."

- Dr. Denis Onieal - Superintendent
of the National Fire Academy

"The greatest problem with
communication is the illusion it
has been accomplished."

- George Bernard Shaw

"Whether an
emergency
management
department has one
person or 15 people,
they all have the same
communication
challenges."

- **Jon Evensen**, *Rolf Jensen
and Associates*

Part of effective messaging is *consistency* in messages from one level of command to another and on campus vs. city or town. Messages must be consistent. Make sure that what your group is communicating to the public is consistent with what other information officers at other levels are communicating. Consistency is part of accuracy and minimizes confusion and errors. If messages are contradictory from one command to another, it sows confusion.

High-profile communication blunders have proven that ineffective communication hampers efforts, contributes to cascading failures, and can create quagmires.[3] With high stress levels and short time, crafting the right message under pressure is quite a feat, and requires preparation.

ADVANCE PREPARATION FOR MESSAGE MANAGEMENT

A. <u>Education</u> – Ensure that all parties responsible for gathering, reporting , or managing information during an emergency, and those responsible for communicating to others, including participating fire departments and emergency managers, are well trained on the importance of accuracy and reliability, source verification, and effective message creation and management. Enable all emergency response professionals to understand how those in charge of mass communication (PIOs) presently create mass messages, what their best message-development practices are, and the lessons they've learned regarding successful vs. ineffective messages. Establish instructional tools on message fundamentals.

B. <u>"Selling" the Message</u> - Most emergency managers are OK at "managing" information (gathering and disseminating facts), but that's different than "selling" the message. History is filled with examples of the public's propensity for ignoring official emergency warnings. Bland facts are easily ignored. Emergency managers must strive to manage and refocus the public's "attention" by relaying facts and instructions in a *compelling* (i.e., hard to ignore) manner that the public will heed, one that actually induces responsive action and overcomes resistant mindsets.[1] Messages grab attention through clarity and credibility – which is more feasible today since citizens can now be engaged more thoughtfully through sophisticated technology.

C. <u>Message Library</u> - Create a permanent library of messages and templates suitable to your community's emergency needs and risk profile(s). Review and collect effective messages used by professional EM peers. Develop your own *prescribed* messages for foreseeable events and event stages – ensure clarity by pre-scripting messages in advance where feasible rather than under the stress of an unfolding emergency. Have these pre-scripted messages well organized and easily accessible for immediate use as events unfold. Such a customized message library becomes a highly useful emergency-management resource readily available for your emergency-management community.

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[1] According to Erik Auf der Heide, in *Common Misconceptions about Disasters: Panic, the "Disaster Syndrome," and Looting,* [a CDC publication - http://www.atsdr.cdc.gov/emergency_response/common_misconceptions.pdf], the usual initial response to disaster warnings is disbelief, not panic. If warnings appear credible, the next response is to confirm its validity, via radio and television, friends, relatives, or neighbors. If there is conflicting information or vagueness about the threat, warning recipients tend to downplay the danger. Threatened populations will seize upon any "vagueness" in a warning message that allows them to reinterpret the situation in a nonthreatening fashion. Nonspecific warning methods, such as sirens, are notoriously ineffective in getting recipients to take protective action.

Defining Safety Through Dialogue

D. <u>Advance Messages</u> - Emergency managers can help prevent disasters by communicating important facts about *preparedness* to the community in advance; they can also do this *after* a disaster as a closing safety recommendation – tying the unfortunate event to proactive conduct by the community. Taking advantage of today's high-tech message dissemination tools, EMs can inform and remind affected communities about products and services available to individuals that aid in minimizing the risk of a disaster or its impact.[2]

MESSAGING ESSENTIALS

Advanced communication technology is great, but even today's sophisticated systems still require that real people create highly effective messages well designed for large groups, or for specific response teams. Words matter. Clarity and conciseness matter. Conveying authority and urgency without creating panic matters. The public is more likely to act on warning messages if they understand the warnings, believe that the warnings are true, believe they are *personally* at risk,[4] and perceive the message source as trustworthy, credible, and authoritative.

The pressure and pace of unfolding events foster mistakes, confusion, poor word choice, and bad timing; these common threats can destroy the utility and success of an emergency message. It's risky to just assume that anyone knows how to create a "good" message. Individuals crafting messages must know what they're doing, have messages crafted in advance, and be well trained in producing messages "on the fly."

