



INTERNATIONAL ASSOCIATION OF EMERGENCY MANAGERS

THE RESPONDER

NEWS OF THE IAEM-STUDENT COUNCIL

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From Lessons Learned to Best Practices

Written by Dorian M. Young, *BA (Toronto), MPhil, MA (Cantab), MA candidate in EDM (American Military University), President of AMU/APU, IAEM Student Chapter*

Herein is an idea to bring lessons learned from disaster research to the attention of emergency and disaster practitioners and ultimately to convert and adopt them into best practices.

Disaster researchers are social science academics employing scientific methodology to study human or organizational behavior concerning disasters. Their studies are published in peer-reviewed journals or books.

This growing body of evidence-based knowledge is the product of several decades of ongoing academic research. Many of the findings are relevant to the preparedness, response, recovery and mitigation work of today's disaster practitioner. This knowledge base, if appropriately tapped, can empower practitioners. Being better informed about how humans react to disaster-related situations significantly benefits their planning and decision-making. It could lead to the saving of lives and the reduction of injuries and losses due to disasters.

The Problem

Though many disaster research studies explicitly state that the practical implementation of their findings is a desired objective, practitioners are unlikely to make much use of them. Only one of 25 disaster research papers recently read by this author actually presented the findings or lessons learned in an easily readable, convenient and comprehensible format suitable

for practitioners. (Enarson, 1999, p 56.) For all the others, the audience addressed was decidedly academic. It was not easy to discern and digest the lessons learned; hindered by such issues as mode of expression, terminologies, organizational layout and method of presentation. These hindrances only add to prior reluctance on the part of practitioners to search out disaster research findings.

While disaster practitioners are well-placed to convert and implement research findings into best practices, they have their limits. Emergency managers are busy people. They are often overloaded with work; holding two or more positions such as emergency manager, fire chief, 9/11 coordinator, etc. It is therefore unrealistic to expect them to spend a great deal of time wading through academic articles in search of lessons learned. Despite being highly experienced and professional at their jobs, some find it challenging to comprehend academic research papers in the format in which they are currently published. A means by which disaster researchers can better impart their lessons learned and improve the chances of their being put into practice as intended is necessary.

The Solution

A template should be devised to allow for optimum presentations of lessons learned to practitioners. Each researcher would voluntarily follow this template to produce a specific list of strategic directions from lessons learned written specifically for practitioners with a view toward encouraging them to adapt and adopt as best practices. The inclusion of such a list would become a routine procedure in disaster research academia.

To devise the template, a high-level conference should be convened by the International Association of Emergency Managers (IAEM) involving the foremost disaster academics and practitioners. Once the template is agreed upon, it would be subject to periodic review by a

representative Committee established at the conference.

The template should set the standard by promoting the following attributes when researchers make their lists of lessons learned for practitioners:

1) A clear and concise layout consisting of easily readable, strategic directions; each being one sentence in length (Enarson, 1999, pp 55-56);

2) Each strategic direction to be referenced so that readers can refer back within a study for further information;
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- 3) Common phraseology and terminology;
- 4) Each strategic listing to be submitted to the Committee prior to publication for prompt consideration of conformity; and
- 5) Strategic directions to encourage practitioners to convert and adopt lessons learned into best practices.

Summary

Disaster Practitioners should be aware that utilizing research can be empowering. That is one of the messages of professor Emeritus Drabek's (2009) new book entitled *The Human Side of Disaster*; written with the disaster practitioner-audience in mind. On the other hand, disaster researchers should be aware that practitioners would be more inclined to make use of their studies if they knew that each one contained a concise, user-friendly list of lessons learned which would be of practical value to their work. These lists should be compiled into an accessible repository housed by the IAEM. The proposed template and resulting lists of lessons learned provide the means of narrowing the gap between disaster research and practice.

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N.B. For a more comprehensive bibliography (including the twenty-five articles referred to above) on the question of lessons learned concerning disasters, please go to: <http://www.kador.com/llbiblio.com>.

Personal Security in Facebook Times

Written by Clinton B. Fields, Jr.

