IAEM Bulletin

INTERNATIONAL ASSOCIATION OF EMERGENCY MANAGERS

**Call for Articles
Special Focus Issue:
"Going All the Way...
Putting Plans Into Action"
Copy Deadline:
Sept. 10, 2006
– See Page 24 –**

Special Focus Issue:
Technology & Research in EM
Affordable Geospatial Information Technologies for Disaster/Emergency Response

By Talbot Brooks, Director, Center for Interdisciplinary Geospatial Technologies, Delta State University

Editor's Note: This is the first in a three-part series. Part 2 will appear in the August 2006 *IAEM Bulletin*.

Geospatial Information Technologies (GIT) encompasses Global Positioning Systems, Remote Sensing, and Geographic Information Systems (GIS). Many fire departments, particularly those that are well-funded and forward thinking, implement GIT to one degree or another – through Automatic Vehicle Location (AVL), Mobile Display Terminals (MDT) or Computer Aided Dispatch (CAD). The general perception is that these technologies are expensive, require extensive technical expertise to implement, and require time consuming and costly training. Risking the ire of some of my colleagues who would like to keep these things an expensive mystery, the objective of this article is to demonstrate some low-cost methods for bringing GIT to your agency or department.

Let's start with a brief introduction to each of these technologies. In the early

IAEM: Working for You

■ **IAEM 2006 Mid-Year Meeting Held June 2-4 at National Emergency Training Center**. See pages 2-5.

■ **IAEM Canada (Region 13) Holds Annual Meeting**. IAEM Canada members held their annual members meeting on June 18 for current and potential IAEM

TEST E-MAIL MESSAGE: JUNE 30
A test e-mail message was sent to all IAEM members on June 30, 2006, to report **important changes in the member database**. See page 24.

NOTICE: CEM® RECERTIFICATION
Certified Emergency Managers® who are recertifying in 2006 may participate in a **beta test** of the proposed changes in CEM® recertification. See page 24.

IAEM Represented at FEMA Higher Education Conference. *From left: Matt McCracken, Director, Marion Co. EMA, Hamilton, Ala.; Marg Verbeek, CEM, IAEM President; and Mike Selves, CEM, IAEM First Vice President, spoke at the FEMA Higher Education Conference on June 8 on behalf of IAEM.*

From the President

IAEM Mid-Year Meeting
A Great Success

By Marg Verbeek, CEM, MCIP, IAEM President,
Manager of Emergency Measures, Regional Municipality of Waterloo,
Kitchener, Ontario, Canada

For those of you who were unable to join us at our recent Mid-Year meeting, here is a synopsis of the highlights. More than 70 IAEM members and guests participated June 2-4 at the National Emergency Training Center in Emmitsburg, Md.

Superintendent **Richard Callis** welcomed attendees in lieu of DHS Undersecretary George Foresman. The meeting was primarily a gathering of Board and committee members to accomplish IAEM work. All-members forums were conducted to discuss internationalization, and a tutorial was provided on management of IAEM Web site content. **Adrian Gordon**, Executive Director, Canadian Centre for Emergency Preparedness, presented an overview of the upcoming World Conference on Disaster Management, and **George Haddow** presented Save the Children. Other highlights of the Mid-Year Meeting included:

Mid-Year Meeting Highlights

■ **CEM® Commission**. The CEM® Commission met and reviewed 50 applications submitted since their February 2006 meeting. Chair David Sullivan, CEM, reported that the CEM® Commission maintained its recommendation that the experience equivalency in lieu of a degree be eliminated by the year 2010. Mike Selves moved, seconded by Pam L'Heureux to accept the recommendation.

■ **IAEM Conference Committee**. Led by Chair Carolyn Harshman, CEM, the committee evaluated more than 100 speaker applications and identified 18 for sessions at the Nov. 12-15 Annual Conference in Orlando, Fla.

■ **U.S. Government Affairs Committee**. Committee Chair Bob Bohlmann, CEM, Policy Advisor Martha Braddock and committee members formulated two issue papers that were approved by the IAEM Board (posted at www.iaem.com). The position statements address IAEM's general principles pertaining to bills to strengthen FEMA and citizen preparedness.

■ **Membership and Marketing Committee**. IAEM Communications & Marketing Director Dawn Shiley-Danzeisen chaired the meeting, initiating a tiered reward program for new member referrals/sponsorships. Within the committee, they plan to develop a "think tank" that will provide input for a brochure to communicate the guidelines for recruitment and incentives. During the Board meeting, Trey Shannon was appointed as the new committee chair.

■ **Strategic Planning Committee**. Committee Chair Jennifer Wilson of North Dakota State University established a work plan that will create a sustainable method for continual improvement and management of the IAEM strategic planning process. Each standing committee will have a representative on the Strategic Planning Committee. An Annual Work Calendar for IAEM was drafted (posted in Members Only area of www.iaem.com), serving as a reference for key annual deadlines relative to budget and various activities.

■ **Uniformed Services Committee**. Col. Bob Ditch, CEM, chair of the Uniformed Services Committee, presented a request to the Board on behalf of the constituents of the IAEM uniformed services membership population, to become an IAEM membership region. There are 170

Contact Your IAEM Staff

Executive Director
Elizabeth B. Armstrong, CAE
Phone: 703-538-1795, ext. 7
E-Mail: armstrong@iaem.com

Staff Executive
EMEX Exhibit Manager
Clay D. Tyeryar, MAM, CAE
Phone: 703-538-1795, ext. 6
E-Mail: ctyeryar@iaem.com

Membership Director/Registrar
Sharon Kelly
Phone: 703-538-1795, ext. 2
E-Mail: info@iaem.com

Communications/Marketing Director
Dawn Shiley-Danzeisen
Phone: 703-538-1795, ext. 3
E-Mail: shiley@iaem.com

Program Manager
Melissa Trumbull
Phone: 703-538-1795, ext. 5
E-Mail: trumbull@iaem.com

IAEM Bulletin Editor
Web Site Content Manager
Karen Thompson
Phone: 703-644-2266
E-Mail: thompson@iaem.com

IAEM Policy Advisor
Martha Braddock
Phone: 703-644-8557
E-Mail: braddock@iaem.com

IAEM Headquarters
Phone: 703-538-1795
Fax: 703-241-5603

From the President

(continued from page 2)

current uniformed services members. A motion was made by Dewayne West, CEM, to consider formation of a Uniformed Services region, seconded by Mike Mumaw, CEM. After general discussion, the motion was withdrawn for future consideration.

■ **Scholarship Commission**. The IAEM Scholarship Commission, chaired by Mike Mumaw, CEM, and facilitated by IAEM Communications & Marketing Director Dawn Shiley, met to discuss business plans and upcoming fundraising efforts at the IAEM Annual Conference.

■ **Public-Private Partnership Committee**. The Public-Private Partnership Committee meeting was well-attended, with the chief focus centering on the critical need to encourage the investment of private partners in the work of IAEM. Participants discussed ways to promote corporate involvement and to enlist the support of the Board in building partnerships with the private sector.

■ **Training & Education Committee**. Committee Chair Kay Goss, CEM, advised that the Higher Education Foundation is looking to partner with IAEM and NEMA on an accreditation process to ensure the future quality of emergency management, homeland security, business continuity and higher education. Goss noted that the first program to be accredited is Arkansas State University's Emergency Management Program, under the School of Community Studies and Professional Development. The Higher Education Foundation is currently writing up the assessment results, which will be available in July 2006. The assessment is based upon 23 standards that are to be met by all institutions.

■ **Web Site Committee**. Chair Nick Crossley and IAEM Web Site Content Manager Karen Thompson advanced plans to improve Web site content and management, and explained how to post information on regional and committee pages with easy-to-use software. Look for an upcoming article on how the Macromedia Contribute 3 software works and what it can do for IAEM!

■ **Editorial Committee**. The Editorial Committee, chaired by Daryl Lee Spiewak, CEM, advanced editorial calendar plans, including special focus issues of the *IAEM Bulletin*. Participants also discussed the feasibility and strategies for establishing a potential IAEM journal.

■ **Board of Directors**. The IAEM Board agreed to sign a letter of intent with The International Emergency Management Society (TIEMS) to:

♦ Collaborate on items and activities of mutual interest;
♦ Initiate and participate in ongoing dialogue; and
♦ Explore opportunities that will be of mutual benefit to members.

Letters of Intent

A letter of intent was also signed with the Netherlands Chapter of TIEMS, for the purpose of taking part in a feasibility study to assess the potential of applying existing CEM® requirements to an international audience in the Netherlands and surrounding countries. Board meeting minutes are posted in the Members Only area at www.iaem.com.

In Summary

Overall, the IAEM Mid-Year Meeting was once again highly productive in advancing our organization's goals and meeting the expectations of our members.

Many thanks to the members who were willing and able to give up so much of their precious time to participate at Mid-Year and make it truly successful. I appreciate the hard work and fine efforts of all, especially the committee chairs who did a great job at motivating and leading their groups. Last but not least, thanks to the IAEM Headquarters staff for all of their hard work in helping us reach our potential.
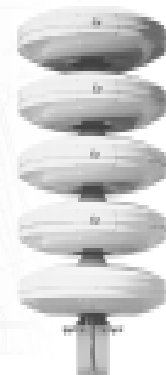
IAEM 2006 Mid-Year Meeting

IAEM Communications & Marketing Director Dawn Shiley-Danzeisen facilitated the Membership & Marketing Committee meeting. Members discussed strategies for membership marketing, including a possible incentive program for members.

George Haddow spoke on Save the Children's post-disaster programs to aid victims of the Gulf Coast hurricane disaster and the organization's wish to network with IAEM members on preparedness and mitigation activities.

IAEM Student Region President Mike Kemp with IAEM Executive Director Beth Armstrong. Kemp announced plans for a student poster presentation at the upcoming IAEM 2006 Annual Conference.

IAEM
Mid-Year Meeting
June 2-4, 2006
National Emergency
Training Center
Emmitsburg, Maryland

Register online at
www.iaem.com for the
IAEM Annual Conference
& EMEX Exhibit,
Nov. 12-15,
Orlando, Florida

IAEM Web Site Committee Chairman Nick Crossley with IAEM Bulletin Editor and Web Site Content Manager Karen Thompson following their presentation on Web site management.

Mid-Year Meeting participants discuss the "internationalization" of IAEM.

IAEM Region 9 President Gunnar Kuepper (left) and IAEM First Vice President Mike Selves, CEM, at the IAEM Board meeting.

IAEM 2006 Mid-Year Meeting

Adrian Gordon, Executive Director, Canadian Centre for Emergency Preparedness, presented an overview of the World Conference on Disaster Management (WCDM 2006).

From left: IAEM President Marg Verbeek, CEM; Emergency Management Institute Director of Training and Superintendent Richard Callis; and IAEM Executive Director Beth Armstrong. Callis welcomed attendees to the National Emergency Training Center campus.

From left: IAEM Scholarship Commission Chairman Mike Mumaw, CEM; IAEM Communications & Marketing Director Dawn Shiley-Danzeisen; and Government Affairs Committee Chairman Bob Bohlmann, CEM, at the IAEM Scholarship Commission meeting.

Yuki Karakawa provided IAEM Board members with a pin from the Arkansas Firefighters Memorial. He is pictured with IAEM Region 3 President Kathleen Henning, CEM.
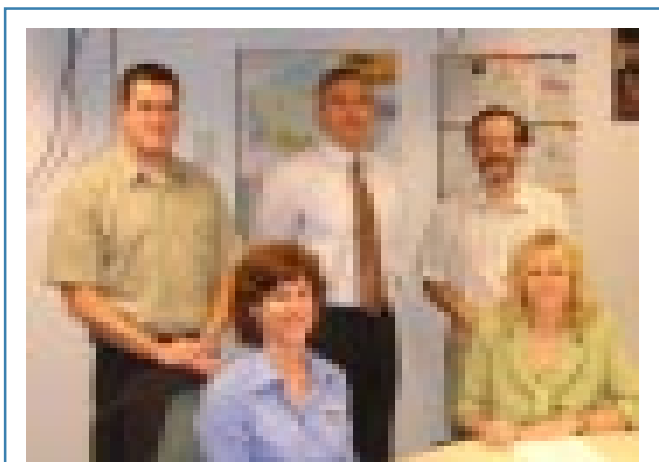
IAEM Executive Director Beth Armstrong and Staff Executive Clay Tyeryar met in Ottawa on June 15 with OAEM President Alain Normand, IAEM Canada President John Ash, and IAEM President Marg Verbeek to discuss administrative details related to OAEM members joining IAEM.

New IAEM Membership & Marketing Committee Chairman Trey Shannon, with fellow Texans Carrie Little, IAEM Region 6 President, and Karen Adkins.

Affordable GIT for Disaster/Emergency Response

(continued from page 1)

1960s, Geographic Information Systems (GIS) was introduced as a technology that allowed for analysis of spatial information (i.e., x,y coordinates) linked to attribute information (i.e., name, quantity) in a single application.

For example, a point on a map (spatial) would be associated with temperature, wind speed, and rainfall (attribute). This point could be joined with many others to calculate and display regional trends. When GPS became available for public use, it became the device of choice for capturing the x,y coordinates needed to create basic spatial data sets. The integration of remotely sensed data (eg., from an airplane, a satellite or some other remote sensor) such as aerial photographs, infrared satellite imagery and detailed elevation models soon followed.

The common theme is that all of these spatial data sources are referenced to geographic locations on the surface of the Earth. Their true power lies within the ability to overlay one layer of data on another to plan, assess and respond to an emergency or disaster.

For example, an aerial photograph may be combined with a layer showing streets with address ranges and a third layer showing the location of fire hydrants with their respective flow rates. In the hands of an experienced emergency manager, a detailed pre-plan for evacuation or fire will surely follow. Likewise, in the hands of a firefighter, the choice of which hydrant to pick up becomes more reliant on fact than on memory.

Free Viewers and Tutorials

Many GIT software vendors provide free viewers and tutorials that allow users to view spatial data in electronic format to create maps. Examples include:

■ Environmental Systems Research Institute's (ESRI) ArcExplorer (www.esri.com/software/arcexplorer/).

■ TatukGIS free viewer (https://shop.tatukgis.com/downloads/DownloadList.aspx (bottom of the page).

■ Intergraph's GeoMedia Viewer (www.intergraph.com/gviewer/).

Federal Online Resources

The Federal government loves spatial data, and collects and distributes it free through numerous free online resources that provide basic data such as streets, major infrastructure elements like major pipelines and transmission lines and aerial/satellite imagery.

Some good resources include:

■ The U.S. Geological Survey's Geospatial One Stop (http://gos2.geodata.gov/wps/portal/gos).

■ The U.S. Dept. of Agriculture's Geospatial Data Gateway (http://datagateway.nrcs.usda.gov/).

■ The U.S. Bureau of the Census (www.census.gov/geo/www/census2k.html).

Further, most states now offer free geospatial data clearinghouses.

Some layers of information do not exist, either for security reasons or because they just have not yet been collected for your area. This is not a major issue; after all, we can collect data ourselves using GPS or good maps and a bit of determination.

For example, if you want to map the location of fire hydrants or drafting locations (for internal planning purposes; if you want something highly accurate that will stand up in court, go find a surveyor), use one of the free viewers to section off and print map pages with good aerial photography. Most people can venture out into the field, look at these images and place the location of hydrant or drafting pad. Likewise, an inexpensive (under $500) GPS can do the same within a few meters of its true location. If you cannot find a hydrant when within a few meters, you have bigger problems than mapping.

Learn More

If this sounds good to you, I would strongly recommend poking around your local or state government to find a GIT expert to help guide you on your way. This stuff can do a lot more than described herein and admittedly gets complicated. We are out here and would love the opportunity to work together with you. If you are interested and have some time, take a class. Most all community colleges and universities offer at least one class about GIT, and Delta State has 30 online courses (http://gis.deltastate.edu). Lastly, please check out the emerging Community of Practice in GIT for Emergency and Disaster Management at http://mississippi.deltastate.edu. Your contributions, comments and ideas are always welcome.

Next Month: Part 2 of this series, "Getting on the Same Page" (August 2006 *IAEM Bulletin*), will discuss lessons learned from the Katrina response and various ways that emergency managers can use GIT for situational awareness, planning, exercising and response.

Online NIMS Resource Management Training

The Federal Emergency Management Agency's NIMS Integration Center and Emergency Management Institute have made available online, interactive Web-based training that will help incident managers establish NIMS-related systems that will help them get the resources they need to respond to an emergency or disaster. Find out more at www.training.fema.gov/emiweb/is/is703.asp.

Sahana: An Open Source Disaster Management System

By Gavin Treadgold, Sahana Committee Member and Director of Kestrel Group, New Zealand

In February 2004, I wrote an article for the *IAEM Bulletin* outlining some of the benefits that open source software had the potential to provide for emergency managers. At that time, little open source software existed for emergency management, and I had just come out of a simple attempt in 2003 to create a Web-based disaster management system. That effort failed, for while there was a well-recognized need for open source disaster management software, there were no real drivers to encourage development of a solution.

2004 Tsunami Spurs Development of Sahana

The driver came with the tsunami that struck Sri Lanka on Dec. 26, 2004, which prompted the development of a free and open source solution called Sahana. Within a couple of days, the need for a system to manage vast quantities of information became obvious, along with the need to attempt to coordinate 1,300 NGOs responding to hundreds of thousands of displaced people.

In the following days and weeks, a Web-based system for managing disaster information was built on-the-fly based on the most pressing needs. Accordingly, the following were the first modules developed:

■ **People Registry** – track and match victims of a disaster.

■ **Organization Registry** – register, connect and track NGOs involved in response.

■ **Camp Management System** – register and track camps.

■ **Request/Assistance Management System** – record, track and match requests and offers of assistance.