> "Information management is not the same as attention management, and emergency managers are not taught the difference," said Art Botterell, a disaster-management consultant with Carnegie Mellon University, Silicon Valley. (Lucus-McEwen, 2011)

How do you create messages that recipients trust, don't sow confusion, and really work? Pay close attention to each of these elements:

A. **Intended Recipients –** Be certain you *clearly* identify the group the message is written for and affects. The team producing the message must determine and understand to whom it is speaking. Everyone that receives the message should immediately know whether or not it applies to them. Even when the message applies to everyone, state that. If there are exceptions, state the exceptions.

B. **Message Objective –** Be clear on what you want the message to accomplish; what action or response do you seek, if any? What is the message's purpose? To notify or warn? Or to instruct and induce action? Or all of these? By answering these questions first, you can quickly get to the point(s). Is the message one of a series, or the only message time permits?

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[2] A good example of *effective* emergency management communication pre-and-post disaster is the recommendation of cooking fire safety solutions like Pioneering Technology's Safe-T-Sensor auto shutoffs for microwave ovens and electric burners. Since most cooking fires occur at predictable times of day, social media and text messaging can be effectively used to target the audience with disaster-prevention messages about wise consumer choices. For more on Pioneering Technology, see page 19 below.

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C. **Information Needed –** Before writing or releasing a message, discern exactly what information the recipient *needs to respond appropriately, at that particular stage of the crisis* (warning, during event, post event). Ensure that the message contains *that* information, and not a bunch of superfluous stuff. The amount of detail an audience needs changes along the event timeline. The specific information provided should be what is necessary to engage audience attention through the course of the event. Releasing information not tied to an event stage risks it being ignored or misunderstood. If information is emerging, and updates will be issued, be clear about when updates occur, and the public's need to stay alert for new data.

1) Discern the difference between essential information (i.e., what *must* be released to the public at a particular point), and non-essential information that can be delivered later or in other ways. Examples of essential information include:

   o Concise description of the event or occurrence.
   o Why is it an emergency? Who is in authority?
   o Where is the emergency? - Pinpoint the location.
   o What is affected? Traffic? Buildings? Power?
   o What is the urgency of the situation and likelihood of impact?
   o What is known? What is unknown?
   o What is dangerous? What is safe?
   o Where to learn more; where to report information.
   o Where to assemble.

D. **Instructions / Action –** Identify the specific action(s) or precautions, if any, the public should take. Likewise, identify conduct that is discouraged or prohibited? Examples of instructions include:

1) Specific directions to the public.
2) What is expected of the public – action required.
   o "Pay attention" "seek shelter immediately" "stay where you are."
3) What to *not* do. Action to avoid.
4) What's mandatory; what's voluntary.
5) Specific courses of protective action that can be taken to reduce the threat (what is obvious to some is not obvious to others).

E. **Timing –** Anticipate and assess appropriate timing for the message release. Is the message release timed to permit recipients to take advantage of the information or follow the instruction? Will its timing cause undue panic? Is the message being repeated frequently enough to demonstrate urgency? Does the team have sufficient information to justify the message's release, or is more information needed?

> What became clear early on during the half-day session was that while there is a need to use technology, the infrastructure relied on may not be in place during a disaster; to borrow an attendee's quote, "we are going to need to go back to the old fashioned way of runners, messengers and bullhorns." That realization, led the group to start focusing back on basic messages that can be disseminated over a variety of platforms.
>
> -- **Mike Halligan**, Em2 Conference attendee, University of Utah

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1) Discern when to release incomplete or uncertain information (vs. when it's right to wait for more detail before going public).

2) Distinguish between pre-event, during-event, and post-event messages, and the essential elements of each. Understand how each stage of a crisis dictates the public's (or other audience's) information requirements. Establish how to create effective messages *before*, during, and after an emergency event.

F. **Proof for Clarity –** Ensure clarity *to the recipient* and avoid "erroneous" messages and misinformation. "Proofing" messages is essential and should include:

1) Verifying facts and information sources, and evaluating their reliability and veracity.

2) Advising public when information released is uncertain, contingent, or subject to change.

3) Confirming that message content is "understandable" – i.e., crystal clear and not susceptible to multiple interpretations or misunderstanding.

