Interoperability & Emergency Communications News Clips
August 21, 2009 – September 4, 2009

Mutual Aid, Lessons Learned Assist Battle Against California Wildfires

September 2, 2009
HS Today
By Mickey McCarter
URL: http://www.hstoday.us/content/view/10064/149/

As firefighters battle deadly wildfires in California, the state has set the stage for their success through strong emergency management assistance compacts and robust support to fill gaps identified after other large wildfires, the chief of the California Emergency Management Agency told HSToday.us.

Matthew Bettenhausen, the top emergency management official in California, described how his state was prepared to combat large fires such as the one currently threatening Los Angeles in a recent interview held before the fire began.

"California has been at the forefront of mutual aid," Bettenhausen stated. "Back in the 1950s, we had one of the first statewide mutual aid agreements. There are states today that still don't have statewide mutual aid agreements and capabilities. Some of our fire chiefs have been going around the country on behalf of the International Association of Fire Chiefs to help states do it."

Bettenhausen formerly served as an emergency management official in the state of Illinois, which did not establish a statewide mutual aid system until after 9/11, he said.

California now is taking the concept one step further by identifying volunteer resources within the state and placing their data within a statewide emergency system. In September, Gov. Arnold Schwarzenegger (R) will stand up a statewide umbrella organization called the California Disaster Corps, which will oversee these resources to help the government identify emergency resources quickly, Bettenhausen commented.

"You need to have a statewide system to be able to identify where are these community emergency response teams? Where are these medical response teams? Where are the volunteers in police services? And those volunteers in police services, what do they do? Can they help you with traffic management or are they radio specialists? It's about typing them and bringing better awareness to them that this is an available resource and mobilizing it," Bettenhausen remarked.

Wildfires have becomes so widespread in California that the state no longer has a window it can identify as fire season, Bettenhausen asserted. Due to climate change, fire season now runs yearlong, which proves difficult to local governments. They are able to tackle the fires, however, through their mutual aid agreements.

The state of California has two strike teams-each consisting of 500 fire engines and 2,500 firefighters-to deploy quickly. The state can deploy the first usually within 24 hours of a

wildfire. Another set of 500 fire engines, with five firefighters a piece, can follow up that first deployment, Bettenhausen described.

In June, Schwarzenegger established a Blue Ribbon Task Force to follow up on recommendations made by his Blue Ribbon Fire Commission, which issued a very influential report after a catastrophic wildfire in 2003.

California disaster authorities have implemented many of the key recommendations of the commission, Bettenhausen noted, including the purchase of dual-use fire engines that can at as urban search and rescue vehicles.

The state purchases these fire engines and places them in local fire departments. The state then continues to pay for maintenance of the vehicles with the understanding that local departments will field them to support statewide mutual aid agreements, Bettenhausen described. The state has 141 such vehicles but the Blue Ribbon Fire Commission recommended that it eventually have 250 of them.

California also has made rapid advancements in interoperable communications since the 2003 wildfire, Bettenhausen reported.

"Across the board, we learned some lessons from the 2003 wildfires in San Diego and the blue ribbon report that came out after it," Bettenhausen stated.

"We have done a great job in California in terms of having tactical interoperability. What do we mean by tactical interoperability? That means if we have an event, we have the capability to bring together disparate radio systems and to hook them together and communicate. It's not the ultimate solution, which would be 24/7/365 that the police officer on the street would be able to talk to the public works guy next to him in a dump truck. That 24/7/365 is a different capability, which we are all building toward," he added.

California has required local agencies to put together tactical interoperability plans, come to governance agreements, and develop the capabilities to support those plans, Bettenhausen said.

"So when we have seen major fires, as we saw in 2007 in San Diego and the 2008 fires, 15,000 firefighters came together for this and we patched them all together and did not have interoperability or radio communications problems," he commented.

Funding issues

California, like most other US states, has been maintaining a focus on building emergency management capabilities while experiencing a budget-sapping recession over the past year.

To provide dedicated funding to emergency management efforts, Schwarzenegger first proposed the Emergency Response Initiative in 2008 and returned to pushing for it this summer, again calling for it in a speech in San Bernardino Tuesday.