Sahana development was initially led by the Lanka Software Foundation and supported by volunteers from the Sri Lankan IT industry. As the immediate need for Sahana subsided in the months following the tsunami, more international contributors became involved in the project, myself included. These ranged from programmers wanting to help out, to those who wanted to offer assistance drawing upon their disaster experiences, including emergency managers.

The positive feedback to Sahana prompted further development to add more response and recovery capabilities applicable to any disaster management situation. Longer-term, the goal is to use Sahana as a means of encouraging comprehensive emergency management in communities by supporting preparation and mitigation. This will start by providing tools to incorporate plans and reference material, such as communication directories in advance and other techniques to encourage greater interagency coordination before an event.

Capabilities

Sahana has been designed to operate in a diverse range of environments due to the nature of disasters. It can run on Web servers and laptops, and has even been installed on a PDA. Over time, it will support both stand-alone and networked modes of operation and allow communication between multiple Sahana servers, including synchronization of data.

There are a number of future modules planned or under development:

■ Disaster Impact Assessment.
■ Alerting.
■ Inventory/Supply Chain/ Logistics.
■ Volunteer Coordination.
■ Intelligence.
■ Response/Rescue Team Management.

In addition, there are a number of key technologies identified for inclusion:

■ Mapping/GIS, and GPS integration – it can already use Google Maps.

■ Biometrics.

■ Provision of information via open standards:

♦ Common Alerting Protocol (OASIS/CAP).

♦ Emergency Data Exchange Protocol (OASIS/ EDXL).

♦ Various OpenGIS Protocols (OpenGIS Consortium).

■ Support of existing paper-based forms.

■ PDA forms for remote field work.

Deployment

Sahana has seen official deployments in multiple events, including the Sri Lankan response to the tsunami in 2004, the 2005 earthquake in Pakistan and the 2006 mudslide in the Philippines. It has also recently seen unofficial deployment in support of the Yogjakarta earthquake and in preparation for an eruption of Mt. Merapi. Sri Lanka's largest NGO is also deploying Sahana within their disaster unit.

Recent Events

In mid-May 2006, a workshop was held in New York that brought together key members of the Sahana development community and IBM. The meeting served two purposes:

■ Firstly, to discuss IBM support of the project, and

■ Secondly, to consider further development of modules for Sahana that could be used during response to a pandemic.

A pandemic presents an interesting opportunity for the deployment of Web-based disaster

Are We Learning From Experience?

By Claire B. Rubin, Claire B. Rubin & Associates, Arlington, Virginia

I have been in the field of emergency management for 28 years, working as a practitioner, independent researcher, consultant and academic (teaching and research). For the past six years, I have been working on a series of disaster history charts, which comprise the Time Line Series, and some narrative, explanatory reports.

My colleagues and I have produced four main charts and a few more that never made it to prime time. The four charts are:

■ Disaster Time Line (DTL): 1969-2005.

■ Terrorism Time Line (TTL): 1993-2005.

■ Homeland Security Time Line: 1933-2003.

■ 100 Years of Seismic Safety in California, 1906-2006.

They can be browsed online at the project Web site at www.disaster-timeline.com.

Graphic EM History Presentation

The charts were created as teaching and briefing aids, and they have been quite popular with practitioners and educators, and also students. We created them in order to capture several decades of recent history, featuring major focusing disaster events and the many types of outcomes – laws, regulations, executive directives, response plans and organizational changes. The causal relationships between events and outcomes are the hallmark of these charts.

We think the graphic depictions of recent decades of disaster experience are useful for a variety of reasons. They provide unbiased, factual information which can help:

■ Provide the historical setting for federal emergency management and homeland security.

■ Illustrate key "focusing events" and their outcomes for training/education efforts.

■ Show cause and effect relationships between events and outcomes.

■ Discern trends, patterns, disconnects, and gaps.

■ Assist in building capability by identifying needs.

■ Contribute to policy and political assessments.

■ Demonstrate the need for strategic thinking and planning.

EM Laws, Regulations and Processes Are Event-Driven

The charts show cause and effect relationships between disaster events and many types of outcomes. Typically, major focusing disaster events have driven legislation, regulations, directives, policies and organizational changes. Regardless of the type of disaster – natural, technological or terrorist – federal policies, laws and regulations have been highly *reactive*. Although this has been the dominant pattern in the past, it should not remain this way.

A highly positive example of state initiative can be discerned in the newest time line chart, *100 Years of Seismic Safety in California (1906-2006)*. It demonstrates how California has identified and prepared for the major hazard of earthquakes through its own programs, plans and resources. It is an extraordinary example of how one state has sustained interest and action for more than 70 years around its most serious threat. Unfortunately, it remains a unique state-level effort.

Some Observations

■ We are not adequately capturing, retaining and implementing hard-earned knowledge and experience from past major disasters.

■ We have known for many years that catastrophes are different both in quantity and quality from major disasters. EM systems need to be designed to effectively deal with them. Yet, it has not happened.

■ How can we improve learning from experience and research? How can we better retain and transmit lessons learned? Doesn't some of the new technology – Web sites, electronic data bases, knowledge management science – allow us to improve the situation?

For the past six years, thousands of time line charts have been distributed to practitioners, researchers, trainers and students. Regarding the two oldest charts, the *Disaster Time Line* and the *Terrorism Time Line*, we have been able to update them annually. Fortunately, we have had funding support from corporate and non-profit organizations, which has allowed us to distribute many free copies and others at a nominal cost via the project Web site.

We sometimes get feedback from users, which we appreciate and use to make changes. Our intent is to keep the charts as accurate and useful as possible.

White Paper on Satellite Communications for EM

Futron Corporation and GVF, the non-profit association of the global satellite communications sector, have published a white paper on *Why Satellite Communications Are an Essential Tool for Emergency Management and Disaster Recovery*. The paper discusses satellite communications that are available to support any emergency requirement and aims to facilitate public and private sector efforts to effectively procure, contract for and deploy satellite-based emergency management and disaster recovery solutions. Download the paper at www.iaem.com/resources/links/documents/SatelliteWhitePaper060906.pdf.

Total Asset Visibility in Emergency Response and Recovery

By Kevin Porter, Program Manager, ACTS

An important use for technology in emergency management is in the area of resource management. In a disaster, mobilizing resources, allocating resources effectively and then demobilizing resources is a consistent problem. It is critical to find a technological tool that can assist with tracking resources so that incident commanders can have good visibility of what assets are available.

A possible solution is Total Asset Visibility (TAV). This is an Army program that is designed to provide commanders information on the location, quantity, condition and movement of assets through the logistics pipeline. TAV is made possible through the use of automatic identification technologies (AITs) such as optical memory cards, bar coding, GPS transponders and radio frequency (RF) tags and readers that provide rapid and accurate data capture, retrieval and transmission. This same system could provide Incident Commanders with a common operating picture of the logistics assets in a disaster.

Optical memory cards are used to process packaged supplies. These cards provide an inventory list of the supplies that are inside a container. The card is attached to the container, and once it arrives at its destination, a reader downloads the inventory of the container. This speeds the process of inventorying the items and receiving the items.

RF tags are placed inside the containers. Interrogators read the RF tags. These RF tags are read as they pass through supply nodes. The information provided is the type, location and quantity of the material being delivered.

Bar coding items allows assets to be associated with documents such as dispatches, work orders and requisitions. This allows logisticians the ability to compare actual assets delivered with the requisitions.

GPS transponders provide an accurate location of each piece of equipment or container of supplies. These transponders emit a signal that is linked to a GPS system that can then be tracked on a computerized map. This map provides managers with a visual representation of the location of all of their assets.

How It Works Under ICS

Here is how it could work under the Incident Command System. Prior to a disaster, bar codes are placed on equipment that has been identified in the Resource Management Annex of the Emergency Operation Plan. The bar codes are linked to a database that delineates the type of equipment, the owner of the equipment and the capabilities of the equipment.

Once a disaster happens, the equipment is sent to the Incident Command Base. At the base, three things happen.

■ The bar code is read, and the data is entered into a database that delineates which equipment was received.

■ The equipment is dispatched to an operator. The dispatch contains a bar code that is read and associated with the bar code of the equipment. This allows the Incident Commander to know who was issued the equipment.

■ Finally, a GPS transponder is attached to the equipment. The transponder gives the Incident Commander the ability to track the locations of his equipment.

Supplies entering the incident area have RF tags and optical memory cards placed inside the containers when they are packaged. These supplies are sent to the Incident Base, and the optical card is read to get an accurate inventory and track the receipt of the items. An interrogator allowing managers to track the locations of supplies reads the RF tag.

The supplies are then moved to the staging area where an interrogator reads the RF tag. This gives the Incident Commander the ability to manage the supplies and know where they are located. This information is placed on a computerized, GPS map that presents a visual representation of the equipment and supply distribution.

NIMS Concept

One of the concepts of the National Incident Management System (NIMS) is that a common operating picture should be developed that is accessible across jurisdictions and agencies. By placing logistics information that is up-to-date and accurate on a computerized system, managers and commanders can get a good understanding of their ability to supply the resources necessary to respond to the disaster.

One of the five key principles of NIMS technology standards is strategic planning and research and development. The only way Total Asset Visibility could become a reality is with a centralized coordinating authority. The NIMS Integration Center could be that authority. The NIMS Integration Center is already tasked with coordinating with DHS to create a national research and development agenda. Total Asset Visibility would be a valuable addition to that agenda.

References

■ National Incident Management System (NIMS) IS-700 Study Guide, August 2004.
■ Army Total Asset Visibility by Cecilia Butler and Sandra Latsko.
■ RFID Supports Asset Tracking for the 21st Century, U.S. Department of Energy.

Modernizing Emergency Response and Preparedness Through the Integrated Patient Tracking Initiative

By Amy DuBrueler, COMCARE, IPTI Project Manager,
and Kelly McKellogg, COMCARE, Communication Manager

Emergency response requires complex coordination by a variety of organizations from the local, state and national levels. Recent incidents, both manmade and natural, have brought to the forefront the real need to strengthen the capabilities of America's emergency response infrastructure. One effort to address this issue includes the development or acquisition of "patient and victim tracking systems." These systems are designed to modernize emergency response and preparedness by electronically capturing and distributing information about the incident and patients to various stakeholders, such as emergency managers, EMS, local hospitals and shelters throughout the continuum of care.

To assist in this process, COMCARE, a non-profit national advocacy coalition dedicated to advancing emergency response, initiated the Integrated Patient Tracking Initiative (IPTI) in 2005. IPTI is a collaborative project that supports open, integrated solutions for locating, tracking and caring for patients and victims during both everyday emergencies and major disasters. It is an open process, driven by practitioners and educated by technology experts with a diverse national group of participants representing more than 70 organizations.

To date, the initiative has developed a set of national consensus requirements that communities can use when procuring patient tracking programs. The requirements are specifically designed so that chosen technologies for a solution can integrate with existing systems and processes and address the information needs of multiple emergency professions. In addition, the initiative is launch-ing a process to identify and fill gaps in the data standards arena so that legacy and new systems can exchange information. Demonstrations of interoperable patient and victim tracking systems are in the planning stages.

From Mass Casualty to Day-to-Day

In response to the threat of mass casualty incidents (MCIs), a few forward-thinking communities have recognized the need for tracking patients when a mass casualty incident occurs; some have already deployed these types of systems. While these technologies will aid in MCIs, it is also accepted that emergency response technologies will only be effective in responding to a mass emergency if they are used during day-to-day incidents as part of an everyday routine.

With the flip of a switch, an electronic patient tracking system can scale to accommodate as many patients/victims as the event dictates. A system designed to collect a broad set of data elements on a patient under ordinary circumstances may be redefined in an MCI to collect a limited subset of the most necessary elements. By serving multiple functions, this kind of solution can increase the likelihood of use by practitioners as well as create incentives for sharing valuable information. In turn this information can significantly improve patient care, reduce emergency response times, and enable analysis and research that was never possible before.

Standards

The IPTI process conducted by COMCARE over the last nine months has clearly demonstrated that a fundamental barrier to effective deployment of patient tracking systems is the absence of standards to use in sharing patient and victim information between the different IT applications. A tracking system must be able to accommodate and interoperate with a wide array of different systems and allow aggregation of data from various data sources. There has been a substantial amount of work done on content standards (dictionaries) but some of these standards conflict; little work has been done on common messaging sets.

To address this issue, COMCARE is initiating the IPTI Standards Specification Project. This project, which will assemble a diverse group of data and operations experts from the affected professions, will rapidly analyze, identify and develop detailed specifications for standards that are needed in the patient tracking continuum of care. These will then be presented to a standards development organization for formal adoption.

Requirements

Through a working group process and a stakeholder summit, IPTI produced and vetted the *Draft Report of Functional Requirements for an Integrated Patient Tracking Solution*, which is currently open for a three-month public comment period ending July 31, 2006. The draft report is available for review and comment on the recently launched Patient Tracking Web Site at www. patienttracking.org. Instructions on how to submit comments can be found on the Web site as well. All comments will be posted to the site.

Making Emergency Alerts Accessible
To People With Disabilities

By Marcia Brooks, Project Director, WGBH National Center for Accessible Media

A hurricane is approaching your city. You've planned for possible evacuation, explained the plans to your kids and begun packing for moving out when the time comes. You've done what you can, and now you wait and monitor the news. Oh, and you're deaf. The captions on television are getting sporadic. What do you do when you've done all you can and now have to rely on strangers for information at home, in transit and in a shelter?

IAEM members work hard to make emergency management plans and systems foolproof for everyone in their area. The devastating events along the Gulf Coast illustrate how even the best planning can be caught short when disaster strikes. Unfortunately, many of us saw the plight experienced there by what some refer to as "special populations," people who have disabilities or who otherwise need specific care, transportation and communication during emergencies.

How do you address the needs of these populations, while also devoting the resources it takes to plan for the needs of the general population? One way is with help from efforts such as WGBH's "Access to Emergency Alerts" project. The WGBH National Center for Accessible Media (NCAM), a division of Boston's public broadcaster and access technology pioneer, is uniting emergency management professionals, emergency alert providers, local information resources, telecommunications industry and public broadcasting representatives, and consumers in a collaborative effort to research and disseminate approaches to make emergency warnings accessible. See the project's Concept Map at www.incident.com/access/index.php/Project_Framework/

Concept Map for the world in which we're operating, and the range of organizations we hope to influence. This three-year project (October 2004-September 2007) is funded by the U.S. Department of Commerce's Technology Opportunities Program.

WGBH's project addresses an urgent need – to develop and encourage adoption of standardized methods of presenting content needed by people with disabilities leading up to, during and after emergencies. We are identifying gaps between existing and developing alert systems and the unrealized potential of these systems to serve the entire population.

People who are deaf or hard of hearing, and who rely on captioned television news, are often left out when emergency broadcasts lack captions. People who are blind or have low vision watch television to stay informed, but are at a loss when on-screen graphics or text crawls are used to convey information. The use of wireless systems – the Web, cell phones and other personal devices – promise greater independence and even safety when traditional electronic media fails or service is interrupted, but these technologies hit the market with access barriers that present new challenges.

NCAM Focus Groups

To date, NCAM has held a series of focus groups with deaf, hard of hearing, blind, visually impaired and deaf-blind consumers, with help from three organizations from our National Consumer Advisory board – the American Foundation for the Blind, Northern Virginia Resource Center for Deaf and Hard of Hearing Persons, Inc., and Telecommunications for the Deaf, Inc.

Focus group participants were asked about the effectiveness and shortcomings of current communications methods and messages, and to offer an ideal – what devices, messages and level of redundancy would be optimal for communicating information before, during and after an emergency. See a summary of results at www.ncam.wgbh.org/alerts.

The next step is to conduct usability testing with disabled consumers, to assess the effectiveness of specific devices to deliver emergency notification at home, at work and in transit. The American Institutes for Research (AIR), an internationally recognized usability testing organization, will assist. Our research points to the need for further development of the project's information requirements, to define the specifications required to address the needs of people with sensory disabilities in emergency alert systems.

A public reference repository (www.ncam.wgbh.org/alerts/resources.html) has been established for summary documents of user needs, design requirements for accessible products and services, usability research and subject-related news articles and conference announcements.

The project established a national forum, the Access Alerts Working Group (www.incident.com/access) within the emergency alert community for review of accessibility needs and solutions. Several IAEM members participate. The counsel of the Access Alerts National Advisory Board ensures that consumers are active participants in defining the need and determining how solutions are evaluated.

Project findings will be shared with the public warning and

Emerging Technologies in Emergency Management

By Kay C. Goss, CEM, Senior Advisor for State and Local Government,
Electronic Data Systems Corporation (ED)

The next time disaster strikes, chances are the crowds of emergency and rescue personnel racing to the scene still won't be able to do a fundamental task: talk to one another.

Each organization is challenged to maintain an appropriate level of preparedness, security, protection and safety for its people, as well as for corporate and public infrastructure, such as buildings, information technology (IT) resources, information and knowledge in databases, telephones and transportation assets.

Additionally, organizations in both the public and private sectors need to integrate their technology approaches so they can coordinate their efforts, collaborating seamlessly across organizational boundaries. As a result, emergency management is becoming a top priority across organizations of all types – public and private, large and small, encompassing the activities that enable a business or government agency to plan for, respond to and recover from an event.

The need for high speed, reliable, interactive communication throughout the entire organization has never been greater. Technology offers organizations new opportunities to enhance their emergency response and management capabilities. As a result, organizations can minimize injuries and loss of life, mitigate damage, and ensure a speedy economic recovery for a community and a rapid return to business as usual.

Emergency Response Challenges

Because of the complexity of emergency management and the uncertainty of unplanned and sometimes unimagined events, developing a strategy for effective response and management is a challenge. Organizations are made up of complex infrastructures and multifaceted interrelationships among people, assets, places and things. In the event of an emergency, the organization must coordinate activities internally, as well as with multiple external groups and organizations – customers; government agencies; constituent groups, suppliers and business partners; media and other public notification organizations; emergency organizations, including emergency medical services; and police and fire departments.