Our world's information and communication systems have in many ways become almost solely dependent upon technology. Modern technological advances have equipped emergency managers with a way to educate themselves with the latest emergency management trends and resources. In the field, online information systems are essential.

But what if emergency manager or first responder information had been retrieved by an uninvited intruder? What if that information was used to cause harm to that person or their family? We are thinking "outside of the box" continuously to improve security and responses, but it is imperative that we exercise the same sense of responsibility within our personal lives.

A large focus has been placed on securing national infrastructure. Whether this security is achieved with firewalls, counterintelligence activities, or other means, we are committed to the security and resiliency of this nation. Have we forgotten about those men and women that serve the country and assist others in times of emergencies?

These men and women may be vulnerable to information intruders, or identity thieves who would be willing to risk their lives or freedom at the expense of their loved ones. We must maintain a heightened level of awareness and provide information with other emergency responders regarding individual information security. If those in vital management/response positions were under personal attack in the midst of an emergency, what would be the psychological and social ramifications?

Facebook, Myspace, LinkedIn and other social networking websites can be useful, enjoyable, and a great way of staying in touch, but it is crucial that each individual recognize his or her vulnerabilities and evaluate if such sites could result in an unforeseen personal debacle later. Social networks can and will be used against individuals in a court of law, and criminals can and will use personal information against individuals both at work or home.



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Third Order Effects - FCC Rule Interpretation Hobbles Emergency Communications Training

Written by Howard D. Thompson Jr., *Emergency Management Planner, Blanchfield Army Community Hospital, KY*

In the wake of 9/11 and Hurricane Katrina, the importance of redundant, scalable communications has become clear. The Department of Homeland Security and State Emergency Management Agencies spent millions of dollars creating a nationwide 800 MHz backbone requiring a complete renovation of most state systems, yet fails to meet expectations. The system lacks the fundamental flexibility to create an ideal self-healing system due to reliance on fixed infrastructure.

One response by many states has been the inclusion of Amateur Radio in their Emergency Communications Plans. These plans rely upon the ability of licensed Amateur Radio communications volunteers to provide flexible, self-healing backup to the infrastructure which is prone to overloading and limited reliability during disasters. The volunteers are organized under Volunteer Organizations Active in Disasters (VOAD) in the form of Amateur Radio Emergency Services (ARES(R)) groups organized under the American Radio Relay League, or as Radio Amateur Civil Emergency Services (RACES) teams under Civil Defense, with similar capabilities. The major difference is that RACES is activated by civil defense or emergency management officials, while ARES(R) can self-activate for civic event support as training opportunities. In all cases these operators provide free communications support using their own equipment, vehicles and time. All are now required to complete Incident Command training and specialized emergency communications training, providing a cadre of qualified volunteer operators.

Given a reliance on this specific type of support it should be no surprise that a

good number of served agency personnel are licensed Amateur Radio operators, able to utilize the ad hoc network in the during an incident. The communications portion of emergency plans is prudently included in exercises.

So- how has the "FCC Rule Interpretation Hobbled Emergency Communications Training"? A recent interpretation of the Part 97 rules governing the Amateur Radio Service reiterates operators cannot receive compensation for their services- a rule which is suspended in times of emergency. Formerly the rule was interpreted to allow paid personnel at served agencies to participate in training exercises under their Amateur Radio privileges, as the exercise supported Emergency Preparedness and Readiness (EP&R). Incident staff, paid or volunteer, should be familiar with the equipment they will operate during emergencies. The recent reinterpretation only allows paid staff to operate in actual emergencies. Proponents of the current interpretation hold that they are protecting the Amateur Radio Service from a government takeover. I hold this is a short-sighted view, and dismisses the intent of the creation of the Amateur Radio Service.

I am a retired Army First Sergeant, so my perspective is that you have to train as you would fight or you are likely encounter obstacles. If a county EMA plans was to use Ham Radio communications in the initial stages, do you assume the volunteer Ham operator will be on standby or have your staff member on duty operate the radio? As of now, legally you have to get a volunteer operator in for the exercise. That is counter to good preparedness.