4) Eliminating unnecessary, non-essential (too much) information and words. Trim long messages into manageable, easily understood segments. Long messages are dangerous in an emergency because they are frequently not read or understood. Rambling, run-on statements should be avoided.

    i. Reduce important, emergency-relevant concepts to no more than three points, each in a separate short sentence; limit the total words to 30 or less and ensure comprehension for a sixth-grade reading level.

G. **Proof for Medium –** Verify that the message's structure and content is suitable for the communication medium used (i.e., email vs. text vs. radio vs. twitter). If the message is released through multiple mediums, ensure that the message is suitably adapted for each without losing clarity. Messages must be crafted to work effectively through the communication medium used. One message may require several different versions, each for use with different communication tools.

1) E.g., a Twitter message is limited to 140 characters. "Get out Now to save your life" may be all you can say on a bullhorn, but the same message on a broadcast email could contain many more details and instructions.

H. **Message Tracking** – Ensure that your team knows a message was sent. Your system should track released messages and statements, and confirm status so that your EM team members all have accurate status information.

Comparative illustrations of effective (good) vs. ineffective (lousy) emergency messages are provided in Appendix 1.

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2.   **Communication Technology**

To be effective, well-crafted emergency messages must be disseminated to, and *reach*, the right people at the right time(s). The technology is the *means* of getting the message out. Even if you have a great message, you need the right technology to get it out. Wise, strategic, and redundant (combined) use of current and traditional technology is essential to reaching affected populations. The best messages are useless if they aren't received and heard.

EMs must stay informed about emerging communication technologies, and take all appropriate steps to ensure that effective emerging technologies are implemented and integrated with older technologies. Keeping current on communication tech innovations has to be a deliberate part of the emergency-management process.

It's also essential that EMs proactively inform the public (in brochures and online publications)[5] of the various communication technologies *their community uses*, and provide appropriate instructions for access and interaction (e.g., email, text, social media sign up), so affected populations know what form(s) emergency communication will take and the steps required to receive emergency messages through those mediums.[6] Community (and campus) populations must be informed of what to expect and look for in emergency communication, and how to communicate information *to* emergency managers. Sadly, even today in our "connected" world, studies indicate that a majority of Americans are unaware of local emergency communications capabilities, and remain apathetic toward responding to emergency alerts.[3] The public is shockingly complacent about their awareness of and response to emergency communication.

Part of a technology's success is the community's understanding of it and preparedness to interact with it.

Examples of the varied technologies that can be used today are listed below; some are old, some are new, but using them all together gets the message out. Essential tools for emergency communication include:

A. **Basic technology**

   a. A "word-of-mouth" program. Identify a number of locations on campus to which a runner can deliver and post information.

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[3] SecurityInfoWatch.com, *Survey: Majority of Americans Unaware of Local Emergency Communications*, June 21, 2012, http://www.securityinfowatch.com/news/10732788/survey-majority-of-americans-unaware-of-local-emergency-communications - The 2012 Federal Signal Nationwide Public Safety Survey (2,059 adults) conducted by Zogby International on behalf of life safety and security systems manufacturer Federal Signal demonstrates that many Americans are oblivious to emergency communications capabilities in their local communities. The online survey found that while 56 percent of Americans believe they are knowledgeable about the steps they should take when disasters strike, 71 percent said that they were unsure if a personal alerting and notification system (ANS) existed in their area.

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b. Advance directives to students – monthly!
c. Establish meeting / assembly points – in advance.
d. Responder Identification - Clear identification of emergency personnel is part of effective communication. Clearly marked attire demonstrating authority and specific functions (e.g., yellow safety vests for traffic and other directors) allows the public and other emergency personnel to quickly understand who is doing what, who has what authority, and who is on what team.

  o Identification in Emergency Settings – Quickly verifying role and authority is essential effective communication management. Identification is key to establishing lines of authority. All on-campus personnel need to understand the imperative of proving who they are at all times.
  o Have thorough ID cards for on-campus personnel so they can clearly justify their presence in an emergency to other emc people in authority. These cards intended to conform to a national standard. Have a call this number to verify.