There are various software tools available, off the shelf, that can significantly enhance emergency response and management processes:

■ Communication and collaboration tools allow widely dispersed teams to communicate and collaborate in developing, documenting, testing and executing response and recovery procedures for various types of emergencies, allowing processes to interact with each other, triggering events automatically without the need for human intervention.

■ Information management tools make a variety of up-to-the-minute information immediately available to responders and managers, any time anywhere.

■ Automatic notification tools immediately alert the right people at the right time through a variety of means, including telephone, pager and e-mail.

■ Activity management tools, such as workflow automation and monitoring, status checking and escalations, enable management as well as response and recovery personnel to keep tabs on the situation for more effective control.

These tools can help throughout all phases of emergency management. In the readiness phases, information management tools can help organizations assess the impact of possible disasters, determining what assets may be endangered along with the associated replacement costs. The tools also help in conducting drills to identify vulnerabilities and to test preparedness.

In the emergency response phase, notification tools speed deployment of response teams and permit immediate, simultaneous notification of team members, management and other affected individuals using all available communications media. Information management tools facilitate crisis assessment as well, providing information such as the location of critical assets.

These tools make essential information instantly available to everyone involved. Response teams can access procedures and checklists to speed execution of response tasks. Information can be accessed from anywhere at any time through the Web – from both wired and wireless devices.

In the recovery phase, automatic notifications can alert management and others when it is time to commence recovery – triggering the deployment of recovery teams. Information management tools help recovery personnel determine what assets must be replaced to return to normal operations. Communication and collaboration tools enhance coordination and communication among team members and enable rapid development of an appropriate recovery plan.

Supporting All Hazards And All Phases of EM

Information collected during the recovery and response phases feeds back into readiness and

Managing a High Tech Manufacturing Facility Emergency Response

By Robert Barnes, Robert B. Barnes Associates, Inc., Scottsdale, Arizona

Editor's Note: This is the first in a two-part series. Part 2 will appear in the August 2006 *IAEM Bulletin*.

As society continues to become more technologically advanced, emergency first responders are being tasked with greater and more diverse roles and responsibilities.

In high technology operations, challenges exist today that may be beyond those for which fire service personnel have historically been trained. The hazards created by new industrial, academic and technological research processes, as well as the complexity of our built environment, have created a need for private sector response specialists who can assist with disasters and emergencies, while working within a knowledge-based flexible system.

Changing Role of First Responders

Historically, municipal fire departments were just that – "fire" suppression experts. Today, the role of the fire service has expanded to that of providing emergency medical service, hazardous materials response and technical rescue response, including building collapses. Many times such responses involve high technology manufacturing facilities or specially designed research laboratories utilizing significant quantities of chemical, biological and radiological substances as a part of their normal operations. The fire service responders in each of these incidents still retains the role of "primary first responder." However, the expanse of knowledge that fire service personnel are now required to have for technical rescue and hazardous materials response has increased dramatically.

Today, traditional fire service first responders are developing a new understanding of and respect for specialists outside their traditional ranks. Pre-planned coordination with private sector emergency responders is assisting public sector responders with specific technical information and experience about a given industry or process – contributing to improved safety for all.

Hazardous Materials Response

One example of a fire service response requiring specialized expertise involves hazardous materials, particularly in high technology manufacturing environments. Semiconductor manufacturing is considered by most to be a clean industry, but go inside one of these futuristic facilities and you will find some of the world's most dangerous chemicals being used in high volume production environments.

This global industry has a remarkable safety record, due in no small part to the expertise and professionalism of its highly specialized workers, but accidents still happen. During the period 1990-2000, there were 232 incidents reported to one of this industry's major insurers. These incidents totaled US$383.3 million in gross business interruption losses. The single largest frequency of peril was due to "escaped liquids," which amounted to 19 percent of the incidents, 25 percent of the dollar losses and a per-incident average loss of US$2.22 million. The second most frequent peril was fire, which amounted to 17 percent of the incidents, 16 percent of the dollar losses and a per-incident average loss of US$1.61 million.[1]

It is important to note that these numbers are based upon "reported incidents" and are merely representative of industry experience. It is generally accepted that only about 20 percent of all such incidents are reported to insurers due to the high levels of self-insurance, deductibles, etc. If this is taken into consideration, then the number of actual incidents in all semiconductor manufacturing facilities may very well be on the order of 500 or more per year (or about 40 per month) worldwide. In fact, a recent survey of semiconductor industry emergency response specialists indicates that corporate emergency response teams respond to an average of six incidents each month[2] in the typical semiconductor manufacturing facility. (Note: there are more than 1,000 such facilities worldwide.)

Fortunately, the emergency response professionals inside these facilities are able to safely handle most incidents, but occasionally there is a call for outside fire service support.

Need for Effective Coordination

According to the loss control manager for a major semiconductor manufacturer, "From my experience, it is extremely important that local fire service and on-site ERT personnel are on the same page [of the emergency response manual] and trust one another. Several years ago, we had a very simple incident turn into a mass evacuation and closure of an entire site for one day, just because the fire service had not been made fully aware of what type of situation they were responding to.

---

[1] FMGlobal
[2] SERF 2005 ERT Management Survey

Turning Threats Into Assets: Floodplain Management Using GIS Technology

By Susan E. Spinella and Md. Mahbuhur Meenar, Center for Sustainable Communities, Temple University

In recent years, Pennsylvania, especially the southeastern portion, has had its share of flooding. The flooding has significantly impacted economic and residential development, transportation systems and the overall quality of life for people that live and work in or near these flood prone areas. The Fort Washington office park of Montgomery County is such an area.

The office park, developed in the 1950s, is prone to flash flooding, which has destroyed vehicles, washed away bridges, damaged office buildings and disrupted day-to-day operations. Those who live, work, or do business in or near this office park are now convinced that the area needs a major makeover.

Almost two thirds of the office park area is inside the Federal Emergency Management Agency (FEMA) designated floodplain zones. This fact has resulted in a vacancy rate of 30 percent, which is much higher than the regional rate (20 percent). The Center for Sustainable Communities of Temple University, along with several partner organizations, is undertaking the "Fort Washington Area Flooding and Transportation Improvement Study." The project is being funded through Federal Highway Administration funds awarded to Upper Dublin Township and the FEMA funds awarded to the Center.

Facing the Challenges

The major issues that the office park is facing are: (1) severe flooding, (2) excessive impervious surfaces, (3) improper or no stormwater management, (4) inefficient street network, and (5) absence of public places and nightlife activity. The project is a perfect case for coordinating land use and watershed planning with transportation planning and development.

This multidisciplinary project requires a stormwater analysis of the entire Sandy Run Creek watershed in order to identify potential upstream stormwater management opportunities to alleviate flooding within the office park. Similarly, the approach to improving the current transportation system requires an extensive evaluation of not only internal conditions and impacts on stormwater runoff volume, velocity and quality but also external conditions such as interconnectivity with local streets and highways and accessibility by public transportation.

Use of Technology

The project team will use Geographic Information Systems (GIS) as a significant support tool for performing an integrated analysis. The GIS technology provides a means to assemble data and to create map layers representing all the information that is relevant to conducting such tasks as hydrologic modeling, assessing stormwater impacts of streets, parking lots and sidewalk systems, testing locations for siting stormwater best management practices (BMPs) and developing visual images.

Using GIS and other technologies, the project team will delineate new and accurate floodplain zones of the watershed. In addition, alternative floodplain zones will also be generated with alternative combinations of flooding improvements, stormwater BMPs, transportation and open space modifications.

The three-dimensional GIS technology will be used to visualize simulations of alternative development. This technology assists in translating complex spatial information into a visual, non-technical language that everyone can understand. The buildings will be modeled separately and linked to a database or GIS system and any amount of data can be associated with each individual building. If necessary, a building model can also be sub-divided into floors. Thus clicking on the fifth floor of an office building may display information on occupancy, usage or area information.

Besides buildings, the other types of three-dimensional models necessary for the simulation are trees, plants, roads, rail tracks, multi-modal transportations, human figures, paved and natural surfaces, natural features (such as creeks, streams, or valleys) and BMPs (such as curb cuts and vegetative swales, constructed wetlands, green roofs and more). The primary softwares that will be used are ArcGIS, 3D Analyst, Spatial Analyst, Network Analyst, SketchUp, AutoCAD and Photoshop.

Turning Threats Into Assets

The project will propose to turn the threats into assets. Flood prone areas will be encouraged to be preserved as open spaces, and risk-free areas will be encouraged for high-density commercial development. The integrated analysis will support the project team's development of design recommendations consistent with Low Impact Development, "Green Street" and sustainable design principles.

An integrated design charette process will be used to better understand all of the issues simultaneously, including water, traffic and architecture, in order to make

HAZUS-MH Is Not Just for Mitigation!

(nor is it just for hurricane, wind, flood and earthquake)

*By Thomas L. Carr III, Appl.Sc., MS-IST, MSM, Former Associate Instructor at the
Emergency Management Institute, National Emergency Training Center, Emmitsburg, Maryland*

In May 2006, FEMA announced the upcoming release of HAZUS-MH MR2 (HAZUS-MH Version 1.2). Included are updated versions of the Flood Information Tool (FIT), the Inventory Collection Survey Tool (InCAST) and the Building Inventory Tool (BIT). There are also updates for provided data, methodology and other features for all of the loss estimation models. HAZUS-MH MR2 will be available in June 2006. (Learn more at www.fema.gov/plan/prevent/hazus/hz_hazusmhmr2.shtm.)

"Hazards U.S. Multi-Hazard" or HAZUS-MH is a standardized methodology and software system developed by the Federal Emergency Management Agency (FEMA) with the National Institute of Building Sciences (NIBS). HAZUS was first introduced in 1997. Now there are modules to estimate the impacts of hurricane winds, floods and earthquakes on populations. For an in-depth look under the hood at the HAZUS-MH methodology, the American Society of Civil Engineers (ASCE)'s *Natural Hazards Review* has recently published a special issue, "Multihazards Loss Estimation and HAZUS," edited by Charles Scawthorn (May 2006, Volume 7, Issue 2, pp. 39-103, available at http://scitation.aip.org/nho).

Response and Recovery

Besides mitigation, HAZUS-MH has applications in emergency management's other interrelated activities. In January 2006, FEMA's Region IV released a report, "HAZUS-MH Applications to Support Rapid Needs Assessment and Response Operations HMTAP 301," which is available at www.hazus.org. The original intent of the report was "to docu-ment the 'state-of-the-practice' in the use of HAZUS-MH to support hurricane disaster operations and to offer recommendations for improving and streamlining the integration of HAZUS-MH into Emergency Support Function (ESF) #5."

The report goes on to recommend a number of report and map templates, noting that HAZUS-MH analyses should be adapted to support planning and impact assessments for other Emergency Support Functions, such as Engineering and Public Works (ESF#3), Mass Care (ESF#6), Health and Medical (ESF#8) and Search and Rescue (ESF#9).

Preparedness

The HAZUS-MH deterministic scenario feature can create a plausible "catastrophic" event with the "worst credible severity" that can be used for planning and exercise scenarios. Besides public awareness and outreach, HAZUS-MH analyses would support preparedness planning by mapping pre-designated facilities and areas, such as camps and mobilization and staging areas for recurring events. As the report notes, HAZUS-MH is "useful in predicting the 'coping capabilities' of potentially impacted populations" and "the distribution of the most vulnerable households."

Essential Elements of Information

However, "out of the box," HAZUS-MH is only at "level 1" and only has data from the 2000 Census and other national sources (MR2 has some updates as 2005), aggregated at the census block level. To increase the effectiveness of these analyses for national, state, county and local community decision-makers using HAZUS-MH, the local community or at least a county should conduct a Level 2 (local data) pre-disaster HAZUS-MH Risk Assessment and maintain Level 2 asset inventories.

Inventory Assets

FEMA's How-to-Guide "Using HAZUS-MH for Risk Assessment" (FEMA 433), has distilled the methodology and outlines the four-step hazard risk assessment process using HAZUS-MH. A review and ground-truthing of the Level 1 Inventory Data provided by HAZUS-MH would be needed.

The Level 1 Inventory Data provided includes:
- General building stock.
- Demographics.
- Critical infrastructures.

Because of the different characteristics of the structures and networks, HAZUS-MH has five predefined categories for most of these facilities and systems:
- Essential facilities.
- Hazardous material.
- High potential loss facilities.
- Transportation lifeline systems.
- Utility lifeline systems.

After conducting a data gap analysis, your community's unique characteristics may require additional critical infrastructures categories, more detailed demographics data to the street block level, or modified building stock data to meet your needs. You would also need to collect landmark and cultural icon data that is not in national databases. For more information, see FEMA's How-to-Guide "Integrating Historic Property and Cultural Resource Consid-

Interoperability Is More Than Radio Communications

By Jim Cook, CEM, Director of Services, ESi

Francois de la Rochefoucauld, a French classical author, is quoted as saying, "The only thing constant in life is change." That is certainly true in the field of emergency management. In late February, the White House released a 288-page report addressing the lessons learned from Hurricane Katrina. You can see it yourself at www.whitehouse.gov/reports/katrina-lessons-learned/index.html. In the coming months and years, we will certainly see drastic changes in how we mitigate, prevent, plan for, respond to and recover from major disasters in this country.

According to the White House report, communications, interoperability and accountability continue to be problem areas that need addressing. Interoperability is a buzzword that became a part of our daily vocabulary following the attacks of 9/11, when we learned that many of the first responder organizations at the World Trade Center and the Pentagon were unable to communicate with each other via radio.

Interoperability is defined as "the ability of two or more systems or components to exchange information, and to use the information that has been exchanged." The problem of interoperability grows exponentially when state and federal agencies, including the military, are involved in a wide-scale disaster.

One solution for interoperability is connecting dissimilar radio systems via an electronic bridge. Although effective in some areas, these solutions are not for everyone. In many cases, it is simply impossible to connect some radio systems.

Interoperability does not just mean voice communications. The definition above uses the words "systems or components." That includes command and control operations at the local, state and federal levels.

Utilizing state-of-the-art software systems such as WebEOC, emergency managers at all levels of government have the technology at hand to address these challenges. By allowing "visiting" response organizations, neighboring jurisdictions, state agencies and federal agencies to monitor a jurisdiction's significant events board and interact with a mission/tasking board, you can effectively provide for interoperability and accountability at an incident. Situational awareness and the proper management of requests for assistance have always been, and will continue to be, the foundation of effective emergency operations.

When utilizing a Web-based software system, it does not matter if your EOC holds 20 people or 200 people, or involves a JOC and/or a JIC or any number of remote locations. With the proper Web-based technology in the hands of well-trained staff, you can be assured that everyone will receive critical information in a timely manner.

Sahana: Open Source System

(continued from page 7)

management systems, as most infrastructure should be operating normally (relative to a hurricane or earthquake).

The Sahana project is interested in contributions, be they time or financial. Time contributions can be made in providing design advice based upon disaster experience, writing the code, testing Sahana or helping to write the documentation. Financial contributions will be used to target module development, such as sponsoring development of a specific module or supporting the core development team that works full time. An international community maintains Sahana, and all contributions are provided back to that community at no cost – a share-and-share-alike ethos to ensure that everyone benefits. Sahana is free to use and has no licensing costs associated with it.

For more information, visit the Sahana Web site or contact the author at gt@kestrel.co.nz.

Internet Links

■ **Sahana Web Site**
www.sahana.lk/
■ **Sahana on Wikipedia**
www.en.wikipedia.org/wiki/Sahana_FOSS_Disaster_Management_System
■ **Dr Sanjiva Weerawarana's Blog**, a record of initial Sahana deployment: www.bloglines.com/ blog/sanjiva/2005_1 and www.bloglines.com/blog/sanjiva/2005_2

Floodplain Management

(continued from page 14)

proposals for new layouts and conceptual proposals for future directions of construction in the office park. This will be accomplished by presenting to the stakeholder group alternative combinations of flooding improvements, stormwater BMPs, transportation and open space modifications, including their costs with the goal of providing far reaching, innovative and cost effective strategies that will guide the office park toward a more sustainable future.

For more information on the Temple University Center for Sustainable Communities, please visit www.temple.edu/ambler/csc.

IAEM Bulletin Special Focus Topics for 2007

The IAEM Editorial Committee, chaired by Daryl Lee Spiewak, CEM, announces the following special focus issues of the *IAEM Bulletin* in 2007. Submit your articles (no more than 750 words) to Editor Karen Thompson at thompson@iaem.com. Complete author's guidelines are posted at www.iaem.com.

■ **February 2007**, "Lessons Learned from Hurricane Response" (Copy deadline: January 10, 2007) We are interested in lessons learned, how plans had to change, photos and tips – and we're not limiting this to Hurricane Katrina.

■ **May 2007**, "How Emergency Management Works Around the World " (Copy deadline: April 10, 2007) Share with IAEM members how emergency management works in your part of the world.

■ **July 2007**, "Regional Response " (Copy deadline: June 10, 2007) We are interested in articles on managing response when multiple jurisdictions are involved, whether they are cities, counties, states or nations.

■ **October 2007**, Theme to be based on the IAEM 2007 Annual Conference & EMEX Exhibit theme, when that has been announced. (Copy deadline: September 10, 2007)

Effective Advertising

Reach out to IAEM members, many of whom are responsible for purchasing within their jurisdictions, with information about your products and services through display advertising in the *IAEM Bulletin*. Download the *IAEM Bulletin* advertising guidelines at www.iaem.com.