The Emergency Response Initiative is a proposal to put an assessment of 4.8 percent on all business and homeowner insurance to support California's mutual aid system, Bettenhausen said.

"Ultimately, as we build those mutual aid capabilities, it should come to a benefit in the overall insurance rates because the insurance losses should ultimately go down as we become more capable and build up resources," he said.

The rate of 4.8 percent for the average California homeowner represents $48 a year, or $4 a month, Bettenhausen stated.

"Having fire engines more distributed, out and available, to respond to catastrophes is going to be critical in an earthquake," Bettenhausen argued. "The surface transportation system may be broke; the water system may be broke; so it also points to our need to upgrade and enhance our aviation capabilities. The Emergency Response Initiative would allow CalFire, our statewide fire agency, to get 11 new helicopters with night-flight capabilities. It would allow us to upgrade the National Guard's planes and helicopters to continue to build that kind of aviation capability, which you would need in an urban environment."

Some critics of the Emergency Response Initiative have said it would benefit only those facing wildland fires and who live in the urban/wildland interface, Bettenhausen commented. But a May fire in Santa Barbara forced the evacuation of half the city, demonstrating that everyone in California would benefit from the initiative.

"So building up these fire capabilities and other response-including medical surge and hazardous material-would support and keep those assets and resources available to respond anywhere. That's a huge initiative for the governor," Bettenhausen said. "About $150 million or a third of the funding would go to support local fire departments that are participating in mutual aid.

"Despite the budget times and the difficulties that we have, we see this as a critical way of ensuring that public safety is not diminished. The progress we have made in growing capabilities in our mutual aid system would be promoted by passing this," he added.

To date, the California state legislature has refused to approve the Emergency Response Initiative as part of the California state budget, however.

###

Vendors moving steadily in the right direction on digital radio noise problem

September 2, 2009
Urgent Communications
By Lynnette Luna
URL: http://urgentcomm.com/mobile_voice/news/vendor-solution-radio-noise-20090902/

Personal alarms, chainsaws and spraying water are just a few of the background noises that firefighters typically encounter while using their public-safety radios at an emergency scene. Understandably, such ambient noise interferes with their ability to hear and understand what people are saying on the radio — which can be a matter of life and death.

Last year, the International Association of Fire Chiefs (IAFC) released a report citing lab tests indicating that analog radios outperformed P25 digital radios in certain noise environments, including in the presence of personal alerting safety system (PASS) alarms. Some fire agencies still are using analog systems for that very reason, although some lab tests showed problems with those portable radios, too.

As such, the vendor community has been challenged to come up with solutions to make digital radios better — and there isn't one answer. Vendors are looking at a series of solutions: better vocoders, enhanced noise suppression techniques, new microphone placement (such as embedding microphones in masks) and improved microphone technology — to name a few.

Harris RF Communications showed the ability of its multiband, P25-compliant Unity portable radio to operate in high-noise environments during demonstrations at the Association of Public-Safety Communications Officials conference last month. Noise simulations included street-level noise, pump-engine noise, PASS-alarm noise and chainsaw noise, which reached 101 dB to demonstrate how the device with an enhanced vocoder and noise-cancellation technology could successfully navigate through these sounds.

Harris is careful and correct to note that the effort to improve radio intelligibility will continue to be an ongoing effort. It will always be a moving target given the unpredictable nature of sound and the fact that digital radios aren't simply re-transmitting sound. The software in digital radios converts human voice into data bits for transmission and reconverts the digital signal back into voice on reception, providing a rough replication of voice.

I don't ever anticipate any vendor declaring that the problem is 100% solved. Noise is too unpredictable. Some noise is steady in amplitude and frequency, while other noise lasts just a few seconds but is equally as damaging. But I think vendors can get pretty darn close. Couple technology with adequate training and industry best practices, such as requiring users to speak loudly and clearly, and the situation should be dramatically improved. Unfortunately, it won't happen overnight.