B. **Standard Technology**

  a. Bullhorns, and good whistles.
  b. P.A. systems and on-campus sirens.
  c. Radio - Ham operators, CB radios, college stations.
  d. Reverse 911
  e. Campus Cable TV

C. **Recent Technology**

  a. Automated incident notification systems simultaneously delivering voice and text.
  b. Alertus Beacons - dispatcher enters key data, which streams across the device in each room along with strobe lights.
  c. Voice over IP – properly configured, these systems can robo-call thousands of telephone numbers at once and present pre-recorded digital messages.
  d. Backward Notification – Important PA system through the Fire Alarm System. This polices all buildings – designed to function more than 24 hours. When fire alarm is pulled, messages

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Emergency Management and Communication Systems Consultants

Companies like Rolf Jensen & Associates (RJA), an Em2 contributor, understand the importance of emergency planning. RJA Group, a leader in life safety consulting services, develops unique plans for campuses or communities focused on various emergency scenarios, ranging from natural disaster, fire or civil disturbance to a security breach, chemical release or terrorist attack. RJA will develop a master-design strategy to evaluate and integrate a range of emergency communication systems to provide seamless interoperability when an emergency event occurs.

Alertus Beacons

http://www.alertus.com/beacon/ - Wall-mounted Alert Beacons flash and sound to capture the attention of building occupants at a distance, and display a custom message from public safety/security about the nature of the emergency and appropriate response. The strobes and sounder provide greater coverage reach than speakers for signaling attention, and the integrated text LCD offers high message intelligibility.

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go backward through the same system to speaker in alarms. (Biggest part of cost is with the fire alarm system.)

D. **Computers, Websites, and Social Media**

o Broadcast Emails and Text Messages
o Social media as central information dissemination points.
  ▪ Twitter, Facebook, YouTube
o Website Banners
o Smartphone applications
o QR Codes

WHY REDUNDANCY? WHY A MIX OF TECHNOLOGIES?

Every technology we rely on has limitations … systems can fail. Cell towers can't handle traffic. TV may go dead. Power grids may go down. Servers can be hacked. The nature of emergencies and disasters are such that any part of communication infrastructure can be disrupted at any time. It's unpredictable. Unfortunately, humans have a tendency to become over-reliant on familiar technology, and most people are woefully unprepared to function without the systems they depend on.

While system disruption is somewhat inevitable, *emergency communication* can't be disrupted. It must continue, and emergency managers must be prepared to communicate during emergencies no matter what happens to infrastructure, systems, and grids. Being prepared for these possibilities requires that operational strategies with backup systems be in place. They must be prepared to use all means of communication reasonably available. An "all of the above" strategy is essential to ensuring that if one method fails, another method will work.

BALANCING HIGH TECH AND LOW TECH

What if you don't have the technology in an emergency – how do you get the message out? Emergency managers must balance the high tech and low tech. Both must be usable and understood by the response teams. To avoid confusion when using multiple communication systems, here are some pointers:

"When it comes to recent tornadoes in Southeastern Ohio we've seen that dependency on cell phones is a challenge. Towers have a tough time handling traffic and systems get bogged down, overwhelmed, and jammed; this risks being late in notification. Sometimes technology cannot handle the burden of the disaster."

-- **Brent Auker**, Em2 Conference attendee, Ohio University

"First, it's important to gather reliable information. Second, good *basic* tech is essential since some newer technology is just too much, or too complicated, especially when the event is over in just a few minutes. While Indiana University systematically updates all phone contacts and social links, and issues advance directives through websites and other online mediums, reliably getting the right information out remains difficult."

-- **Steve Arthur**, Em2 Conference attendee, Indiana University

- ✓ Establish a "reliability hierarchy" – in emergency notification systems and use. How are they used in combination to ensure coverage? Identify all available communication methods, and which methods are used in what order; which are most reliable (primary) and which are backup only (supplemental); which should be used simultaneously, and how to recognize that a system has failed. Understand which systems are able to survive off the grid during a power outage (e.g., through generators). Understand which systems are practical for which populations.

- ✓ Ensure that all personnel are well trained on these varied low-and-high-tech tools, and the protocols and strategies for their mixed / simultaneous use.

- ✓ Push messages out in multiple mediums, but from one single location. The messages released through each medium must have the right, consistent information, and releases must occur under the right authority (PIO). A single point of origin for all communication streams reduces the risk of error and lost time.

BROADCAST EMAIL AND TEXTING –

- Even though phone texting programs and email are highly reliable when the system is up, with any text or email, emergency managers don't know how many messages are actually received. Inevitably, a fair number of recipients may not see the message for hours, or at all. Recognizing this limitation, EM's must also use other broadcast tools. Website announcements, emails, texts all have the limitation of "did the message get to the recipient?" Even with this limitation, used in combination, the prospect of deep coverage improves.