Donate Scholarship Auction Items

IAEM Headquarters is seeking donations of items and services to be auctioned at the IAEM 2006 Annual Conference & EMEX Exhibit in Orlando, Florida, to benefit the IAEM Scholarship Program. Please approach your local retailers for contributions, and report all donations of items (with their value) to Dawn Shiley-Danzeisen, Communications & Marketing Director, IAEM Headquarters, 703-538-1795 or shiley@iaem.com. If you are not attending the conference and plan to mail your auction item to IAEM Headquarters, please ensure that it reaches Dawn no later than **Sept. 15, 2006**.

The IAEM Scholarship Auctions have been exceptionally successful during past IAEM Annual Conferences, raising significant funds for the IAEM Scholarship Program. Please help us make this year's event another outstanding success.

IAEM To Host Student Poster Presentation at Annual Conference

By Micheal Kemp, Region 12 (Student Region) President

I would like to announce that IAEM will be hosting a student poster presentation at the IAEM 2006 Annual Conference & EMEX Exhibit in Orlando. The contest will be open to all IAEM student members. Specifics (such as theme, length of proposal and submission deadline) will be provided soon through the *IAEM Bulletin*, Web site and e-mail discussion group. We are planning to solicit sponsorship and will offer a $500 cash prize.

Presentation in this form and forum allows interaction, as students explain their ideas and practitioners provide feedback. This is an opportunity to identify and analyze an issue, research it, and articulate conclusions and proposed solutions. These skills are integral to the future success of students in the emergency management field.

Speaking as the IAEM Region 12 President, I would like to thank the IAEM Conference Committee and the IAEM Board for their continuing commitment to students.

Student Chapter News

■ **North Dakota State University (NDSU) Chapter Publishes Newsletter**. The NDSU International Emergency Management Association, an IAEM student chapter, is publishing a newsletter to share news about their activities, which will include brown bag seminars, training, a summer applied research trip and a chapter delegation to the IAEM 2006 Annual Conference. For details, contact Chapter President Dustin L. Jensen at dustin.jensen@ ndsu.edu, or download the chapter newsletter from the Student Region (Region 12) Web page at www.iaem.com/regions/12.

■ **University of South Dakota Forms Student Chapter**. The University of South Dakota has established a student chapter and is working toward achieving a full charter. Contact Chapter President J. Richard Monroe at J.Richard.Monroe@usd.edu.

Patient Tracking Initiative

For more information or to become involved in the initiative, please visit www.patienttracking. org or e-mail info@patienttracking. org. COMCARE is a national advocacy coalition of 100 member organizations dedicated to advancing emergency response. COMCARE's members represent the wide diversity of the emergency response community. For more information, visit www.comcare.org.

Alerting People With Disabilities

disabilities communities, and with the FCC and the Department of Homeland Security, to help promote an inclusive and universal design for the nation's information and emergency alert systems.

For more information, or to share efforts to address and include people with sensory disabilities in your area, please contact Marcia Brooks, Project Director at Marcia_brooks@ wgbh.org, or 617 300-3431.

HAZUS-MH Not Just for Mitigation

erations into Hazard Mitigation Planning" (FEMA 386-7).

Other Hazards

HAZUS-MH is not just for hurricanes, wind, flood and earthquakes. FEMA's How-to-Guide "Using HAZUS-MH for Risk Assessment" (FEMA 433) provides an adapted methodology to include hazards not modeled by HAZUS-MH in the comprehensive risk assessment. Additionally, FEMA's How-to-Guide "Integrating Human-Caused Hazards into Mitigation Planning" (FEMA 386-7) shows the user how to include non-natural hazards in the assessment.

An Opportunity Lost

Ironically, with the upcoming release of HAZUS-MH MR2, the HAZUS User Group (www.hazus. org) has posted a notice that the Emergency Management Institute (EMI) at Emmitsburg, Md., is contemplating canceling the free HAZUS training courses due to lack of enrollment. Most of the three- to five-day courses' intended audiences are state and local government, community members, and federal agencies.

GAO Issues Military Response Report

The U.S. Government Accountability Office (GAO) has published "Hurricane Katrina: Better Plans and Exercises Needed to Guide the Military's Response to Catastrophic Natural Disasters," GAO-06-643, May 15, 2006.

The full report is available for download at www.gao.gov/ new.items/d06643.pdf.

Bulletin Extended Online Edition

There's more to this month's *IAEM Bulletin* than what arrives in your mailbox. Download your copy of the **extended electronic edition** of this issue on the *IAEM Bulletin* page in the Members Only area at www.iaem.com.

Extra material (Pages 25-44) in the online version includes:

■ IAEM New Member Listing, May 16-June 15, 2006.

■ IAEM Awards and Media Contest. **Deadline**: Sept. 1, 2006.

■ IAEM 2006 Annual Conference Sponsorship Opportunities.

■ E.M. News and Resources.

■ "Transforming Public Communication Through Technology: The Katrina Example," by Gerald Baron, President of Baron & Company and Founder of AudienceCentral.

■ "Wikis and Emergency Management," by Gavin Treadgold, Director, Kestrel Group, New Zealand.

■ "NENA Completes Research on Emergency Notification Systems," by William C. Weaver, Jr., Senior Technical Consultant, iXP Corporation, Chair of the National Emergency Number Association 911 Center Operations Committee, Houston, Texas.

■ "How To Design Information Technology for Planned and Improvised Response: A Research Perspective," by David Mendonça, Ph.D., Information Systems Department, New Jersey Institute of Technology, and Frank Fiedrich, Ph.D., Institute for Crisis, Disaster, and Risk Management, The George Washington University.

■ "Using Simulation To Exercise EM Skills," by Roger Huder, CEM, and Theresa R. Tamash, Applied Research Associates, Inc., Orlando, Fla.

■ "Technology Can Get in the Way," by David B. Nock, Program Manager, Emergency Operations Training and Simulations, NERRTC/TEEX, Texas A&M University System, College Station, Texas.

■ "Research and Technology in Emergency Management: From Concept to Reality," by James Graham, Director, University of Louisville IT Resource Center for Homeland Security.

■ "State of Illinois Enacts Laws To Protect Emergency Managers," by David H. Searby, Jr., BS, JD, IPEM, Operations Officer/Public Information Officer, Emergency Services and Disaster Agency, City of Du Quoin, Ill.

Many Thanks

Many thanks to all of the contributors to this special focus issue of the *IAEM Bulletin*. The Editorial Committee welcomes article submissions and invites potential authors to review the author's guidelines and the editorial calendar at the IAEM Web site at www.iaem.com. The Editorial Committee has announced the special focus topics for the *Bulletin* in 2007. See page 4.

IAEM Bulletin Archives

The Members Only archives of the *IAEM Bulletin* at www.iaem.com now includes issues back to August 1999, the earliest issue available in electronic format. The Members Only area is searchable by key word and phrase. This expanded archives is offered as a resource to IAEM members.

High Tech Emergency Response

(continued from page 13)

We now have drills and regular tours for fire service personnel to reduce the chance of this ever happening again."[3]

By establishing such open lines of communication, public and private sector responders can better understand both the requirements and limitations of their respective response duties and can thereby operate in a collaborative manner to better protect the safety of the facility occupants as well as the safety of their fellow responders.

Next Month: In Part 2 of this series (August 2006 *IAEM Bulletin*), the author will discuss how private-sector emergency responders can assist their counterparts in the public sector with specific technical information and experience.

[3] Posting to the SERF Discussion Groups, Dec. 6, 2005 (http://seshaonline.org/serf/discussions)

Emerging Technologies

(continued from page 12)

preparedness activities to enable continuous improvement of the organization's capabilities:

■ Assessing risk.

■ Creating policies and procedures, and testing the strategies.

■ Establishing direction, command and control structure.

■ Sending alerts and notifications.

■ Tracking emergency response activities.

■ Initiating recovery procedures.

■ Tracking recovery.

■ Auditing and reporting on the effectiveness of response and recovery procedures for needed improvements.

These technology capabilities ease fears and eliminate confusion, help personnel to determine what they should and should not do, as well as ensure that top management has the information required to make critical resource allocation and problem resolution, saving even more lives and protecting even more property.

What Our Members Are Saying

From E-Mails to Marg Verbeek, CEM, IAEM President
**about recent Board decision to eliminate the ability to apply additional
experience in lieu of a four-year baccalaureate degree by the year 2010**

This is a good compromise. I thank you for our non-degreed public safety brothers and sisters who have not yet traveled the certification path. Shame on them for not heeding this urge to do so before the door closes.

I looked through some of the responses – yeah, we're all "too busy." It comes down to a personal financial and time-management decision – how bad do you want it? I've certified three times since 1995. I saw a lot of whining in some of the responses.

Thomas S. Hughes, CEM
State Training Officer
Pennsylvania Emergency Management Agency
Bureau of Plans & Training
E-Mail: thughes@state.pa.us

The news is wonderful! I believe education is something very important, no matter how much experience a person may have, especially in the rapidly changing field of emergency management. I just finished my MS in emergency management at Arizona State University and have a BS in business management. I am also very happy about the prep course for the exam, since I have been having problems getting information about the exam, with the exception of the few practice questions that have been provided in the past. Thanks for all of your hard work.

Rob Gresser
Gilbert Emergency Hospital
EMT/Disaster Coordinator
Chandler AZ
E-Mail: gresserfamily@msn.com

Let your President and Board members know what you think about what IAEM is doing for you and the emergency management profession. Your feedback and your active participation are crucial to the success of our association.

IAEM: Working for You

From left: K. Harald Drager, TIEMS President; Marg Verbeek, CEM, IAEM President; and Won-Kyong Moon, Administrator, National Emergency Management Agency of Korea, at the TIEMS 2006 Conference. IAEM President Marg Verbeek was a keynote speaker on "Training and Certification for EM Professionals." Learn more about TIEMS 2006 at www.tiems.org.

members. The meeting, planned in conjunction with WCDM 2006, focused on: the background of the affiliation of IAEM and IAEM Canada; the IAEM Canada structure; a review of strategic priorities; an executive update to members; and membership categories and fee structures.

■ **Call for IAEM Officer Nominations**. IAEM members will elect a new First Vice President, Second Vice President and

Secretary at the 2006 Annual Conference. Candidates must submit credentials by **Sept. 1, 2006** to IAEM Headquarters.

To be placed on the ballot, candidates must submit: a letter stating candidacy; a letter of permission from the immediate supervisor supporting the time and travel necessary to fulfill the duties of the office; a brief resume; and confirmation of membership of at least three consecutive years immediately prior to seeking office. Individual members are eligible to hold national office provided they have been a member for at least three consecutive years and have served as a regional or national officer, national committee chair or active national committee member for two consecutive years.

■ **IAEM Issues Position Statements**. The U.S. Government Affairs Committee met during the IAEM Mid-Year Meeting and proposed two position statements that were approved by the Board on general principles affecting bills to strengthen FEMA and citizen preparedness policy. You can read the committee meeting record and download the position statements at www.iaem.com/committees/government affairs.

■ **IAEM Comments on Interim Changes to NRP**. IAEM representatives Jim Raymond, CEM, and Steve Detwiler recently participated in a conference call with DHS officials regarding interim changes to the National Response Plan (NRP). IAEM weighed in on those changes and soundly vocalized a willingness to assist with the upcoming review of the NRP. Detwiler cautioned against too much planning being done independently, resulting in a lack of coordination throughout federal response as a whole. Also, comments were made stressing that mitigation is much more than long-term recovery.

From left: Marg Verbeek, CEM, IAEM President; Pam L'Heureux, CEM, IAEM Region 1 President; Robert Bohlmann CEM, IAEM Government Affairs Committee Chairman; and Martha Braddock, IAEM Policy, Advisor at the May 13 Region 1 Annual Meeting.

At left: Former Montana EM Director Jim Greene (jmgreene@montana.com) visited fellow IAEM members in Nigeria, May 2006. Greene shared his disaster preparedness expertise and information about IAEM. After his visit, 19 Nigerians joined IAEM, and we welcome them as new members. See more photos and details on page 29 of the online July 2006 Bulletin.

Gunnar Kuepper (center), IAEM Region 9 President, at the first Region 9 Roundtable on "H5N1 Bird Flu: Threat of an Influenza Pandemic," held May 15 in Los Angeles, Calif. See calendar on page 23 for details of the July 13 roundtable.

E.M. Calendar

July 9-12   Hazards Research and Applications Workshop, Natural Hazards Center, www.colorado.edu/hazards/.

June 19   Disaster Studies Workshop, Civil Emergency Management Centre, University of Hertfordshire, UK, www.britsoc.co.uk/specialisms/45.htm.

June 19-21   New Zealand Security & Civil Defense Conerence, Wellington, New Zealand, endorsed by **IAEM**, www.iir.com.au/conferences.

July 11   **IAEM Region 9 Roundtable**: "H5N1 Bird Flu: Threat of an Influenza Pandemic," Gilbert Fire Dept. Amphitheater, Gilbert, Arizona, www.iaem.com.

July 11-13   Transportation Disaster Response: Family Assistance, National Transportation Safety Board Academy, Ashburn, VA, www.ntsb.gov.

July 20-26   2006 International IMSA Conference, Overland Park, KS, www.imsasafety.org.

Aug. 16-19   Chicago Fire Dept. 2006 Life Safety Conference, "Large Scale Incident Evacuations," Navy Pier, Chicago, IL, www.cfdconference.com.

Sept. 6-8   8th Annual Technologies for Critical Incident Preparedness Conference & Expo, Atlanta, GA, http://www.regonline.com/eventinfo.asp?EventId=88623. Presented by DHS, DOJ, and DoD; **IAEM** is a conference co-sponsor.

Sept. 10-16   International Conference on Infrastructure Development and the Environment, Abuja, Nigeria, www.iseg.giees.uncc.edu/abuja2006/.

Sept. 25-26   EMS EXPO 2006, co-located with National Association of EMTs Annual Meeting, Las Vegas, NV. **IAEM** is a supporting organization of the expo.

Oct. 11-13   IDER 2006, International Disaster & Emergency Resilience Conference & Exhibition, Italian Fire Service College, Rome, Italy, www.iderweb.org. **IAEM** supports the conference, and IAEM President Marg Verbeek, CEM, will be a speaker. IAEM plans to organize a **group package** with discounted registration fees; for details, contact Clay Tyeryar, IAEM Staff Executive, at ctyeryar@iaem.com.

Oct. 18-19   IMF 2006: International Conference on IT-Incident Management & IT-Forensics, Stuttgart, Germany, www.gi-ev.de/fachbereiche/sicherheit/fg/sidar/imf/imf2006/index.html.

Nov. 12-15   **IAEM 2006 Annual Conference & EMEX Exhibit**, "Going All the Way...Putting Plans Into Action," Orange County Convention Center, Orlando, FL, www.iaem.com.

Virtual EMEX 2006

Exhibitors who have reserved space at EMEX 2006 already have their company profiles posted at **www.emex.org**. The Virtual Expo offers a year-round presence for EMEX exhibitors, including a direct link to their Web sites for more information.

IAEM 2006 Annual Conference & EMEX Exhibit
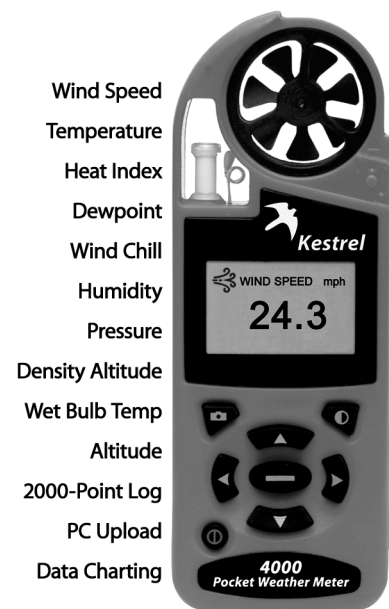**"Going All the Way...Putting Plans Into Action"**
Nov. 12-15, 2006, Orange County Convention Center, Orlando, Florida

CEM® Recertification Beta Test

Certified Emergency Managers® who are recertifying in 2006 may participate in a beta test of the proposed changes in CEM® recertification. If you are interested in being part of the beta test, you have until **Aug. 28, 2006** to submit your recertification documents to IAEM Headquarters. Beta test participants must submit their recertification documents two ways: (1) according to the original requirements in a 3-ring binder, and (2) also using the new point system for comparison by the CEM® Commissioners.

Those candidates participating in the beta test should complete a form under Professional Contributions (N: Other) to receive credit for this extra effort. If you have any questions or need additional information, please contact Sharon Kelly at info@iaem.com.

IAEM Bulletin Call for Articles

The IAEM Editorial Committee has issued a Call for Articles for our next Special Focus Issue of the *IAEM Bulletin* on the IAEM 2006 Annual Conference theme of **Going All the Way...Putting Plans Into Action**. The deadline for article submissions is **Sept. 10, 2006**. Please keep your articles under 750 words, and submit them to *Bulletin* Editor Karen Thompson at thompson@iaem.com.

Test E-Mail Sent June 30 in Preparation for New Database

A test e-mail message was sent to all IAEM members on June 30, 2006, in preparation for the association's move to a new integrated online member database. If you received this e-mail, we have your current e-mail address on file. This is the e-mail address at which you will receive **your new IAEM User ID and Password** later this summer.

You will soon need your new individual IAEM User ID and Password in order to take advantage of these member benefits: access the Members Only area of the IAEM Web site; register for conferences and meetings; enroll in the Certified Emergency Manager® Program or apply for recertification; renew your IAEM membership dues by Oct. 1, 2006; update your own IAEM member profile; browse the new IAEM online membership directory; and vote online for IAEM officers in the upcoming 2006 elections.

If you did not receive the June 30 e-mail message or if you wish to change your e-mail address with IAEM, you should contact IAEM Membership Director Sharon Kelly at info@iaem.com as soon as possible. Thank you for helping to ensure that IAEM has your accurate, up-to-date e-mail address on file.