The severe weather season brings

another concern. In most areas the SKYWARN storm spotters communicate via Ham radio. The current prohibition makes things difficult. Legally, you would have a volunteer Ham radio operator on standby in the EOC in case there is storm activity. However, with severe weather in particular, the first ground level reports are often received over Ham radio.

As emergency management professionals, I believe you can see the issue at hand. We have spent the years since 9/11 training and organizing ARES(R) and RACES groups for backup communications on Amateur Radio frequencies, equipping our EOCs with Amateur Radio equipment at government expense, officially writing this communications asset into the state and local level plans. As such, staff members have been encouraged to become licensed Ham radio operators. In short, we rely on it as a backup. To be prevented from exercising the plans realistically is an inefficient practice.

The FCC has published a Notice of Proposed Rulemaking (NPRM) which changes the rules to allow operation by licensed served agency employees during drills and exercises. FCC WP Docket 10-72 proposed to amend the Commission's amateur radio service rules with respect to amateur radio operations during government-sponsored emergency preparedness and disaster readiness drills and tests. Although public safety land mobile radio systems are the primary means of radio-based communications for emergency responders, experience has shown that amateur radio has played an important role in preparation for, during, and in the aftermath of, natural and man-made

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emergencies and disasters. Current rules provide for amateur radio use during emergencies. At the same time, the rules prohibit communications in which the station licensee or control operator has a pecuniary interest, including communications on behalf of an employer. While there are some exceptions to this prohibition, there are none permitting amateur station control operators who are employees of public safety agencies and other entities, such as hospitals, to participate in drills and tests in preparation for such emergency situations and transmit messages on behalf of their employers during such drills and tests. Accordingly, we propose to amend the rules to provide that, under certain limited conditions, amateur radio operators may transmit messages during emergency and disaster preparedness drills, regardless of whether the operators are employees of entities participating in the drill." The full text of the NPRM can be viewed [here](#). This NPRM will correct the problem in a final way. Mr. Hank Koebler Jr., Chief of Operations for the Tennessee Emergency Management Agency states it very clearly- "The key to this whole thing is that this allows employees who are hams to foster and build relationships and practice back up communications that will be used during a major disaster. There is no attempt to take over the ham bands for public service use...it simply strengthens what we have already been doing and what has worked successfully in disasters like Katrina, Rita and Gustav, to serve the public."

If your state or local plan relies upon Amateur Radio communications, consider adding your voice to the chorus of dedicated volunteer disaster communicators and served agency employees who make up the ARES(R) and RACES teams. You can submit your comments on the NPRM thru the link below using the FCC Electronic Comment Filing System. Enter the numbers "10-72" in the docket search window. Web address: ECFS Home <http://fjallfoss.fcc.gov/ecfs/>

This is an Emergency Management issue, not merely one for licensed served agency employees and volunteer ARES(R) and RACES members. The availability of reliable communications is critical to EP&R.

Mr. Howard D. Thompson Jr. is the Emergency Management Planner at Blanchfield Army Community Hospital on Ft. Campbell, KY. He is a member of Montgomery County (TN) ARES(R), serving as the Hospital Liaison, and holds Amateur Radio license K2CEM. In his spare time, he is a Master's Candidate at Eastern Kentucky University in the Safety, Security and Emergency Management program, scheduled to graduate in December 2010.

Mobile Command Center Training and Planned Events

Written by Sean Hurly, *Tulane University, School of Continuing Studies, Homeland Security Studies*

Recently, emergency management and first responder agencies in the greater New Orleans area tested their interoperable communications during the 2010 Mardi Gras season. These communications were put into practice in mobile command centers, staged in two key areas, Lee Circle (New Orleans) and Veterans Boulevard (Metairie). DHS officials were on hand to observe interoperability and incident action plans (IAP), which would later be used to provide feedback and funding. Mobile command centers should never be taken for granted and agencies should always implement training, environmental controls and appropriate staffing for usage.

It is imperative that personnel have working knowledge of the command center. One New Orleans UASI official summed it up best. "Whenever something can go wrong, it will go wrong. You will get to an incident and equipment will be broken, communications will fail and it always seems as though nobody will be available to assist in its restoration." This might be true during a major incident, but it should not be the case for a planned event. Agencies who own the vehicle need to keep in mind that other agencies working within their vehicle, might solely depend on them in keeping it operational.