- Using email and texting – requires that campus and city administrators maintain accurate and up-to-date email and telephone databases. This is a big task, and the systems have to be in place and well managed. Even then, numbers and emails routinely change without systems being updated.

- Software products/services are emerging that permit community emergency managers to quickly and efficiently compose and disseminate emergency messages *across multiple platforms simultaneously*, e.g., social-media sites, text, voice, RSS, etc., while easily targeting messages through geo-mapping, groups, and filters. An example is "Blackboard Connect."[7]

- Beginning in mid-2012, smartphones enabled with Wireless Emergency Alerts technology can receive 90-character emergency messages in certain geographic zones established jointly by FEMA and wireless providers. Use of this federally managed system is limited to "imminent threats" such

> "From a technology perspective, our research shows it's important for campus public safety officials to have a Twitter presence.
>
> That should become a trusted source for such emergency information. The number of followers for such a Twitter account would increase enormously during an emergency and allow for trusted word-of-mouth dissemination."
>
> --H. Raghav Rao, SUNY Distinguished Service Professor, UB School of Management.

> "We now frequently use text messaging alerts and the Blackboard Connect alert system to reach students and the community."
>
> -- Jim Patton, Corvallis Fire Department and Oregon State University

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as tornadoes, hurricanes, flash floods, blizzards and extreme winds (doesn't include others like severe-thunderstorm watches or warnings). System use will increase as smartphones become more pervasive and emergency managers adapt to the process of releasing their messages through the system. These messages hit all smart phones physically present within the configured geographical area of the emergency, regardless of whether the phone's number originates elsewhere.

QR CODES – Rapid growth in the use of smart phones now renders QR (quick response) codes a useful option for quickly getting affected populations to emergency notification websites, expanding citizen access to emergency alerts.

By encoding the square-shaped 2-D bar code matrixes to automatically link with a public-notice webpage, and widely posting and promoting the QR code, emergency organizations offer communities yet another effective mechanism for instant information access during emergencies. With a smartphone ([with a QR Reader app](#)) and a QR code, users can instantly view published emergency alerts, rather than having to enter a website or search for information.

The QR code can link directly to a designated emergency-notice page offering both up-to-the-minute information, and registration to receive direct emergency notifications via voice, text, and email. (Scan this QR Code with your smartphone QR reader to see how documents like this paper can be presented.) The convenience of QR code instant access and registration improves the chance that affected populations, especially on campuses, will see emergency messages and instructions.

SOCIAL MEDIA – The recent emergence of social media is transformative; its impact on communication is exponential, especially among younger populations (e.g., on college campuses). Information disseminated through social interaction (shared among people who know each other directly or indirectly) is *trusted* and thus very effective. Because social media allows the community to instantly post facts, alerts, warnings, questions, requests for assistance, and other comments it is unique as both an information gathering and dissemination tool, it has disrupted the processes through which major segments of the public receive and share information, and dramatically affects emergency communication protocol and standards. The power of this medium must be understood and wisely used, as it presents both great opportunity, and some serious risk.

It's not just another communication channel to get messages out. Tweets and Facebook posts are becoming life-saving tools. "It is important that emergency managers use the tools their communities are using," according to Sara Estes Cohen, an independent social media consultant specializing in emergency response.[8] Because the internet is now so pervasive, many look to social media sites as a source for emergency information. The medium is increasingly being used by disaster victims to seek help and inform authorities. "Social media is becoming an integral part of disaster response," said Wendy Harman, director of social strategy for the American Red Cross.[9]

Two 2011 surveys conducted by the American Red Cross found that Americans increasingly rely on social media, smart mobile devices and online news to learn about unfolding disasters, seek help and share emergency-related information.[10]

Key ARC Survey Findings include:

- Following television and local radio, the internet is the third most popular way people gather emergency information, with 18 percent specifically using Facebook for that purpose.

- 24 percent of the general population and 31 percent of the online population would use social media to let loved ones know they are safe.

- 80 percent of the general and 69 percent of the online populations surveyed believe that national emergency response organizations should regularly monitor social media sites in order to respond promptly.

- For those who would post a request for help through social media, 39 percent of those polled online and 35 of those polled via telephone said they would expect help to arrive in less than one hour.