IAEM SCHOLARSHIP DONATIONS ARE TAX DEDUCTIBLE

Support the future of emergency management through your donations to the IAEM Scholarship Fund, which awards scholarships to EM students each year. Learn more at www.iaem.com.

IAEM Membership Benefits You: Join Today at www.iaem.com

■ Access to the largest network of top emergency management experts who can offer solutions, guidance and assistance.

■ Certification program in the only internationally recognized program for emergency managers. The Certified Emergency Manager® program can enhance your career and salary, raise and maintain professional standards, and certify achievements of emergency management professionals.

■ Representation on federal level working groups addressing vital issues such as terrorism preparedness, emergency management, program standards, communications, disaster assistance delivery, and others.

■ A unified voice at the federal, state and local levels to educate decision makers about the impact of policies and legislation on emergency management services.

■ The *IAEM Bulletin*, a monthly newsletter that is the definitive source for emergency management news and information.

■ Conferences and workshops to enhance networking and inform members about legislative issues.

Our Annual Conference and EMEX Exhibit offers networking and information on current emergency management issues. Our Mid-Year Workshop, held in the Washington, D.C., area, focuses on committee work and federal legislative issues. Regional conferences give members the chance to exchange information with colleagues closer to home.

■ WWW.IAEM.COM is the portal to the world of emergency management. The IAEM Web site offers discussion groups and a wealth of other professional tools, including the popular career center.

■ Alliances with a network of related associations and organizations to further the profession and its members.

■ Professional recognition of individuals through an annual awards program.

■ Scholarship opportunities and funds for students enrolled in emergency management courses of study.

■ Professional development through in-person meetings, networking and training opportunities.

■ Discounts on certification program fees, selected publications, conference registration and more.

Transforming Public Communications Through Technology: The Katrina Example

By Gerald Baron, President of Baron & Company and Founder of AudienceCentral

It's no secret that technology has created a whirlwind of change in the world of public information. But what many in emergency management may not realize is the degree to which technology is transforming the way Public Information Officers (PIOs) perform their jobs.

The two wars in Iraq, separated by about 12 years, provide a clear example of how technology is changing the ways we access and receive information. In the first, journalists far from the front lines generally would provide regularly timed dispatches through the major media, primarily by using still images. Fast forward to the current war, and hundreds of reporters now are embedded with the front line troops, dodging bullets and sending clear video images of actual engagements in real time.

Transforming Expectations About Information Access

The ever-increasing selection of television stations provides another example of today's expanded information outlets. Now we are selecting not from one of the three networks, but from literally hundreds of cable stations, including international channels. And while citizens still rely on print and online venues for daily news, more and more often today they find current information on a consistently growing number of blogs, through which they can access countless first-person stories from soldiers, eager to tell their stories from the front, and able to share their immediate perspectives on the dangers and drudgery they face.

But why is today's growing access to and availability of technology so important? In the singular context of war, technology is transforming our view of battleground experiences, and in so doing, is dramatically and literally redefining our expectations of access to information. All of the various technologies available today – Internet, satellite, video, cellphone, etc. – are converging and fundamentally altering what the public expects and demands of communicators and decision makers. Immediacy and authenticity now are determining factors in citizens' access to news and information, and they reasonably expect to be kept consistently informed.

It's fair to say that the world is shifting under the feet of today's Public Information Officer and, for that matter, today's Incident Commander, both of whom need to understand the demands each faces if they are to make informed decisions. Experienced Incident Commanders know that their efforts are judged positively by the public only if two things occur: the response is handled well, and the public is kept adequately informed. A poorly communicated response, no matter how effective it may originally have been, is nonetheless a reputation disaster.

Post-Katrina Success of U.S. Coast Guard Communications

It is little wonder, then, that the U.S. Coast Guard – perhaps more than any other agency involved in last year's devastating hurricane season – concluded its emergency efforts not only with its already-impressive reputation intact, but markedly enhanced. Not only did Coast Guard personnel perform their services and operations exceedingly well – having achieved more than 30,000 successful rescues – they also communicated efficiently and rapidly with stake-holders, decisionmakers, press and the public at large. It was this effective communication that likely made the difference in the Coast Guard's successful efforts during this critical emergency period.

During Hurricane Katrina, the U.S. Coast Guard District 8, headquartered in downtown New Orleans, managed to distribute numerous press releases with up-to-date information and respond to more than 500 inquiries from the public and media via its public information Web site. Additionally, Coast Guard members were able to feed the media and the interested public a continual stream of images and documents, in excess of 250 all told.

Destroyed HQ and Resources Don't Stop the Coast Guard

What is most impressive about the Coast Guard's performance during this challenging time was the fact that all of these tasks were able to be successfully carried out by PIOs after their headquarters – along with all of their IT resources – had been inundated and destroyed. The Coast Guard never skipped a beat and never stopped communicating. Their valuable efforts on this front focused on managing an information-rich public Web site relied upon by the media and stakeholders, all of whom were able to quickly access an accurate picture of exactly what events were occurring, and subsequently engage in interactive, intelligent dialogue.

The key to the Coast Guard's communication success during Hurricane Katrina was an organization-wide commitment to be the best in providing public information

Public Communications: The Katrina Example

(continued from page 25)

while using reliable, cutting-edge technology. The Coast Guard's virtual communication management system, a Web-based product designed specifically for public information during an emergency response, gave PIOs and their staff "virtual Joint Information Center" capability.

In other words, while others were hampered by not being able to physically co-locate with needed resources readily at hand, Coast Guard personnel were able to call on a number of staff spread around in various parts of the country to assist, since they could all collaborate online to collect, process and distribute critical information, and effectively manage inquiries.

Summary

In summary, the Coast Guard performed with great distinction, and their reputation and role in emergency management has been greatly enhanced. This can be attributed to two key, equally important factors so critical in emergency situations today: its outstanding response effort, and its non-stop communications using the best technology available.

One of the Coast Guard's most memorable images*, taken within a few hours of the city's IT resources being destroyed during Hurricane Katrina, shows a Coast Guard member working by flashlight to compile a list of people awaiting rescue. Thanks to its effective use of communication technology, the U.S. Coast Guard was on the job – despite many difficult and dangerous surrounding conditions – and the world knew about it. The photo was shot, uploaded to a virtual communication center using a laptop with a cell phone modem, and sent along with a press release to hundreds of media contacts via e-mail. The next day, this image appeared on newspapers' front pages across the country.*

The IAEM 2006 Annual Conference & EMEX Exhibit program will feature:

IAEM 2006 Annual Conference & EMEX Exhibit
"Going All the Way...
Putting Plans Into Action"
Nov. 12-15, 2006 ■ Orlando, Florida

Register online: www.iaem.com
Tour Virtual EMEX 2006: www.emex.org

• Keynote Presentations by U.S. DHS Under Secretaries George Foresman (Preparedness) and David Paulison (Federal Emergency Management)

• Disasters Through Time, by archeologist and author Brian Fagan

• The Five Concurrent Themes for Success, by highway patrol officer, attorney, risk manager and humorist Gordon Graham;

• Developing Legal Trends in Emergency Management, including Making Your Case on a FEMA Appeal, by Ernest Abbott of FEMA Law Associates

• Wal-Mart's Hurricane Response, by Jason F. Jackson

• Life Ain't Certain: Ride Your Best Horse First, by Sandy Davis

• The Political Realities of Disasters, by former FEMA Director Mike Brown

• U.S. National Incident Management System (NIMS); multiagency coordination systems; resource management; public information systems; and many additional sessions and speakers.

Wikis and Emergency Management

By Gavin Treadgold, Director of Kestrel Group, New Zealand

The rapid growth of the Internet and World Wide Web has spawned the creation of new and potentially useful software applications that may provide benefits to emergency managers. One of these applications that is currently drawing attention is the wiki.

Wiki is the Hawaiian word meaning to hurry, hasten; quick, fast, swift. Wiki software therefore refers to packages that are designed to make it quick and easy to create and modify collaborative Web pages on the Internet. Their uses have become more powerful and advanced than simply for the creation of Web content. Wikis now power some very content-rich Web sites, including the Wikipedia, the open encyclopedia.

Key Characteristics of a Wiki

Some key characteristics of a wiki include:
- Server-based software.
- Free, with few licensing restrictions.
- Accessible from any Web browser.
- Can be run on a stand-alone laptop.
- Uses html links to reference other pages in the database.
- Designed for collaboration and sharing.
- Records all revisions of documents and tracks changes made by users.
- Immediately highlights recent page changes and by whom.

Opportunities in EM

Wiki software has much potential to be used as a collaborative planning tool, whether planning occurs within or between organizations. Rather than passing a word processing document around via e-mail to all participants in the planning process, the plan could instead be created and maintained using a wiki. A secured Web site would provide an excellent home where plan developers could log in to check the latest changes and make modifications. The one key benefit over using a document-based approach is that everyone is always guaranteed to be reading and editing the latest version of the plan.

As certain milestones are reached in plan development, it is possible to lock the wiki, and create a "snapshot" of the current plan before continuing the review and development process. Conceptually, this model of development is quite similar to techniques used for managing the development of computer software, with developers sharing a central repository.

In addition to planning, a wiki can also be used as a knowledge base to store information and references to other documents. For example, certain pages in a wiki could be "tagged" with a pandemic tag. Then, by viewing the pandemic category, it will show all pages that are tagged with that pandemic. This provides quick and easy access to relevant information.

The benefits of wikis do not end when response starts. Conceptually, wikis can be installed on laptops or PDAs, enabling responders to have an entire knowledge base available on a mobile device, including all the links and available plans.

Wikis could be used on a set of wireless laptops as a tool to assist your incident management system of choice. For example, the response plan developed in the EOC could be created in a wiki. Then planning/intel, operations, logistics, finance and information could collaborate on the one document, with each section being able to view the other sections.

Wikis are also starting to be used in response and recovery by those people who have access to power and communications.

Probably the best recent example is the Katrina Help Info wiki that was used to consolidate response and recovery information following the disaster, in effect creating a portal for the event with links to other agencies' Web sites. In this manner, a wiki could be used as a public information system where key infrastructure is available.

Another example is the Hurricane Katrina Web page on Wikipedia, which started as a collaborative effort to record open source situation information. As in the case of the Flu Wiki, wikis are even being used to develop a community knowledge base about a hazard before the event.

It is important to note at this point that public wikis with permissive access controls can have issues with the quality and authenticity of information provided. Restriction of editing rights to approved and trained personnel can ensure that the quality of information contained in the wiki is not threatened.

The next likely development is going to be the consolidation of wikis and community mapping projects, such as the Hurricane Information Maps that were developed following Hurricane Katrina and utilized Google Maps. The combination of information contained in a wiki linked to spatial references and presented on a map will provide a very powerful information resource for response and recovery.

Links

- Katrina Help Info Wiki, http://katrinahelp.info/wiki/index.php/Main_Page
- Hurricane Katrina page on Wikipedia, http://en.wikipedia.org/wiki/Hurricane_Katrina/
- Flu Wiki, www.fluwikie.com
- Hurricane Information Maps, www.scipionus.com

NENA Completes Research on
Emergency Notification Systems

By William C. Weaver, Jr., Senior Technical Consultant, iXP Corporation, Chairman of the National
Emergency Number Association 911 Center Operations Committee, Houston, Texas

This article provides the emergency communications and emergency management professional with information about recently completed operational research on emergency notification systems by the National Emergency Number Association (NENA).

NENA, the advocate organization for 9-1-1 issues, received information from commercial vendors and practicing association members regarding what was believed to be a "serious disconnect" between what public safety agencies were seeking to purchase and their eventual use.

Working Group Examines Key Operational Issues

NENA formed a working group to research key operational issues and, where appropriate, make comments and suggestions in the form of an Operational Information Document (OID). The purpose of an OID is to provide background, insight and guidance to the public safety community on a specific technology, process, operation or point-of-interest.

The recently completed Wide Area/Statewide Emergency Notification Systems Operational Information Document provides substantive information on emergency notification systems as a key communications and information tool.

The OID provides:
■ Working definitions.
■ Examples of operational issues.
■ Key management, administrative and operational information with regard to ENS systems, including the following types of emergency notification systems (characterized by use).

Types of Emergency Notification Systems

■ **First Responder Notification**: communication systems designed to alert first responder personnel, traditionally local police, fire and emergency medical services, of an emergency event using one of many available methods (i.e., radio, pager, telephone); allow the coordinated notification of multiple field resources (on- and off-duty personnel); and may include staff from multiple jurisdictions.

■ **Emergency Alert System**: a locally managed emergency alert system that uses locally available media to communicate important emergency messages to the public. Common media include, but are not limited to, telephone communications, e-mail, alphanumeric pagers, dynamic message signs, Internet, and commercial radio/television broadcasting spectrum.

■ **Emergency Notification System**: most commonly used for high-volume notification of the public based on the need to distribute time-sensitive information rapidly by calling the recipient's landline or wireless phone. Notification targeting can also be based on a specific geographically linked dataset.

■ **Mass Notification System**: system designed to notify a large number of people, usually in a dense metropolitan area, of an emergency event using one or many methods to deliver communications.

Goals and Objectives

The OID is also intended to provide substantive information on the goals and objectives of an emergency notification system, and the importance of clearly understanding how these systems may be used, as well as identify the often overlooked responsibilities of the host agency/system administrator in appropriately specifying, implementing, using and managing these systems. The following key functional areas are addressed:

■ **System Administration**: points of consideration the management team should address in developing procedures and protocols, including guidance and background information on data acquisition, written procedures documentation, public education campaign, authorized use, five sources of telephone number database information and database accuracy.

■ **System Operations**: the major system operations issues one should consider, including event classification capabilities, targeting capabilities, database management, system and operational security, confidentiality, and voice and data audit trail.

■ **Information Systems and Support**: the major maintenance and support considerations an agency should plan for, including data maintenance, mapping (GIS) data, contact lists, event numbering and system interface points.

■ **Facilities and Support Systems**: the facilities and support system requirements/concerns an agency should consider, including physical security, UPS system support, equipment redundancy, data security and other critical issues.

■ **Training**: major training issues, including such points as simulator training, tutorial systems training, and training curriculum structure and suggested content.

IAEM Welcomes New Members From Nigeria

At left is Moremi Soyinka-Onijala, with the Office of the Special Assistant to the President, Migration and Humanitarian Affairs, speaking at a news conference at the U.S. Embassy in Abuja, Nigeria.

Jim Greene, former Montana EM Director, was recently in Nigeria for the U.S. State Department as a speaker and specialist to present at the May 16-19 Murtala Muhammed Conference on "Global Perspectives on Disaster Management." Greene spoke on emergency management in the United States and lessons learned from Hurricane Katrina. He met four IAEM members from Nigeria, including Salisu Makarfi, Director-General of Nigeria's National Emergency Management Agency (NEMA), and Kayode Fagbemi, IAEM national representative in Nigeria and Assistant Chief Planning Officer, NEMA.

"The trip to Nigeria was quite an experience," said Greene. "The poverty, lack of infrastructure and large number of people are overwhelming. Several non-government organizations are trying to make a difference and support their National Emergency Management Agency. A couple of people expressed a desire to join IAEM, including a military attaché at the U.S. Embassy, so I encouraged them."

Following Greene's visit to Nigeria, 19 Nigerians joined IAEM. We welcome them as new members!

Street scene in Abuja, Nigeria.

Former Montana EM Director Jim Greene visited fellow IAEM members in Nigeria, May 2006. Greene shared disaster preparedness expertise.

Photo taken en route to Abuja Airport, Nigeria.

All photos were provided courtesy of Jim Greene
jmgreene@montana.com

How To Design Information Technology for Planned and Improvised Response: A Research Perspective

By David Mendonça, Ph.D., Information Systems Department, New Jersey Institute of Technology, and Frank Fiedrich, Ph.D., Institute for Crisis, Disaster and Risk Management, The George Washington University

The use of sophisticated and highly specialized information technology in all phases of emergency management has become widespread, even pervasive. Yet disasters continue to confound the capabilities of these technologies, not only during response but during training and recovery. A more comprehensive and longer-term view of the role of information technology (IT) in emergency management must be developed if IT is to be useful in improving planning, response and recovery.

Developing a Long-Term View

Developing such a view requires a combination of needs assessment (with considerable input from the field), basic research to generate design requirements for technologies to address these needs, and engineering in conducting development, deployment and evaluation.

The history of organized response to disaster demonstrates that there is much more to managing response activities than following pre-event plans. Indeed, the particular circumstances of disasters often require emergency managers to improvise. But the development of tools to support improvisation has received very little attention. The focus of this article is therefore on how research may be used to design IT to support plan execution and improvisation by emergency managers.

Creativity Under Pressure: Hallmark of Skilled Emergency Manager

The ability to act creatively and successfully under pressure is a hallmark of the skilled emergency manager. Much anecdotal and scientific evidence suggests that this ability follows from exposure and response to a wide range of field conditions (e.g., situations ranging from planned to improvised, low to high risk, and slow to sudden onset).

Plans certainly have considerable value, and the innovations generated by response personnel can sometimes be turned into new plans. But seasoned personnel also understand the logic and limits of plans. They can recognize when to depart from a plan and determine how to assemble a new plan on the spot. Research into the 9/11 attacks in New York City revealed many such instances of improvisation, both during response (e.g., the waterborne evacuation of lower Manhattan, the creation of a new Emergency Operations Center) and recovery (e.g., the rewiring of lower Manhattan, the cleanup of Ground Zero).

Understanding When and How Successful Improvisation Occurs

A reasonable first step is to understand when and how improvisation happens successfully in order to generate programs for training in improvisation. An appropriate next step is to use this understanding to guide the development of technologies that enable – and properly constrain – creative problem solving in all phases of emergency management.