Employee training should start with a basic introduction of the vehicle. Personnel should then undergo testing based on observance of surrounding, ability to maneuver, and knowledge and operations of vehicle. Knowledge of operations should include trouble shooting. During testing, buttons on the control panel could be flipped to the off position. The trainee might have to do something as simple as tripping the breaker. It is ineffective to put someone into operations if they can not meet the requirements set fourth in the testing phase. Personnel deemed capable of operating the command center should undergo refresher courses. Other personnel can begin with basics or focus on areas where they lack skills. Prior to planned events, employees operating the vehicle should be required to repeat these proper training protocols once or twice.

Environmental controls are simple in nature, but can often be overlooked. First, plan on having security personnel and barriers in place to prohibit non-employees from entering

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the command center. There is already enough interaction as it is and friends or colleagues can cause distraction. Be sure to stage the command center in an appropriate place and a safe distance from the scene. Secondly, set temperature controls to appropriate levels. Too much heat can cause drowsiness, while cool conditions can cause discomfort. Third, volume control is vital and something as simple as an earpiece is appropriate. Not only are agencies listening to first responders at the scene, but they are coordinating with officials within the command center. Multiple communication channels are in frequent use and it is critical that resources do not become duplicated. Finally, plan on having food and beverages available and allow personnel to take breaks when appropriate.

Appropriate staffing for the command center can consist of a multitude of things. Do they have experience in the command center? Were the personnel in the command center involved in drafting the IAP? In New Orleans and Jefferson Parish, agency personnel in the command center were responsible for drafting the IAP. Another important question is whether or not they know what station they will be positioned at within the command center. Although command centers are not the size of an EOC, personnel need to know their environmental surroundings. Each station in the Jefferson Parish mobile command center had a phone, which enabled them to dial out. It is important that there is a visual display of each station's number and instructions nearby for calling out. Is everyone familiar with radio frequency channels of other agencies? During Mardi Gras, personnel could hear interactions across jurisdictional boundaries. For example, command center personnel in Metairie could hear the Operations Chief in New Orleans.

During the Mardi Gras parades on "Fat Tuesday" the coordinator in charge of the command center not only had excellent KSAs to perform the specified tasks involved with the command center, but personally developed and organized the IAP. It should also be noted that this individual was commended on scene by DHS observers. Fire, EMS and JPSO officials in the command center also helped in creating the IAP and had previous experience in command center settings. Overall, each of the concepts listed above were appropriately implemented. These implementations made for safe Mardi Gras festivities in regards to public safety.

Incident Command System and WMD Incidents

Jon Shoemake, *Fort Worth CERT*

The term weapons of mass destruction usually makes people think of an explosion possessing a nuclear, chemical, biological, or radiological agent released upon detonation. Although the previous statement is true of weapons of mass destruction, for the purposes of this paper the definition from the Federal Emergency Management Agency (FEMA) is used. FEMA defines weapons of mass destruction as "any weapon or device that is intended, or has the capability, to cause death or serious bodily injury to a significant number of people" (Definition: Weapons of mass destruction, n.d.).

According to the definition set forth by FEMA, the United States suffered a weapon of mass destruction attack on September 11, 2001, when the jet airplanes, piloted by terrorists, crashed into the Pentagon in Washington, D.C. and the World Trade Center in New York City. This paper focuses on the response and operations of the Emergency Management Team and the Emergency Operations Center (EOC) of Arlington County, Virginia, to the attack on the Pentagon. The paper discusses methods of incident command used in 2001 and current methods used for incident command developed from lessons learned following this attack.

On September 11, 2001, American Airlines Flight 77 left Dulles International Airport at approximately 0820 bound for Los Angeles, California. Between 0846 and 0850 hours, hijackers took control of the aircraft. At approximately 0938 hours, American Flight 77, piloted by the hijackers, crashed into the Pentagon in Washington, D.C. (9-11 Research, 2006).