Not only should emergency managers use Social Media platforms to disseminate information, they should adjust procedures to *actively monitor* social media sites to gather information flowing among members of the affected populations during the emergency. In this way, EMs *engage* with the community and acquire otherwise unavailable on-the-ground knowledge in real time. This information can be critical in guiding response efforts. Given the clear (and dramatic) advantages of effective social media usage, emergency managers should commit digital volunteers to listening to and engaging social communities, monitoring feedback, and working with emergency response colleagues on processes and protocols for *acting* on incoming information during disasters.

"Social media is not just a new way to broadcast information. It reverses the direction of communications."

"Emergency managers have to understand that the public is going to self-manage the disaster with or without them, so the challenge is to develop a collaborative model where the old assumption that the public is a problem to be managed is replaced with the assumption that the public or your employees are a resource to be harnessed."

- John Orlando, Social-media Consultant.

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An example of this interactive dynamic – Storm-Spotter classes presented by the National Weather Service at Indiana University (Bloomington) in March 2012 are so popular that the 40 available seats are immediately filled and a waiting list builds. While class attendees have not been used by the university in the past, "we've come to realize that these folks would be a very good resource for alerting us to actual severe weather occurring on campus. We're going to begin working on a procedural guideline [for spontaneous field report submissions]," according to Marilynn Mundy, an IU emergency manager.

Similar procedures could be established for receiving and reporting information about victim tracking, volunteers, and material donation from persons within the affected population.

Researchers from the universities of Colorado and California at Irvine found that during the October 2007 Southern California fires, residents turned away from mass media and official information sources and instead used peer-to-peer blogs, forums, e-mails, text messages, and Twitter to learn about fires in their neighborhood. Social Media provided better, more-timely information, and the means to quickly re-disseminate it. Community participation kept rumors in check, validated information sources, and posted news instantly.[11] Even Deputy FEMA Administrator Richard Serino noted, in closing a March 2012 Think Tank conference in Atlanta, "Community is a crucial part of all preparedness plans. It requires effort from the whole community to get through a disaster."

Because there is a certain learning curve associated with social media platforms and their use by emergency managers, it remains essential to use social media in combination with other communication technologies. As effective and pervasive as it may be, like any other technology option, it's unwise to rely too much on one medium.

If critical members of your communication team don't "get" social media, or dismiss its relevance, training about the effectiveness and pervasiveness of this communication medium is in order. Team leaders need to embrace social media and ensure that, even if they don't fully understand it, social media is part of all emergency communication strategies, and that the team has members proficient in the medium.

Finally, when your response team does use social media, *be certain of your message*, its clarity and accuracy, because once you put it out there, you can't pull it back. The viral medium takes over. Have systems in place to ensure that bad messages can't slip out through these mediums. The nature of social media is such that the risk of misinformation is high. That said, when using social media as an information source, take appropriate steps to screen (verify) the incoming information. Teams must implement mechanisms to distinguish between bogus postings and reliable (pertinent) information. Ensure that your Social Media team members are *system proficient*, and capable of getting out ahead of the message curve while managing a large volume of incoming posts.

3. **Cross Training - Area Emergency Managers**

Emergency responders and managers for the city, campus, fire, at all levels must know and be familiar with each other, their systems, and their protocols, their hierarchies; they must work seamlessly together.

This ensures that everyone knows what to expect out of the other, what inter-and-intra-agency lines of authority are, and what each command's technical capacities and proficiencies are. By knowing these essentials about each group, emergency commands can wisely use available resources and systems.

Under ESF#5 each level of government is responsible for coordinating planning efforts with their higher, lower, and adjacent partners.[12] In college towns, these include:

1. local fire departments
2. college campuses
3. community emergency-planning departments

Ideally, such coordination rises to the level of an Incident Command System (ICS), which FEMA describes as:

"a standardized, on-scene, all-hazards incident management approach that:

- allows for the integration of facilities, equipment, personnel, procedures and communications operating within a common organizational structure;
- enables a coordinated response among various jurisdictions and functional agencies, both public and private; and
- establishes common processes for planning and managing resources."

A significant part of communicating effectively is knowing the people you're working with. Campus community insiders have to communicate well with emergency managers on the outside. These relationships must be built. People on both the inside and outside must trust each other – it goes both ways. They have to know about you and you have to know about them.

Familiarity between emergency management groups is critical: Who makes what decisions? Who's in authority on what issues? Who's best at executing which tasks? What's the inter-agency hierarchy and protocol for communication to the public?