At present, the importance and relevance of improvisation in emergency management is not well-reflected in the design of accompanying information technologies. In training, IT systems (e.g., Internet-based examinations for NIMS training) have a proven effectiveness at inculcating skills and drills, allowing personnel and trainers to reflect on the rationale behind correct and incorrect performance. During response, IT systems (e.g., geographic information systems for consequence management) can be useful for supporting shared situational awareness. During recovery, IT systems (e.g., document management systems for tracking contracts) can support organizations in cataloguing lessons learned from the response.

Considering What IT Can Best Fit the Task at Hand

But a persistent problem with these and other information technologies is that many cannot adapt themselves. Instead, they must be re-programmed to meet emergent needs. As a result, sophisticated or highly specialized technologies may be dropped because they were not built to solve the current problem, and would require too much time and effort to reconfigure.

On the other hand, ill-fitting technologies may continue to be used even when it would be best to discard them. It is therefore appropriate to consider what information technologies can provide the best fit to the task at hand, given the tremendous uncertainty that can accompany disasters.

Research Results

Our own work suggests that existing information technologies may be sufficient for collecting and processing data on how emergency managers improvise during response, and may also be used for

Using Simulation To Exercise Emergency Management Skills

By Roger Huder, CEM, and Theresa R. Tamash, Applied Research Associates, Inc., Orlando, Florida

One of the overarching priorities in the National Preparedness Goal is expanding regional collaboration. Command-level decision making is a critical factor in the success of management and mitigation efforts of regional, multi-jurisdictional mass casualty incidents. Research performed by Klein Associates, a division of Applied Research Associates, Inc., shows that the more experience leaders have with critical incidents, the more "workable," "timely" and "cost effective" their decisions become.[1] However, gaining this valuable experience is difficult because mass casualty incidents are uncommon and full-scale exercises are costly.

Benefits of Simulation-Based Training

Simulation-based training offers an opportunity for leaders to develop and improve their decision making and collaboration skills in a safe and realistic environment. This approach is not new. For many years, the U.S. military has been using simulation to train doctrine and tactics, exercise leadership and model potential outcomes. Simulation systems can realistically model complex incidents, consequences and mitigation efforts (such as an explosion, the resulting building damage, fire and casualties) and the effects of evacuating an area or failing to identify entry and exit corridors. Data generated by a simulation can be logged and easily used in After Action Reviews.

In March 2004, the Office for Domestic Preparedness commissioned a review of 100 systems designed to provide emergency preparedness training and exercise. The report, called *Review of Models, Simulations and Games (MS&G) Volume III*, states, "Gaps were satisfied by a range of MS&G products, including equipment simulation, large-scale simulators, information management tools, awareness videos and modeling tools. The cost of such products may be quite diverse (e.g., AEAS and CRISIS both map directly to the greatest number of gaps, but AEAS is free whereas CRISIS can range from $20,000 up to several hundred thousand dollars)."

Of course, AEAS (Automated Exercise and Assessment System) was not free to develop. More than $2 million in federal funds were used to develop AEAS, but the software is provided free to emergency response agencies in the U.S. by the National Guard Bureau who sponsored the design and development.

Automated Exercise and Assessment System (AEAS)

AEAS is a computer-based simulation system for training, exercising and assessing emergency responders. The system provides a broad collection of chemical, biological, radiological, nuclear and explosive (CBRNE) scenarios, and a pandemic flu scenario will be completed this summer. AEAS exercise participants are on-scene and Emergency Operations Center command-level personnel.

AEAS directly exercises the Incident Command System within the National Incident Management System, as well as collaboration, resource management, critical decision making and situational awareness. Exercises can be tailored to the resources and capabilities available in the exercising jurisdiction. AEAS offers an automated, unbiased assessment of individual and team actions taken to mitigate an incident.

Use in Tabletop and Functional Exercises

AEAS can be used for both tabletop and functional exercises, and in each, participant actions directly affect the incident progression and outcome. In a tabletop exercise, decisions are discussed among the group and entered into AEAS by a designated operator.

In a functional exercise configuration, each participant sits at an AEAS player station. As a scenario begins, AEAS participants are given background information and a map with resource locations. They begin receiving simulated e-mail and radio messages about the incident and must work together in order to mitigate it under time pressure.

Automated assessment of individual and collective participant actions is automatically generated during an exercise and compiled in an After Action Review (AAR) tool along with communications and resource tracking information. The AAR tool can be used immediately after the exercise to facilitate discussion and generate reports in soft- and hard-copy formats as a take-away package.

Barriers to the Use of A Simulation System

Several barriers to the use of a simulation system like AEAS are a reality to many jurisdictions.

■ First, computer software often has a learning curve that is difficult to overcome. AEAS was designed to be easy to use, and it also includes a complete set of

---

[1] Klein, G. and Klinger, D. Naturalistic Decision Making. Human Systems IAC GATEWAY XI:3. Winter 1991.

Research and Training in Emergency Management: From Concept to Reality

By James H. Graham, Jr., Director, University of Louisville IT Resource Center for Homeland Security

Communications capability, during and after a disaster, has long been a high-priority issue in emergency management. The interoperability problem between disparate agencies first came to attention after the Oklahoma City bombing in 1995, and received considerable attention six years later because of the communications failures after the terrorist attack on the World Trade Centers. The issue even received significant coverage in the final 9/11 Commission Report. It is almost incredulous that nearly five years after 9/11, the same issues are front and center in the after-action reports on the response to Hurricane Katrina.

Need Identified for Field Communications Infrastructure

Suggested key elements contained in these reports address the need for a field communications infrastructure to give first responders, more specifically their Incident Commanders, the following capabilities:

■ Access to documentation regarding local assets and response guidelines.

■ The ability to provide situation reports from the field.

■ Collaborative information sharing across jurisdictions and agencies.

■ Mapping, geospatial and imagery capability.

■ Access to intelligence analysis.

■ Decision support technology.

■ Interoperability of voice and data among local, state and federal resources.

Some jurisdictions have large, complex and expensive "mobile command posts" with some of these attributes and the trained staff to run them. However, deploying the behemoth mobile command posts in disaster zones with no infrastructure and debris-strewn roads that have been damaged proved to be problematic in the Gulf Coast Region after Katrina. In addition, small or rural jurisdictions cannot justify their average price tag of one-half million dollars or more.

A research project proposed by the University of Louisville's IT Resource Center for Homeland Security suggested a methodology to address these issues while enhancing situational awareness and information sharing. The project was funded in 2005 by the Science and Technology Directorate of the U.S. Department of Homeland Security (DHS).

The problem addressed by the project is that the decision maker with the boots on the ground, the Incident Commander, needs relevant information in the early stages of the emergency and an efficient way to communicate with other resources, including a local or state EOC. A proposed integrated technology solution and concept of operations was recommended after analyzing the results of several field exercises, interviews with users and actual deployments as part of an Incident Command Team.

Man-portable Interoperable Tactical Operations Center

The prototype solution, called the MITOC (Man-portable Interoperable Tactical Operations Center), is a rapidly deployable, rugged, highly portable and easy-to-use command and control communication system. The nation's top technology firms, university faculty and emergency management practitioners came together with a wish list of requirements for the project. The subsequent design was an integrated unit providing the most cost-effective and efficient technologies used in many circumstances, especially in the initial hours of a response.

This solution has proven to be more versatile than the typical "mobile command post" that is based on a large bus or RV chassis. This is because the proposed solution is small enough to be carried by two people, costs significantly less than a bus or RV-based solution, and is less complicated to operate because of its automated set-up routine and satellite acquisition.

Its configuration makes it easier to get to the incident scene in an SUV, pick-up, trailer, boat or helicopter. The MITOC can even be used as an ad hoc EOC in the field, or can be brought indoors since it supports up to 36 VoIP telephones and laptops via its wireless network.

The research observations were supported by user interviews, field tests and an analysis of size, cost and ease-of-use. The research indicated that resources accessible via the MITOC provided situational awareness, collaboration and communications interoperability tools to the Incident Commander in a less expensive and easier-to-operate modality than many existing "mobile command posts." The research also validated additional applications for the MITOC, such as business continuity, medical field hospitals or points of dispensing.

Commercializing the Solution for the Field

The goal of the research project was to commercialize the solution so that its benefits could be realized in the field. The MITOC project was recently licensed to

Technology Can Get in the Way

By David B. Nock, Program Manager, Emergency Operations Training and Simulations,
NERRTC/TEEX, Texas A&M University System, College Station, Texas

The use of technology and application of new processes has always been a challenge for jurisdictions. Do you remember the old blackboard and chalk? Better yet, remember when telephone connections were made through a switchboard? Over time, we have learned to apply new technology in new ways. Using the example of the blackboard, the basic need to display information in a classroom or emergency operations center still exists. The premise of this discussion is not about technology, so much as it is about understanding basic needs so that new methods or applications may be presented properly.

The communications challenge demanded of responders and communities is huge. The National Response Plan (NRP) and various other recent federal documents address communications and information distribution planning. They do not tell how these issues are to be handled, only that they must be. Local challenges are often not addressed in such documents, and they should not be.

What is the local challenge? What is the local requirement for information distribution? How does the Emergency Operations Center communicate, or how does it distribute information? How is technology to be applied?

Know your requirement first. Focus on the basics. Many communications and information challenges can be resolved with the application of technology. Use technology to enhance your capabilities. This point is not just for communications applications. It applies to all applications of new or existing technology.

Technology applied correctly can be a huge response and incident management multiplier. However, technology applied for technology's sake can cause delay, disruption, loss of situational awareness and a lack of timely, effective decisions. If you believe you have a problem with communications, information management or some other aspect of emergency management, you are probably correct. The fix may not be more, better, bigger applications of technology, but rather the correct usage.

Define Needs

Review your requirements, define the need and then study the options. What courses of action are available to resolve the issue? What are your basic operational processes and procedures related to the problem? Apply the technology that will enhance your capabilities. Do not just apply technology without defining the need.

Many jurisdictions are working to establish regional response mutual aid agreements or support compacts. As these planning and management agreements are developed, new incident management challenges for establishing situational awareness and maintaining it will unfold for you. Who are your players (the stakeholders) and the responding agencies that are now part of the team? Communications and information sharing will need to be established within the new structure.

Technology can enhance your capability or it can cripple you. Proper planning, coordination and consideration of the needs of all the stakeholders will go a long way toward allowing technology to be a help and not a hindrance.

In recent years, many jurisdictions have purchased software or hardware systems based on the idea that the new systems would solve problems or enhance capabilities. In testing the new systems, in conjunction with a training event or drill, new challenges can emerge. Sometimes a new system doesn't work or doesn't address the real needs, thereby wasting precious local resources. There are several reasons why this can happen:

■ A basic needs assessment may not have been done.

■ Staff may not have been properly trained on the new system.

After a new system is brought into a jurisdiction, all the personnel who are expected to interact with it need training. Remember, the system was purchased to resolve a problem or improve response capabilities, situational awareness and information management. Implementing a new system without adequate training can result in failure, followed by loss of confidence – or worse yet, the possibility of loss of life.

Technology applied to information management can lead to the further challenge of information overload, when responders are burdened with unprocessed information. This can cause the disruption of response capabilities, the loss of situational awareness and a lack of timely, effective decisions.

Establish the Basics

While the application of technology to information management can be beneficial for any jurisdiction, it is important to remember a couple of things. The basic incident management tools include blank chart paper, a marker, a stack of incident management forms, a city map and a copy of the Emergency Operations Plan – no technology needed.

Establish the basics first. Once this is done, use technology to *enhance* your capabilities. Don't let technology drive your requirements; let your requirements drive the need for technology.

Designing IT for Improvisation

training in a wide range of improvised behaviors. For example, logs of telecommunications and subsequent decisions can yield considerable insights into how response personnel determine when and how to depart from plans. In the near future, it will likely be possible to track communication and decision patterns using consumer-grade technologies, enabling managers to know who is talking to whom, when and where the communication is taking place, what is being discussed – all in nearly real-time. Similarly, remote and mobile sensors will likely be able to provide detailed data on the status of decisions about human and materiel resources. The ability to synchronize streams of communication and decisision data is further off, but certainly on the horizon. For any of these technologies to have value in supporting improvisation, considerable research must be done to ensure that the analysis of these data is based on a firm understanding of training, response and recovery activities.

Broader Focus Needed

Research into how emergency managers determine whether and how to depart from plans should lead to a set of requirements for the design of information technology to support them in executing these activities. Generating this understanding requires a broadened focus, one that recognizes the competing – but highly complementary – skills of plan execution and plan improvisation. Given the lack of flexibility in sophisticated technologies, it may be worthwhile to consider how improvements in performance may be achieved through the novel application of existing techniques and technologies, tailored to a new set of demands.

Research on Emergency Notification

Summary

In summary, the OID addresses several major issues related to emergency notification systems:

■ Discusses management's responsibility with regard to data acquisition, operations, administration and management of an ENS system.

■ Raises the critical and essential issue of ENS database accuracy and identifies the five general sources of ENS data.

■ Highlights the differences between some states regarding the availability of 9-1-1 extract data to perform emergency notifications.

■ Provides on-point guidance to the practitioner or public safety professional charged with developing technical and functional requirements for ENS systems.

■ Offers general guidance on other issues deemed important by the working group's members to the successful acquisition, implementation and management of an ENS system.

As with any technology-based system, an understanding of the system's intended purpose is essential: how it is expected to accomplish its mission; what resources (i.e., lines, databases) it has access to; what other systems it must interface with (i.e., mapping systems, Internet); intended message recipients (i.e., E/9-1-1 extracts, dynamic lists, associative lists); and how they are targeted (i.e., zip code, map coordinates).

Using Simulation To Exercise EM Skills

user manuals and a free support Web site (www.myaeas.com) with tutorials.

■ Second, computer equipment is expensive. AEAS can be run on existing equipment, and a new Individual Trainer mode (available in early fall 2006) will allow a single person to exercise their decision making skills with a simulated team without requiring a computer network.

Simulation can be a cost-effective tool for the emergency management community to increase the effectiveness of leadership and collaboration so we are prepared when a mass casualty incident occurs. While AEAS is a good example of a system that is currently available, others are being designed and developed and promise to offer increased opportunities for training and exercising.

From Concept to Reality

TriAegis LLC, which is building, servicing and providing back-end services to MITOC units – either as stand-alone units or integrated in various SUV configurations.

This process took less than a year from concept to reality, thanks to the DHS grant, and will have a positive impact on emergency management and response this hurricane season and beyond.

Online Resources

DHS Fact Sheet: Strengthening Preparedness for 2006 Hurricane Season – www.dhs.gov/dhspublic/display?content=5677
FEMA Fact Sheet: Family Evacuation Plans and Guidelines – www.fema.gov/plan/prepare/evacuation.shtm
Ready Business – www.ready.gov/business – information on emergency preparedness planning for business; includes download of posters, brochures, supply checklists and sample emergency plans.

State of Illinois Enacts Laws
To Protect Emergency Managers

By David H. Searby, Jr., BS, JD, IPEM, Operations Officer/Public Information Officer,
Emergency Services and Disaster Agency, City of Du Quoin, Illinois

Effective Jan. 1, 2006, the State of Illinois took steps to better protect emergency managers, by enacting two separate laws.

Public Act 94-0243

The first such law, Public Act 94-0243, made several changes to the Illinois Criminal Code and Code of Corrections, providing for enhanced penalties against persons who assault, cause bodily harm to or kill emergency management personnel.

In order to create the enhanced penalties, the definition of "emergency management worker" had to be written and defined. The statute, as enacted, defines an *emergency management worker*:

(a) any person, paid or unpaid, who is a member of a local or county emergency services and disaster agency as defined by the Illinois Emergency Management Agency Act,[1] or who is an employee of the Illinois Emergency Management Agency or the Federal Emergency Management Agency,

(b) any employee or volunteer of the American Red Cross,

(c) any employee of a federal, state, county or local government agency assisting an emergency services and disaster agency, the Illinois Emergency Management Agency or the Federal Emergency Management Agency through mutual aid or as otherwise requested or directed in time of disaster or emergency, and

(d) any person volunteering or directed to assist an emergency services and disaster agency, the Illinois Emergency Management Agency or the Federal Emergency Management Agency.[2]

Parts (b), (c), and (d) were added to the original bill to encompass other personnel who work hand-in-hand with emergency managers during critical times.

Public Act 94-0243, as enacted, makes it a specific criminal offense to threaten harm to (or otherwise assault), cause bodily harm to or kill an emergency management worker while acting in the course of his/her duties. In addition, committing the offense to prevent the emergency management worker from carrying out his/her duties, or in retaliation for an emergency management worker performing his/her duties, is covered.

All penalties for the offenses are enhanced, meaning that emergency management workers have the same protections as police officers and firemen. A term of natural life imprisonment is mandated for a person committing first degree murder of an emergency management worker under the same conditions.[3]

In addition to defining an "emergency management worker" and amending the provisions of the Criminal Code/Code of Corrections as described herein, Public Act 94-0243 also created the new offense of "obstructing an emergency management worker," which is where a person "knowingly obstructs the performance by one known to the person to be an emergency management worker of any authorized act within his or her official capacity."[4] A violation of this provision is a Class A misdemeanor.[5]

Public Act 94-0323

In addition to Public Act 94-0243, another law regarding emergency management personnel became effective Jan. 1, 2006. This law, Public Act 94-0323, made it a criminal offense to impersonate an emergency management worker.[6]

Specifically, Public Act 94-0323 makes it a Class 4 felony for a person to "knowingly and falsely" represent himself or herself to be an emergency management worker of any jurisdiction in Illinois or of the American Red Cross.[7]

The second part relating to emergency management personnel is the "aggravated" provision, which makes it a Class 3 felony for a person to attempt to or commit any other felony while "knowingly and falsely" representing himself or herself to be an emergency management worker.