Arlington County used the Comprehensive Emergency Management Plan (CEMP) developed in 1956, often revised over the years, as the basis for emergency operations following the plane crash into the Pentagon (Fisette, 2001). Arlington County CEMP established a group of senior county managers knowledgeable in field operations to serve as an advisory body to the County Manager on operations, disaster response, and recovery called an Emergency Management Team. During emergencies, the Emergency Management Team meets in the Emergency Operations Center (EOC) once activated.

The CEMP established a standing Emergency Planning Team (EPT) consisting of senior staff members from local fire, police, and public works departments. This included members

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from public health, schools, environmental services, parks, recreation, community resources, and technology services (Fisette, 2001). Duties of the EPT included maintaining the CEMP, planning the training for emergency management operations, and during actual emergencies, anticipating and planning for future requirements.

Additionally, the CEMP established six Emergency Task Groups (ETGs) consisting of members from various county departments and offices, and other outside agencies when appropriate (Fisette, 2001). The ETGs maintained functional areas of responsibility including shelter and evacuation, employee support, recovery, resource management, communications, and traffic and routing, with a lead agency responsible for each ETG.

The Emergency Management Team along with the EPTs and ETGs manned the EOC providing support to field operations. Although the EOC supported the operations, each responding organization maintained its own Incident Commander. The Arlington County Fire Department possessed overall Incident Command, however, the lack of a documented plan for such an event caused discord in operations among the organizations involved.

In March 2008, the National Response Framework (NRF) replaced the National Response Plan. The NRF provides a scalable, flexible, and adaptable all-hazards response guide for events ranging from local events to large-scale catastrophes (NRF, 2008). Under the NRF, the Incident Command System (ICS) uses as many or as few human assets as necessary to handle events.

A weapon of mass destruction event requires response from multiple organizations across jurisdictions. Under the current ICS, the possibility of a unified command or joint command exists, depending on the size and complexity of the incident. Additionally, under the current ICS, the Incident Commander has a Command and General Staff directly under his control (Deal, de Bettencourt, Huyck, Merrick, & Mills, 2006).

The Command Staff consists of a Liaison Officer, Public Safety Officer, Information Officer, and Intelligence Officer. The Command Staff reports directly to the Incident Commander. Only one Officer from each group exists, even in multi-jurisdictional responses, however, each officer possesses the ability to have as many assistants as needed in response to an event (Deal, et al, 2006).

The General Staff consists of an Operations Section, Planning Section, Logistics Section, and Finance/Administration Section. As with the Command Staff, the General Staff reports directly to the Incident Commander (Deal, et al, 2006). Each section of the General Staff can expand to as many individuals needed to meet the requirements of the incident. Once the supervisor of a section retains eight subordinates, another supervisor is assigned to maintain additional workers as necessary.

The ICS works on a well-proven and defined set of management characteristics, common terminology, modular organization structure, management by objectives, integrated communications, unity of command, and many more (Walsh, Christen, Miller, Callsen, Jr., Cilluffo, & Maniscalco, 2005). This set of common characteristics allows individuals and agencies, responding to a WMD event from anywhere in the country, to quickly and effectively integrate into the event response regardless of the location, jurisdiction and command.

The Comprehensive Emergency Management Plan developed by Arlington County incorporated functions such as shelter, evacuation, and communications into specific groups of the EOC. Under the NIMS and ICS these functions fall into Emergency Support Functions (ESFs) activated separately by the EOC.

Under current methodology, the Incident Commander (IC) maintains control of the incident with a General Staff under his direct command for logistical, financial and administrative, planning, and operational support. The EOC maintains similar groups, providing a counterpart for individuals on the scene to contact for support. The IC also makes use of the Command Staff providing press releases through the Public Information Officer, coordinating with other agencies through the Liaison Officer, and maintaining overall safety of the response and recovery operations through the Safety Officer. On some occasions, an Intelligence Officer compiles and disseminates information for operations.

The NIMS, NRF, and updated ICS provide a more comprehensive approach for response to WMD events than plans developed prior to the terrorist attacks on September 11, 2001. The emergency management field constantly evaluates and revises policies to better serve the community and nation.