Establishing a solid plan in advance can spare all departments a lot of grief, and save lives. Sadly, this familiarity is all too often lacking, especially in more urban environments where cross training is less feasible.

Participation by a community's various emergency response teams in cross-training exercises and conferences is important because during emergencies the groups frequently work *together*, and their messaging must be *consistent* to ensure safety and avoid confusion, lost time, and mistakes. Moreover, effective messaging during emergencies is dependent in part upon the extent to which these three groups are known to and familiar with each other; a deliberate and planned dialog among these groups provides an opportunity for interaction on this essential EM issue – effective mass communication. Local and regional responders should meet regularly to discuss potential response scenarios, creatively network with others, and update mutual-aid agreements.

This level of familiarity and coordination has to be *worked* at – everyone has to be involved in the table-top discussion. And, because getting key on-campus and community players interested in and *focused* on the subject can be tough, leadership from the top (whether university, city, or institutional leaders) emphasizing the imperative of emergency team interactive planning is essential to getting this coordination "done." The Em2 Roundtable participants agreed that "it's vital that university Presidents help with the mandate, to ensure a consistent, centralized message."

One of the problems in emergency communication is entrenched thinking. Many experts think they know everything, and aren't open to new ideas. They've been at it a long time, believe they know what they're doing, and are comfortable with what they're accustomed to. This common mindset adversely affects development; it's risky given today's very-fast-moving communication technology (and changing consumer practices). Working and coordinating with other teams diffuses the influence of those stuck in the communication past. It's an opportunity to refresh ideas and benefit from the knowledge of others.

So, the various emergency response groups serving a community must have a plan for working together, and understand what each brings to the table, and what each group's limitations are. Doing so ensures that emergency communication occurs with one coordinated, unified voice; not multiple, disparate voices. It also permits communication to occur without redundancy through the best technical mediums available.

First responders have to know what they're getting themselves into. They need to know this to coordinate their response … among themselves and with the public.

Closing

The message, the dissemination technology, and inter-agency coordination are core messaging elements essential to emergency communication success. They combine to establish credibility and trust in the public's mind. If the public receives the message, but doesn't trust the source, or some aspect of the delivery mechanism, then the message may be ignored or response may be delayed. Recent studies demonstrate that students must trust the source of emergency alerts in order to act quickly.[4]

By carefully crafting effective messages and wisely deploying the communication technologies that the community uses, expects, and is familiar with, well-coordinated emergency-response teams can improve emergency processes, responses, and outcomes.

Reader Online Survey

The March 2012 Em2 Roundtable participants thoughtfully clarified the topics discussed in this white paper. To continue this dialog, Em2 and Live Safe invite you to take our Emergency Communication "Quick Survey" and help us learn more about this topic through your responses. Thank you.

Survey Link: http://survey.constantcontact.com/survey/a07e637mcu7h4005kwi/start

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[4] April 2012 Survey / Study, University at Buffalo School of Management. Surveys of 600 students and a dozen student focus groups showed that students are more apt to immediately comply with emergency alert instructions when they know and trust the source of the alert. When trust is lacking, students feel they must first verify the information with peers or known official sources of information before complying with alert, the research showed.

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Next Steps

For more information about the Em2 Roundtable series or emergency communication, please contact Jill Marcinick, Live Safe's President and Board Chair, directly at **614.207.6872**.

We also encourage you to visit www.live-safe.org to join the conversation on emergency communication, saving lives, and fulfilling campus-related safety duties.

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EM2 Roundtable

Participating and Contributing Emergency Management Experts

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University of Utah

Steve Broccolo
Kansas State University

Marilynn Mundy
Indiana University

Jim Patton
Corvallis Fire Department
Oregon State University

Steve Arthur
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Brent Auker
Ohio University

Jon Evenson
RJA Group

Em2 Panel Moderator:

David Speaker
Probizwriters, LLC

Other EM2 Conference Attendees, Contributors and Supporters

"**Thanks**" to our friends at **Pioneering Technology**, **RJA Group** and **NIFAST** for joining us and sharing their products and special promotions in such a unique way. We are grateful for their hospitality and the additional level of expertise that their presence added to the conversation.

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"Pioneering" Safe-T-Sensor technology for microwave ovens was recently featured at the 2012 Vision 20/20 "Models in Fire Prevention" Symposium in Reston Virginia.

Ohio University Fire Protection Engineer, Brent Auker was invited to share the success of their "Nuisance Alarm Reduction on Campus" program featuring Pioneering's Safe-T-sensor.