---

[1] See 20 ILCS 3305 et seq
[2] 720 ILCS 5/2-6.6
[3] 730 ILCS 5/5-8-1(a)(1)(c)(iii)
[4] 720 ILCS 5/31-9
[5] Ibid.
[6] 720 ILCS 5/32-5.6, 720 ILCS 5/32-5.7
[7] 720 ILCS 5/32-5.6

New Members: May 16-June 15, 2006

A monthly listing of new IAEM members appears in each issue of the *IAEM Bulletin*.

REGION 1

Maggie Targrove
New Haven, CT

Blayden Wall
Woodland, WA

REGION 2

Obianuju Nwobi
New York, NY

Douglas Sandbrook
Saugerties, NY

Christopher Savarese
Shirley, NY

REGION 3

Brian E. Anderson
Gaithersburg, MD

Thomas Blount
Clinton, MD

Barbara Camp
Centreville, VA

S. Ashley Ehrhart
Alexandria, VA

Benjamin G.M. Feril
North East, MD

Michael D. Krumlauf, CEM
Derwood, MD
Sponsor: Kathee Henning,
CEM

Kevin Porter
Dulles, VA

Juliana Sadovich
Potomac, MD

Kevin O. Shanley
Arlington, VA

Frank J. Sullivan
Malvern, PA

REGION 4

John D. Barile
Cary, NC

Ken Bishop
Winston-Salem, NC

Joanne M. Cline
Marietta, GA
Sponsor: Mike Selves, CEM

Charles L. Cyrille
Miami, FL

Donald Druitt, Sr.
Miami Beach, FL

James C. Hilliard
Port Orange, FL

Adam Mengel
Palatka, FL

Erin Mohres
Fort Lauderdale, FL

Jerry W. Rodgers
Jensen Beach, FL

James Michael Stallings
Rocky Mount, NC

Leon Thomas
Knoxville, TN

Alan E. Williams
N. Charleston, SC

REGION 5

Keith Laub
Cleveland, OH

REGION 6

Kwa Heri Heard
Dallas, TX
Sponsor: Lanita Driskill

Otis Latin
Austin, TX

Glen Wisecarver
Hammond, LA

REGION 8

Alan J. Briding
Monument, CO

Jeff Miller
Jackson, WY

REGION 9

Christopher Boyer
Martinez, CA

Celeste Cook
San Jose, CA

Eric Grimm
Atherton, CA

Richard Mirgon
Minden, NV

David Petersen
Mesquite, NV

REGION 11

Simon Beckett
London, United Kingdom

Fernando De Ferraris
Buenos Aires, Argentina

Simmone Edge
Silverdale, Auckland
New Zealand
Sponsor: Chris Laird

Gerardo Jose Fernandez
Colonia Jardin Balbeuena
Mexico

Alessandro Gazzini
Rome, Italy

Kerry R. Hinds
St. Lucy, Barbados

Dr. Abdulbari M. Ibrahim
Jeddah, Saudi Arabia

Yongkyun Kim
Seoul, Korea

Paul Read
Silverdale, Auckland
New Zealand
Sponsor: Chris Laird

Alejandro Villatoro-Martinez
Cuauhtemoc, DF, Mexico

Yunge "Jonathan" Zhang
Chengdu, Sichuan
China
Sponsor: Tao "Victor" Bai

STUDENT REGION (REGION 12)

Jesus Jose Baquera
Fort Huachuca, AZ

Marianna Completo Carvalho
Staten Island, NY

J.T. Flick
Hawthore, NY

Lisa Graves
Baton Rouge, LA

Edward Knowles
Oakville, CT

Gary Meaney
San Antonio, TX

William L. McCarthy
Douglaston, NY

Pauline Redmond
Columbus, MS

Sheldon J. Tennian
Crown Point, NY

Amanda L. Turner
Gloucester, VA

Blayden Wall
Woodland, WA

Alexander Yesnik
Arlington, VA

IAEM CANADA (REGION 13)

Pierre Legault
Ottawa, ON

Jason Levy
Brandon, MB

Pat Marten-Daniel
Toronto, ON

Dr. Charles Manny Solnik
Mississauga, ON

E.M. News

■ **DHS Releases Nationwide Plan Review**. On June 16, the U.S. Department of Homeland Security (DHS) issued findings from a national assessment of the country's catastrophic planning capabilities. Responding to directives from President Bush and the Congress following Hurricane Katrina, the Nationwide Plan Review looked at whether existing emergency operations plans for states and urban areas are sufficient for managing a catastrophic event. The review also presents conclusions on actions needed by the federal government to improve and coordinate planning.

Conducted in all 56 states and territories and 75 urban areas over six months, the Nationwide Plan Review was the most comprehensive assessment of emergency operations plans to date relative to planning for a catastrophic event. Reviewers examined nearly 2,800 emergency operations plans and related documents, with participation from more than 1,000 emergency managers and homeland security officials.

The two-phase review began with a self-assessment of key planning components. Then peer review teams, composed of former state and local homeland security and emergency management officials, visited each site and assessed the plans against national standards developed just prior to Katrina. To provide an overall picture, plan components were assessed on a scale of "sufficient," "partially sufficient" or "not sufficient" to manage a catastrophic event. The majority of components assessed fell into the "partially sufficient" category.

While most areas of the country are well prepared to handle standard disaster situations, the National Plan Review findings demonstrate the need for all levels of government across the country to improve emergency operations plans for catastrophic events such as a major terrorist attack or category-five hurricane strike. Several areas – including evacuation, attention to populations with special needs, command structure and resource management – were areas needing significant attention.

The Nationwide Plan Review can be downloaded in its entirety at www.dhs.gov/interweb/assetlibrary/Prep_NationwidePlanReview.pdf. The related fact sheet on the review is posted at www.dhs.gov/dhspublic/interapp/press_release/press_release_0928.xml. The fact sheet on initial conclusions is posted at www.dhs.gov/dhspublic/interapp/press_release/press_release_0929.xml.

■ **The Technology "Cart" and the EMS "Horse" – New Technology and EMS Project Launched**. Many new technologies hold great potential for their application in emergency medicine and the improvement of emergency care. To date, however, most technologies are developed first, leaving those who deliver emergency care to figure out how to use the finished product in the prehospital setting. That may be about to change. Through an initiative coordinated by the National Association of Emergency Medical Services Physicians (NAEMSP), the National Association of State EMS Officials (NASEMSO) is involved in a project designed to evaluate the utility of technology before it is deployed in EMS.

The "Technology and EMS" project, funded by Emergency Medical Services at the National Highway Traffic Safety Administration (NHTSA), will link individual EMS experts, national professional associations and educational institutions having extensive EMS knowledge with developers of multiple kinds of technology (e.g., technical devices, information technology) to increase national EMS community involvement in evaluating the clinical and practical utility of technology before it is deployed in EMS. A Technical Consulting Committee (TCC), composed of medical, surgical, emergency medical, public safety, public health and other organizations and agencies convened by NAEMSP, has been charged with developing a template and a process for evaluating new technology for its application in EMS.

Member News

■ **Arthur Rabjohn Welcomes New Addition to Family**. IAEM Region 11 President Arthur Rabjohn is a new father. Phoebe Louise Rabjohn was born on May 20; mother and baby are doing well.

■ **Jeffrey Crane Accepts New Position**. Jeffrey S. Crane has accepted a new position as Executive Director of the John P. Murtha Institute of Homeland Security, which is part of the University of Pennsylvania system.

■ **David Maack Receives State Certification**. David L. Maack, CEM, recently received certification as a Wisconsin Certified Public Manager, joining 300 other Wisconsin managers who have earned this certification since 1990.

■ **In Memory of Hal Munck**. IAEM Headquarters was recently notified that IAEM member Hal Munck, CEM, of Cleveland, Tenn., passed away on May 27.

■ **Share Member News**. The *IAEM Bulletin* shares member news of promotions, achievements, new positions and retirements from time to time. E-mail your news to *Bulletin* Editor Karen Thompson at thompson@iaem.com.

E.M. News

The *Emergency Medical Services Agenda for the Future* cites the expanding role of technology in its recommendations for the future practice of emergency care. However, the Agenda specifically recommends that as technology pertains to the direct clinical care of patients, EMS should "employ new care techniques and technology only after [they are] shown to be effective." The goal of the "Technology and EMS" project is to develop a coordinated method for determining the efficacy, effectiveness and efficiency of new care technologies in EMS.

The practice of emergency medicine and the delivery of emergency care will continue to evolve, as knowledge is expanded and technology is developed. As technology continues to advance, this project will allow the EMS "horse" to be repositioned before the technology "cart." For more information on NASEMSO's role, contact Bob Bass at rbass@ miemss.org or Kevin McGinnis at mcginnis@nasemso.org. For more information on the "Technology and EMS" project, contact Principal Investigator Dr. Robert Domeier at rdomeier@aol.com.

■ **FEMA Launches Debris Contractor Registry Online**. The U.S. Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) is implementing a number of improvements to strengthen its programs for the 2006 hurricane season. As part of this, FEMA is launching a new Debris Contractor Registry online.

This database will establish a nationwide list of debris removal contractors that can help communities better plan for and more rapidly respond to debris removal requirements in times of disaster. In order to register their business, contractors will simply log on to the Web site at https://

65.207.63.84/usp3_nerr/ default.aspx and follow the instructions. Those who encounter problems or have questions or concerns regarding use of the Web site should contact the help desk at (703) 674-3003 or e-mail usp3-support@mantech-ist.com.

■ **Two New Grant Initiatives Announced for Institutions**. At a May 31 conference sponsored by the National Trust for Historic Preservation and Tulane University in New Orleans, First Lady Laura Bush announced two new grant initiatives that will provide funding to institutions that have suffered a major disaster. The Institute of Museum and Library Services is reserving $1.5 million of the grant money it will award over the next year for projects related to the Gulf Coast and other regions affected by major disasters. Read more about this program at www.imls.gov/news/2006/ 060106.shtm. The National Endowment for the Humanities will award an additional $750,000 in stabilization grants to cultural and historical institutions along the Gulf Coast. Details of the program can be found at www.neh.gov/news/ archive/20060602.html.

■ **Cannon Appointed Director of Response**. Glenn Cannon has been appointed director of FEMA's Response Division where he will be responsible for coordinating the development and execution of interagency plans, policies, and procedures and for response operations in Presidential disaster and emergency declarations and other incidents of national significance.

Cannon currently serves as the manager of public safety for M/A-COM Wireless, Inc., a subsidiary of TYCO Electronics, a position he has held since 2001. M/A-COM provides Mission Critical Communications Systems to public safety systems including state-wide radio systems to both Florida and Pennsylvania. Previously, Cannon served as the manager and chief operating officer of Allegheny County, Penn., beginning in 1996.

In this role, he was responsible for the day-to-day operations of Allegheny's county government, which had 7,800 employees, a $1 billion operating budget and served 1.4 million residents. Along with reorganizing 41 county departments down to six, Mr. Cannon reduced operating costs $218 million, directed the development of the county-wide 911 system and successfully negotiated the county's labor agreements with 18 unions.

■ **Former Presidents Urge Americans To Prepare for Emergencies**. Former U.S. Presidents George H.W. Bush and Bill Clinton are urging Americans to take steps to better prepare themselves and their families and businesses for emergencies. The former presidents recorded two thirty-second public service advertisements (PSAs) from New Orleans for the U.S. Department of Homeland Security's *Ready* Campaign. *Ready* is a national public service advertising campaign, produced by The Advertising Council, that is designed to educate and empower Americans to prepare for and respond to emergencies.

"We are honored to have former Presidents Bush and Clinton help us raise awareness about the important steps individuals and businesses should take to prepare for all types of emergencies," said Homeland Security Secretary Michael Chertoff. "We hope these ads will encourage all Americans to get an emergency supply kit, make a family emergency plan and be informed about the potential threats that could occur in their hometowns."

In both PSAs, the presidents remind Americans that events like hurricanes can be devastating, but there are steps individuals and businesses can take to limit the effects of emergencies. The presidents state that a little advance planning can help keep individuals, families and businesses safe. The PSAs encourage viewers to visit www.ready.gov.

E.M. Resources

■ **GAO Issues Report on U.S. Tsunami Preparedness**. The U.S. Government Accountability Office (GAO) has issued a report on "U.S. Tsunami Preparedness: Federal and State Partners Collaborate To Reduce Potential Impacts, But Challenges Remain." The GAO did this study because the 2004 Indian Ocean tsunami raised questions about U.S. preparedness for such an event. The National Oceanic and Atmospheric Administration (NOAA) leads U.S. detection and warning efforts and partners with federal and state agencies in the National Tsunami Hazard Mitigation Program (NTHMP) to reduce tsunami risks. In 2005, Congress appropriated $17.24 million in supplemental funding to enhance these efforts. This report (1) identifies U.S. coastal areas facing the greatest tsunami hazard and the extent to which potential impacts have been assessed, (2) discusses the effectiveness of the existing federal tsunami warning system, (3) describes efforts to mitigate the potential impacts of tsunamis on coastal communities, and (4) assesses NOAA's efforts to develop long-range plans for federal tsunami programs. GAO recommends, among other things, that NOAA take steps to develop software for tsunami loss estimation, conduct periodic end-to-end warning system tests, increase high-risk community participation in its tsunami preparedness program and prepare risk-based strategic plans for its efforts. Download the report at www.gao.gov/new.items/d06519.pdf.

■ **IOM Releases Three Reports on the Future of Emergency Care**. Three reports from the Institute of Medicine's (IOM) "The Future of Emergency Care in the U.S. Health Care System" project were released on June 14 during a press briefing in Washington, D.C. The reports address three key focus areas of the study – prehospital, hospital-based and pediatric emergency and trauma care. The pediatric report examines the unique challenges associated with the provision of emergency services to children and adolescents, and evaluates progress since the publication of the IOM's 1993 report *Emergency Medical Services for Children*. The full commissioned reports will be available in mid-July through the National Academies public access file. Directions for accessing the public access file are available at www.nationalacademies.org.emiweb/is/is703.asp.

■ **Racine County Posts Resources on Disaster Preparedness**. David L. Maack, CEM, CPM, Racine County Emergency Management, reports that the June edition of *Becoming Disaster Ready* is now online. Articles in this issue include: pandemic flu planning, NIMS update and more. Download the publication at www.racineco.com/crepository/emergencyman/EMREADYJUNE.pdf. In addition, you can check out Racine County's monthly preparedness tips at: www.racineco.com/emergencymanagement/preparedness.aspx.

■ **GAO Issues Report on Improper Hurricane Disaster Relief Payments**. The U.S. Government Accountability Office (GAO) has issued a report on "Hurricanes Katrina and Rita Disaster Relief: Improper and Potentially Fraudulent Individual Assistance Payments Estimated To Be Between $600 Million and $1.4 Billion." The report provides an estimate of improper and potentially fraudulent payments through February 2006 related to certain aspects of disaster registrations, identifies whether improper and potentially fraudulent payments were made to registrants who were incarcerated at the time of the disaster, identifies whether FEMA improperly provided registrants with rental assistance payments at the same time it was paying for their lodging at hotels, and reviews FEMA's accountability over debit cards and controls over proper debit card usage.

To estimate the magnitude of IHP payments made on the basis of invalid registrations, GAO selected a random statistical sample of 250 payments made to Hurricanes Katrina and Rita registrants as of February 2006. The agency also conducted data mining and investigations to further illustrate the effects of control breakdowns. You can download the full report at www.gao.gov/new.items/d06844t.pdf.

■ **Pediatric Disaster Tool Kit Posted for Public Comment**. The New York City Department of Health and Mental Hygiene has posted for public comment the *Pediatric Disaster Tool Kit: Hospital Guidelines for Pediatrics During Disasters*. This evidence-based resource is intended for general hospitals that have limited or no pediatric care infrastructure and/or staff. This is not a clinical resource, but rather guidelines for administrative organization of personnel, space and equipment. The toolkit is currently divided into 11 sections: security, dietary, surge considerations, equipment, training, transportation, staffing, decontamination, pharmacy, psychosocial considerations/legal concerns and infection control. For more information about the tool kit, visit www.nyc.gov/html/doh/html/bhpp/bhpp-focus-ped.shtml.

■ **University of Kentucky Launches Pediatric Terrorism Awareness Level Training**. The University of Kentucky's Terrorism and Response program has developed Pediatric Terrorism Awareness Level Training, an online course that targets federal, state and local emergency public

E.M. Resources

safety and law enforcement officials; emergency responder nurses; and emergency medical personnel, agencies and authorities (including hospital emergency facilities). The course objectives include reviewing potential terrorist weapons, including the most likely agents in each class; identifying the characteristics that make children more susceptible to the various forms of terrorism; reviewing the recognition, evaluation and management of pediatric victims of terrorist incidents; and discussing the various specific agents of terrorism, including the mechanisms of injury or illness, expected signs and symptoms, and evaluation and treatment of victims. For more information or to access the online course, go to www.kiprc.uky.edu/trap/peds.html.

■ **NYC Launches Bioterrorism Emergency Preparedness Web Site**. The New York City (NYC) Department of Health and Mental Hygiene's Bioterrorism Hospital Preparedness program and many citywide partners have launched a new Web site, *NYC Healthcare PREPARES*. The Web site has been created to share many of the protocols, templates and emergency preparedness drill scenarios that have been created in NYC during the last four years. To access the site, visit www.nyc.gov/html/doh/html/bhpp/bhp.shtml. All materials are available for free download.

■ **National Defense University Issues Report on Transatlantic Homeland Defense**. The Center for Technology and National Security Policy and the Institute for National Strategic Studies at the National Defense University have published a "Special Report on Translatlantic Homeland Defense." The paper proposes an initiative to enhance transatlantic homeland defense at the North Atlantic Treaty Organization (NATO) November 2006 Riga Summit and beyond. It can be downloaded at www.ndu.edu/inss/press/CTNSP-INSS/spl-rpt.pdf.