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Interoperability Fundamentals

Written by Patrick Sutera

First responders can experience problems communicating with other agencies due to radio spectrum congestion, dissimilar radios used by adjacent public safety agencies and other inhibitors. Interoperability attempts to solve these problems by providing alternate communication methods allowing first responders to talk with other responders and adjacent agencies by compensating for spectrum congestion, hard to manage radio channel assignments and other impediments.

After the terrorist attacks on the World Trade Center in 2001, the National Institute of Justice created a Task Force to better understand the interoperability issues experienced during the incident. The Task Force identified five categories that prevented a coordinated response in the emergency communication infrastructure. The five areas are:

- o Incompatible and aging communications equipment,
- o Limited and fragmented funding,
- o Limited and fragmented planning,
- o Lack of coordination and cooperation, and
- o Limited and fragmented radio spectrum.

Several government agencies have taken the lead to address these problems, developing structural plans, management, command and control and technical specifications to address interoperability. FEMA, The Department of Homeland Security, Office for Interoperability and Compatibility (OIC), and the U.S. Department of Justice are all addressing interoperability as well.

The Department of Homeland Security sponsors a program called SAFECOM. SAFECOM provides guidance and standardization for voice and data communications. SAFECOM developed a tool called Interoperability Continuum. Interoperability Continuum assists emergency response agencies and policymakers responsible for planning and implementation of interoperability solutions for data and voice communications. Interoperability Continuum identifies five critical success elements necessary to achieve a comprehensive interoperability solution, which follow.

Governance: The organization's stakeholders are charged with the decision making process and define the guidelines by which interoperability programs are implemented. Sample Governance activities are described below.

Partner with the Statewide Interoperability Committees: An example is Statewide Interoperability Committee Resources from the Association of Public-Safety Communications Officials International, Inc. (APCO). More information can be found at <http://www.apcointl.org/frequency/siec/documents/documents.htm>

Formalize Agreements: This occurs between agencies. Formalized agreements are necessary to establish authorities, responsibilities, and mutual expectations.

Address Financial Issues: This includes concepts such as grant funding resources. The SAFECOM Program maintains a listing of potential funding sources for communications interoperability projects at <http://www.safecomprogram.gov/SAFECOM/grant/default.htm>.

Review Process: This allows for periodic review of interoperability projects.

Standard Operating Procedures (SOPs): SOPs are formal, written instructions for the use of emergency response personnel. SOPs can be localized per agency or shared

across jurisdictions. The fundamental purpose of SOPs is to create written procedures which are required to manage a given set of assets and provide the required instruction how to manage and maintain those assets. Following are several examples of what would be included in written form as Standard Operating Procedures.

- o Equipment management and deployment
- o Standard equipment configurations
- o Maintenance of radio caches
- o Gateway configuration, maintenance, deployment, and use
- o Outage responsibilities/repair standards
- o Availability of spare equipment
- o Preventive maintenance
- o Notification of maintenance activities

Technology: Technology tools must be defined with specific goals in mind. Scalability, personnel, resources, training, cost and expected results must be considered. The technologies used to create interoperability solutions are complex, yet there are only several categories or elements that need to be identified. These categories are described below.

Swap Radios: Swapping radios and keeping a ready backup cache ensures communication device availability that predates the interoperability era and not considered an efficient or cost effective means of asset management. Limitations may also be experienced due to the lack of radio channel availability.

Gateway: Technology has made it possible to connect radios of different types or radios that are being used on different channels by using a gateway device. Voice over Internet Protocol (VoIP) has become an increasingly popular gateway method to move audio across data networks between radio systems.

Shared Channel: First Responder organizations can agree on a predefined set of channels to use for a given incident where mutual aid is required. However, this approach is not considered a

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CHAPTER REPORTS

AMU/APU Student Chapter

On March 3rd, 2010 the IAEM Student Chapter of the American Military University (AMU)/American Public University (APU), was greatly honored to host a distinguished guest speaker, Professor George Haddow.