Ohio University and the Athens Fire Department had a significant problem related to nuisance alarms and fire department responses to campus. Ohio University presented their success story for determining the most prevalent cause of nuisance alarms on campus and then the best way to address them.

Results over the past school year (75% reduction in burnt food runs versus the annual average) means that Ohio University is exceeding its target of reducing nuisance runs over the next 3 years. Ohio expects the trend to continue resulting in a savings of approximately $222,000 and better safety for its students and first responders.

For more on Pioneering's Safe-T-Sensor success, and related statistics visit: www.pioneeringtech.com.

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	Good Emergency Message	**Why is it Good?**	**Lousy Emergency Message**	**Why is it Bad?**
1.	Everyone east of Crestline Road should evacuate to the High School on Main Street; a shelter has been set up there.	Provides detail on destination.	Everyone east of Crestline Road should evacuate.	Fails to say what "evacuation" is.
2.	Due to a waterline break, the campus needs to shut down. Residence Halls and hospital operations will remain open and persons in those facilities can remain there. All persons in other parts of campus must evacuate immediately as follows: Students and staff on campus north side should leave along North Campus Street by 12:30. Students and staff on campus south side should leave via Main Street starting at 1pm. This staged shutdown will minimize traffic problems.	Explains emergency and who is affected, and provides specific evacuation instructions.	The campus has been closed and all are ordered to evacuate immediately.	No context or reason provided.

Defining Safety Through Dialogue

Endnotes

[1] **Columbus, OH, March 4, 2012** - The Live Safe Foundation, an Ohio 501(c)3 non-profit organization dedicated to fire and life safety, successfully hosted and launched the "Em2 = Emergency Management Exchange Roundtable 2012," whose expert panelists conducted an in-depth analysis of communication solutions in disaster management. The EM2 Roundtable program held its inaugural session at the Hyatt Regency in Columbus, Ohio, one day before the 9th Annual Campus Fire Safety, Security & Risk Management Conference.

The exclusive Em2 Roundtable is a one-of-a-kind annual safety-expert forum comprised of selected experts from across the country with specialty knowledge and experience in institutional emergency management and fire and life safety. The Roundtable group is uniquely qualified to analyze issues and identify solutions.

[2] **Message Mapping: How to Communicate During the Six Stages of a Crisis**, Everbridge, Inc., 2009 White Paper.

[3] Id.

[4] Erik Auf der Heide, *Common Misconceptions about Disasters: Panic, the "Disaster Syndrome," and Looting, [*a CDC publication - http://www.atsdr.cdc.gov/emergency_response/common_misconceptions.pdf], at 348. This article appeared in book form: O'Leary M (2004) The First 72 Hours: A Community Approach to Disaster Preparedness, Chapter 27. Lincoln (Nebraska), iUniverse Publishing. http://www.iuniverse.com/bookstore/book_detail.asp?&isbn=0-595-31084-2

[5] A good example of such an online publication is posted by Kansas State University here: http://www.k-state.edu/safety/alerts/.

[6] Emergency Managers should also inform their community of FEMA's website called "Ready" which provides a nationwide map for finding community and state resources and information on preparedness: http://www.ready.gov/community-state-info

[7] *See*, http://www.blackboard.com/Platforms/Connect/Overview.aspx for more information on this powerful communication product.

[8] More universities relying on social media for emergency communication, Viviana Bonilla Lopez, USA TODAY College: Posted November 25th, 2011, http://www.usatodayeducate.com/staging/index.php/ccp/more-universities-relying-on-social-media-for-emergency-communication .

[9] **More Americans Using Social Media and Technology in Emergencies**, American Red Cross Survey (Aug. 24, 2011), http://www.redcross.org/portal/site/en/menuitem.94aae335470e233f6cf911df43181aa0/?vgnextoid=7a82d1efe68f1310VgnVCM10000089f0870aRCRD .

[10] Id.

[11] **To Be Continued? Five steps you can take to make sure your company survives catastrophe**, Yasmin Ghahremani, | CFO Magazine, March 01, 2012 [http://www3.cfo.com/article/2012/3/risk-management_business-continuity-disaster-recovery-risk-management?currpage=4]

[12] Emergency Support Function #5 – Emergency Management Annex, Department of Homeland Security / Federal Emergency Management Agency, January 2008.

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