■ **FEMA Releases Preparedness DVD**. "Getting Ready for Disaster: One Family's Experience," a citizen preparedness DVD from the Federal Emergency Management Agency (FEMA), has been released to help people get ready for disasters that may impact their families and communities. The DVD guides viewers through important steps of disaster preparedness and addresses critical issues. It was designed to be used with "Are You Ready? An In-Depth Guide to Citizen Preparedness" and the accompanying facilitator manual for teaching preparedness principles in small group or classroom settings. Free copies of the DVD (FEMA 500) and the "Are You Ready" guides (IS-22 and IS-22FG) are available through the FEMA Distribution Center at (800) 480-2520. Requests are currently limited to one DVD per caller. In the coming months, the DVD will be translated into Spanish and will be available in both languages on a single DVD. Video files, a transcript and the guide can also be downloaded from www.fema.gov/areyouready.

■ **Transportation Research Board Issues Guide**. The Transportation Research Board of the National Academies has published "A Guide to Transportation's Role in Public Disasters." The guide examines development of transportation response options to an extreme event involving chemical, biological or radiological agents. It contains technical information on chemical, biological and radiological threats, including vulnerabilities of the transportation system to these agents and consequence-minimization actions that may be taken within the transportation system in response to events that involve these agents. Learn more at www.trb.org/news/blurb_detail.asp?id=6266.

■ **EIIP Virtual Forum Hosts Discussion on New High-Tech Training Facility**. The EIIP Virtual Forum hosted a live chat presentation on May 24 featuring Robert J. Harper, Jr., Program Manager for Northrup Grumman, and Charles J. Venable, Senior Program Manager for SAIC. Discussion focused on the Emergency Management Training, Analysis & Simulation Center (EMTASC), a state-of-the-art facility under development in Virginia, devoted to the command and operations management side of homeland security training. EMTASC will employ high-tech modeling and simulation tools to conduct training, exercises, analysis and operational support. Download the discussion transcript at www.emforum.org/vforum/lc060524.htm.

■ **IAFC Board Approves MASTF Report**. In May, the International Association of Fire Chiefs (IAFC) board approved a Mutual Aid System Task Force report. The report came out of a collaborative effort of all divisions within IAFC to evaluate current issues concerning interstate movement of fire service resources and assets. The group identified key issues to improve effectiveness: validate the use of a national point of contact for deployments; establish policies and procedures to enable rapid deployments; identify the aspects that make you eligible to participate; determine the best methods to educate participants on the system and provide training; determine the linkages with other services that will connect the systems together; and determine who will be responsible for funding the development, monitoring and support of the system. The group also recommended the formation of a standing committee within the IAFC to be called the Emergency Management Committtee, which will be established following a staff review to develop a mission plan and scope of work. Learn more at www.iafc.org.

IAEM Conference Sponsorship Opportunities Available

IAEM is looking for sponsors for the upcoming IAEM 2006 Annual Conference & EMEX Exhibit, Nov. 12-15 in Orlando. IAEM conference sponsorships are a great way to enhance your presence at this event. IAEM can work with any budget, and co-sponsorships can be considered. To discuss these and other sponsorship ideas, please contact IAEM Executive Director Beth Armstrong, at 703-538-1795, ext. 6 or armstrong@iaem.com.

■ **Platinum Conference Sponsorship**: $10,000+. Sponsors receive premiere recognition on pre-event materials, prominent entrance signage, designation as a specific meal or break host (choose one), and a one-time rental of IAEM's member list.

■ **Conference Luncheons**: $19,750 each (2 sponsors). Lunch is served Tuesday and Wednesday; on Tuesday, it is located in the exhibit area.

■ **Exhibit Opening Reception**: $12,000 (1 sponsor). EMEX begins with a opening ceremony and reception on Tuesday, 4:00-5:30 p.m. This is a great PR opportunity for the sponsor.

■ **Cyber Café**: $9,975 (1 sponsor). Internet-connected stations are located in the EMEX exhibit hall for visitors to access their e-mail while at the IAEM event.

■ **Registration Bags**: $8,500 (1 sponsor). Canvas briefcase-style bags will be provided to each registrant, containing conference hand-outs and reference materials.

■ **Breakfasts**: $8,550 each (2 sponsors). IAEM seeks support to provide continental breakfasts for all attendees on Tuesday and Wednesday.

■ **Welcome Reception**: $5,000 (1 sponsor). This Sunday evening gathering includes a brief overview of IAEM for newcomers in an informal setting, and provides the sponsor ample exposure as party host.

■ **Scholarship Auction**: $3,500 (1 sponsor). IAEM provides refreshments during this Tuesday fundraiser to raise scholarship funds for emergency management students. There is a cash bar and light hors d'oeurves.

■ **EM Career Workshop**: $2,500 (1 sponsor). Sponsorship is perfect for those recruiting EM and homeland security professionals – it is a popular session for students graduating from EM degree programs. *Note*: Speakers and topics are determined by the IAEM Conference Committee.

■ **Afternoon Coffee Breaks**: $2,200 each (2 sponsors). Two breaks in the exhibit area offer attendees coffee, tea, sodas and an afternoon snack, and allow networking.

■ **Morning Coffee Breaks**: $2,000 each (3 sponsors). Three breaks in the exhibit area offer attendees coffee, tea and sodas, and allow networking.

■ **President's Hospitality Suite**: $2,000 per night (4 sponsors). Attendees can relax after-hours in a suite organized by IAEM. Assorted beverages and snacks will be served. Four nights.

■ **Champagne Toast**: $1,500 (1 sponsor). Wednesday evening, the IAEM President's Banquet concludes with a toast to Certified Emergency Managers® and others.

■ **IAEM Board Meeting**: $1,000 each (2 sponsors). The IAEM leadership meets twice during the conference. Refreshments and materials are provided.

Benefits of Sponsorship

■ Publicity is included in pre-conference literature and materials (commit early to take advantage of this benefit).

■ Sponsor logos are printed on a premier page of the conference program.

■ Attention-getting signs announcing sponsors are posted.

■ Sponsors receive verbal recognition from the podium.

■ Meet-and-greet the more than 900 emergency management professionals who will attend this annual event.

■ Sponsors receive additional publicity in IAEM's post-conference newsletter coverage. The *IAEM Bulletin* reaches more than 3,100 via print and an average 10,000 electronically each month.

■ Your company sponsorship is announced on www.iaem.com with a link to your Web site.

■ You may receive tax deduction to the extent permitted by law: Check with your financial advisor. IAEM is a non-profit, charitable organization.

Other Opportunities

■ **EMEX Exhibit Booth**. In conjunction with the conference, IAEM showcases all significant suppliers of homeland security and disaster technology. See www.emex.org for a map of current space available and a list of your competitors.

■ **Scholarship Auction**. Goods, services and cash donations are sought for this charitable program that supports the study of emergency management and disaster preparedness. Contact Dawn Shiley at 703-538-1795, ext. 3, or shiley@iaem.com.

■ **Doorprize Drawings**. Items are publicized in conference materials, and the drawings provide additional exposure for donors' products and services.

■ **Registration Bag Inserts**: $300 per item. Get details about your product or service into the hands of every attendee.

■ **Student Sponsorships**. Cover the costs for students to participate at the conference (registration fee is $200 per student, and travel expenses vary), or contribute to a central fund for this purpose. Contact Sharon Kelly at 703-538-1795, ext. 2, or info@iaem.com to discuss these and other participation ideas.

EMEX 2006 News

Virtual EMEX 2006 Is Up-and-Running!

Exhibitors who have reserved space at EMEX 2006 already have their company profiles posted at www.emex.org. The Virtual Expo offers a year-round presence for EMEX exhibitors, including a direct link to their Web sites for more information.

IAEM 2006 Annual Conference & EMEX Exhibit: "Going All the Way... Putting Plans Into Action"
– Nov. 12-15, 2006, Orange County Convention Center, Orlando, Florida –

What They're Saying...

What are people saying about the **Emergency Management & Homeland Security Expo**, featured at each year's IAEM Annual Conference?

"EMEX is our #1 destination each year."
– Eric Sutliff, Twenty First Century Communications

"EMEX is the place to see the latest and greatest lifesaving equipment from the different vendors, as well a chance to network with international and local decision makers."
– Chris Roller, American Signal Corporation

"I've found EMEX to be the best! All the newest and latest in emergency management in one location."
– Michael D. Selves, CEM, IAEM First Vice President

IAEM Annual Conference & EMEX Exhibit

November 13-15, 2006
Orange County Convention Center
Orlando, Florida

The information, products and services you offer are vital in today's high-threat world, so there's no better time than now to reach the customers who will see your resources through IAEM/EMEX. EMEX 2006 is the show that brings together homeland security and disaster preparedness suppliers in the same building, under the auspices of the International Association of Emergency Managers (IAEM).

Attendee Profile. More than 900 leading emergency management and homeland security decision makers will convene in Orlando at the Orange County Convention Center for IAEM's 54th Annual Conference. The majority of attendees are purchasers or specifiers for their jurisdictions or corporations, to include disaster planning and preparedness managers, first response coordinators, emergency communications managers, private industry security and contingency planners, government continuity of operations managers, and contract services providers.

Conference Theme. "Going All the Way...Putting Plans Into Action." The IAEM Conference Committee is currently putting together an exciting program based on this theme.

Book a Booth. Large display space or 10x10 exhibit booths are available and come with standard amenities. Exhibitors also are included in a virtual trade show. With the unprecedented success of the 2005 show in Phoenix, we are expecting a much greater interest from even more compnaies at EMEX 2006 in Orlando. Visit **www.emex.org** to see complete details and reserve your space today! There is booth space still available – but prime locations will go fast!

Book Vehicle Space. If you're interested in booking vehicle space in the show room, contact IAEM Headquarters for details.

I WANT TO BECOME A MEMBER OF IAEM.

Pay annual membership fee of $170 U.S. individual ($50 for members outside United States), $25 student, or $500 affiliate (corporate). Fill out this form and mail with your check to: IAEM, 201 Park Washington Court, Falls Church, VA 22046. Or register online today at www.iaem.com

Name _____   Title _____

Organization _____   Recruited by _____

Mailing Address _____

City/state/zip _____

Phone/fax _____   E-mail (if available) _____

☐ I can't join now, but I would like to receive more information on the benefits of IAEM membership.

IAEM 2006 Award Nominations and Media Contest

The IAEM Annual Conference is the time when IAEM recognizes members who have made special contributions. Nominations for awards should be sent IAEM Headquarters. Nomination deadline is **Sept. 1, 2006**.

Include a written report detailing actions of the nominee and their significance to the organization. Remember to indicate the award for which you are nominating someone.

Award Categories

■ *Presidential Citations.* Bestowed by the current President on outstanding representatives of the principles and practices of IAEM.

■ *Executive Citations.* Selected by regional presidents with input from regional members, and given to members who exemplify the image of professionalism.

■ *Honorary Citations.* Granted to two individuals from any profession who have actively supported IAEM. Recipients are selected by the IAEM Board of Directors.

■ *Membership Award.* To the person most active and successful in recruiting new members.

■ *National Security Award.* To a person who has significantly contributed to efforts promoting national security. Selected by the IAEM Board.

■ *Partners in Preparedness Award.* Given by the Awards & Recognition Committee to an organization for its support of local emergency management.

■ *Business & Industry Preparedness.* Bestowed by the Awards Committee.

For more details, on IAEM awards, visit the IAEM Web site at www.iaem.com.

Media Awards

IAEM Media Awards recognize successful promulgation of emergency management related information through the media via:

■ Newsletters.

■ Special publications (posters, brochures, educational campaigns, reference materials).

■ Individual media items (news/promotional story or photo, editorial).

■ Audiovisual products (videotapes, audiotapes).

■ Computer products (Internet sites, bulletin board, interactive software).

Entries can be submitted in one of three divisions:

■ Local (entries must be submitted by IAEM members).

■ State, regional or national government or nonprofit organization.

■ Commercial or for-profit entities.

How To Submit Media Entries

Samples for the Media Contest should be sent to IAEM Headquarters for judging by a panel of media experts. Include a cover letter explaining how the project was created, distribution methods, how it was funded (if appropriate), a statement granting IAEM the right to reprint entries, and exact wording on how the recipient's name should be listed on the awards certificate if selected. Contestants may submit no more than one entry per category. Entries must have been published or developed during the period of Apr. 1, 2005 to July 31, 2006. A label must be attached to the front cover of the entry showing the name of the contestant, the category, and the appropriate division, if applicable.

Entries should be submitted to IAEM Headquarters no later than **Sept. 1, 2006**. Entries will be displayed during the Annual Conference in Orlando, where winners will be announced. Entries not picked up in Orlando will be discarded. More details can be found at www.iaem.com.

Clayton R. Christopher Award

The Clayton R. Christopher Award is presented by Region 4 to a member who is a local director, in recognition of unselfish devotion and outstanding contributions to emergency management. Any member may nominate a candidate regardless of location. For details, contact Larry Gispert, Region 4 President, 813-276-2385 or gispertl@hillsborough county.org. The deadline for nominations is **Sept. 1, 2006**.

IAEM and HPP To Co-Sponsor 2nd Annual Interagency Disaster Preparedness Award

The 2nd Annual Interagency Disaster Preparedness Award is co-sponsored by IAEM and *Homeland Protection Professional* magazine (www.hppmag.com). This award was established to recognize and encourage the crucial role of interagency cooperation in keeping citizens and communities safe from both natural and manmade disasters in the post-9-11 world. To be eligible for consideration, a program must be an ongoing multi-agency effort whose mission is primarily disaster and/or terrorism mitigation, prevention, response, and/or recovery. Entry is open to U.S. and Canadian emergency response, emergency management and emergency support agencies (such as public health and public works) and their municipal, county, tribal, state, military or federal jurisdictions or parent agencies. Entries are judged on the extent to which their collaborative efforts demonstrate results in disaster or terrorism preparedness. Entries must be received at IAEM Headquarters by **Sept. 1, 2006**. Please see www.iaem.com for details about IAEM Awards.

Invitation to Participate in IAEM Region 9 Roundtable on "H5N1 Bird Flu – Threat of an Influenza Pandemic?"

July 11, 2006 – 10:30 a.m.-2:30 p.m.

Gilbert Fire Department Amphitheater, 85 E Civic Center Drive, Gilbert, Arizona 85296
(located about 25 miles southeast from Downtown Phoenix, south of the 60 Freeway)

May 23, 2006

Dear Friends and Colleagues,

The IAEM Region 9 Roundtable on the H5N1 Bird Flu in Los Angeles on May 15 was very successful. More than 80 government agencies in the Greater Los Angeles Area were represented. Also in attendance were some of the larger industry employers and subject matter experts from public health services, as well as a variety of IAEM Region 9 members.

Our second IAEM Region 9 Roundtable on H5N1 Bird Flu will be held on **July 11** in the City of Gilbert in the Greater Phoenix Area, Arizona. I invite you to participate in this second IAEM Region 9 H5N1 Bird Flu Roundtable in cooperation with the Gilbert Fire Department (www.ci.gilbert.az.us/fire/default.cfm).

If you would like to participate, please send your registration ASAP. Space is limited to 80 participants. We will be accepting both credit cards and checks.

If you have any questions, please do not hesitate to contact me.

Best Regards,

Gunnar J. Kuepper
IAEM Region 9 President
Emergency & Disaster Management, Inc.
5959 West Century Boulevard, 5th Floor
Los Angeles, CA 90045

Phone: (310) 649-0700
Fax: (310) 649-1126
E-Mail: gjk@edmus.info
Web Site: www.edmus.info

Region 9 Roundtable Program

The H5N1 Bird Flu Virus has already killed at least 200 million wild birds and poultry throughout Asia, Africa and Europe. Worldwide 217 people have become infected, and 123 of those have died. In February, the virus had reached Germany, Italy, Austria and other countries in Western Europe, which created significant challenges for the governmental agencies, emergency services and the communities affected.

Using astonishing images and animations with PowerPoint technology, the roundtable will describe and demonstrate:

i. the H5N1 Bird Flu Virus, its history, mode of action, infectivity and virulence. The limited effectiveness of antiviral drugs such as Tamiflu will be explained. The complexity of the current situation throughout the globe will be shown in a comprehensible manner

ii. the lessons learned from recent experiences in Western Europe, such as:
  o protocols for collecting and transporting deceased birds
  o unexpected infections of cats and other mammals
  o miscommunication and confusion between local, state, and federal governments, particularly in Germany
  o public health concerns and public education

iii. the WHO (World Health Organization) protocol for rapid response and containment, followed by

iv. Discussion and exchange of information on the threat to Arizona, effective preparations and our state of readiness.

In addition, we will introduce the National Institute of General Medical Sciences simulation of different various flu pandemic scenarios in the U.S. We will also present the study's findings for successful intervention strategies.

Admission (including coffee, tea and an excellent lunch):
  o for IAEM Region 9 members: US $25
  o for members of AESA, public sector agencies, emergency services community (fire, EMS, law enforcement, emergency planning and business continuity), health care and public health, or members of civic organizations such us the Red Cross, Salvation Army, Rotary: US $45
  o for others not affiliated with any of the above institutions: US $165

Please register via e-mail (info@edmus.info), fax (1-310-649-1126), or mail and provide payment no later than **July 4, 2006**. Please make checks payable to Emergency & Disaster Management, Inc. Since space is limited, we recommend early registration. Registration is transferable to another person. Walk-in will not be possible.

Registration:
Name: _____
Title: _____
Agency/Group: _____
Address: _____
Phone: _____
Fax: _____
E-Mail: _____
  o IAEM Region 9 Member Registration: US $25
  o Member AESA Registration: US $45
  o Emergency Service (fire/EMS/law enforcement) or Governmental Agency Registration: US $45
  o Civic Organization:_____Registration: US $45
  o Other Registration: US $165