The event was well-attended, informative, thought-provoking and motivating. The lively question and answer session afterward allowed students to pose questions to Professor Haddow about mitigation, career opportunities, the National Disaster Recovery Framework (draft), FEMA and other EDM-related issues. The lecture was recorded, and is available at <http://www.kador.com/haddow.mp3>

A link to read a short bio on Professor Haddow written by Chapter member Judy Whidbee is: <http://www.kador.com/haddowbio.doc>

A link to download a copy of the commemorative poster to mark this momentous speaking event as designed by Chapter Treasurer Jeremy Beck is: <http://www.kador.com/haddowposter.pdf>

The next speaker in the Masters of Disaster Distinguished Speaker series is Dr. Wayne Blanchard, head of FEMA's Higher Education Program. Dr. Blanchard joins us on April 14th, 2010 at 5: 00 pm EST. Teleconference details will be shared shortly. Please contact Dorian at dorian@kador.com, if you wish to attend this event.

The 2009-2010 Masters of Disaster Distinguished Speaker series is organized and hosted by the AMU/APU IAEM Student Chapter. Its purpose is to expose students to the teachings and experiences of prominent members from the field of emergency and disaster management (EDM) and allow for interactive opportunities. All recordings

are made and shared with the express permission of each guest speaker. The first guest speaker in this series was FEMA Administrator Fugate (Nov. 2009). He was followed by Professor Emeritus Joe Scanlon (Jan. 2010) and Professor Emeritus Thomas Drabek (Feb. 2010).

*Submitted by Dorian Kador,
AMU/APU Student Chapter President*

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strategic plan to solve interoperability issues.

Standards Based Shared System: A standards based system is the optimal solution to the interoperability problem. Standardization promotes interoperability by removing proprietary communications protocols and technologies which limit the full use of individual devices and interconnected networks which move the audio between systems.

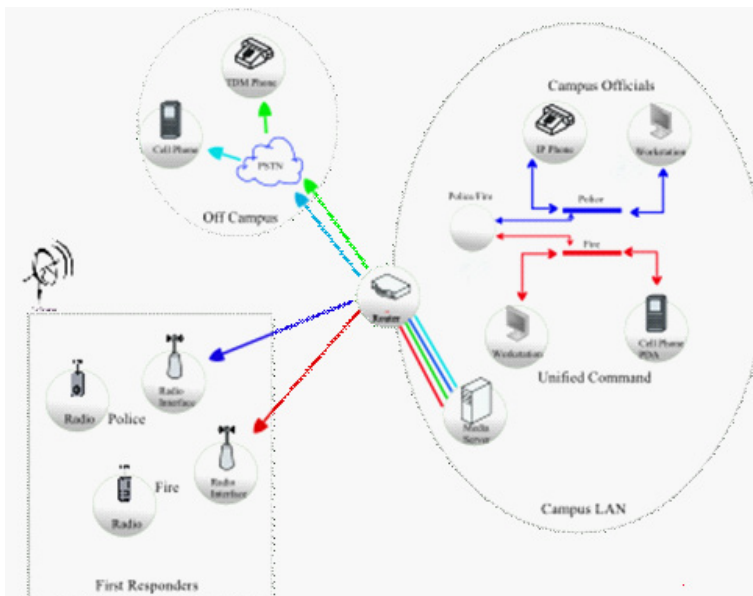
Training: Training exercises are extremely important to the overall success of an interoperability solution due to the need for an absolute understanding of the device and the communication methods used during emergencies.

There are multiple types of training exercises. The first is general orientation,

which provides introductory exercises to familiarize first responders with the components in use. The second type of training exercise is single agency tabletop exercises. These use the device or solution at a fundamental level and identify gaps in understanding or operation. Multi-agency tabletop exercises inter-operate with an agency that would likely answer a call for mutual aid and practice a dry run of the evolving interoperable infrastructure. Full-functional exercises execute a full emergency response using interoperable solutions as the active method of communicating with other first responders or agencies. In these situations usage addresses how often the interoperable solution will be used and its success is contingent upon the previously mentioned elements.

The conceptual drawing below utilizes VOIP as the transport protocol; the different colored lines are radio "channels" which use the internet for the transport of radio communications.

Interoperability has been identified for grants by several government agencies. Agencies refer to SAFECOM as the governance body for interoperability. Specifications set by SAFECOM are required to be considered for a federal grant.





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