###

Harris puts noise-cancellation prowess on display

September 1, 2009
Urgent Communications
By Donny Jackson
URL: http://urgentcomm.com/mobile_voice/news/harris-noise-cancellation-20090901/

Harris RF Communications showcased the ability of its multiband, P25-compliant Unity portable radio to operate in high-noise environments during demonstrations conducted at the company's booth during the Association of Public-Safety Communications Officials (APCO) conference in Las Vegas last month.

During the demonstration, Harris simulated various noise levels in a sound chamber and had a company representative speak into an analog radio, a P25 radio with the enhanced vocoder and a Unity radio with the enhanced vocoder and noise-cancellation technology. Noise simulations included street-level noise, pump-engine noise, personal alerting safety system (PASS)-alarm noise and chainsaw noise, which reached 101 dB.

Last year, the International Association of Fire Chiefs (IAFC) released a report citing lab tests indicating that analog radios outperformed P25 digital radios in certain noise environments, including in the presence of PASS alarms.

However, in each simulation at the Harris booth, the Unity radio outperformed the other radios in terms of delivering intelligible audio.

"Here's the thing to remember: we're not done," said Dirk Young of Harris. "There has been tremendous improvement, but no one in the industry is done."

In particular, Young noted that DVSI — the company that developed the P25 enhanced vocoder — is expected to release another upgrade to its vocoder by the end of the year.

When asked whether he believes the tests conducted for the IAFC report should be repeated with the Unity and other new portable radios on the market, Young said he would like to wait for some time, so additional improvements can be made to the radios. However, Young said he is confident the industry is moving in the right direction in its effort to address the concerns of the firefighting community.

"We're well underway on the journey, but by no means are we at the destination," Young said.

###

IAFC safety head wants focus on community

August 31, 2009
FireRescue1

By Jamie Thompson
URL: http://www.firerescue1.com/fire-news/586960-iafc-safety-head-wants-focus-on-community/

IAFC safety head Chief David Daniels questioned how many departments are truly relevant to their communities during a session at Fire-Rescue International on Saturday.

Chief Daniels, chair of the Safety, Health and Survival Section, said many organizations have shifted away from what should be the number one priority of serving the "customers" in their districts.

"Now it's about us," he said. "In my view, we have gotten to the point in our industry where we believe what the papers say, that everybody loves us.

"Maybe it is true, but do you want to be loved or do you want to be necessary? I would rather be necessary."

The Chief/Emergency Services Administrator in Renton, Wash., said organizations were wrong to continue to call themselves "fire departments" because of the ever-evolving range of services many now provide.

"When I interviewed for the job in Renton, they asked me to prioritize what the number one service was that I should provide, and I said EMS," Chief Daniels said. "That's my number one business. That's a growth industry. People always get sick."

He cited General Motors, which accounted for 40 percent of the auto sales in the United States and was arguably the most popular auto dealer in the world just a few years ago, as being an example of a group that failed to evolve.

General Motors filed for bankruptcy in June, and is now 60 percent government owned after a bailout.

"The world kept on moving, people kept on moving, their needs changed," Chief Daniels said. "But GM kept doing the same thing."

Chief Daniels said public agencies are perceived by many "customers" as being too slow to change and inflexible, with public employees being protected even in the face of unethical behavior.

"Should you have a job for life if you aren't contributing? You hear it all the time — 'We can't get rid of so and so,'" Chief Daniels said. "Trust me, you can. If you're not performing and not meeting the job requirements, I don't have to keep you forever."

Departments should be continually looking to get input from their communities on the services they offer, Chief Daniels said, and recommends conducting regular services of their needs and expectations.

In emergency services, the only real contact comes during an emergency but it is vital customers are kept engaged, he said.

"We often respond to people's worst moments and do a great job, taking care of them," Chief Daniels said. "But what happens to them next week?

"Does anyone follow up to see if they are doing OK? Do you go back and tell them how the fire started?"

###

APL, Homeland Security developing next public alert system

August 31, 2009
The JHU Gazette
By Paulette Campbell
URL: http://gazette.jhu.edu/2009/08/31/apl-homeland-security-developing-next-public-alert-system/

Engineers in APL's Infocentric Operations Business Area are helping the Department of Homeland Security create a national next-generation emergency alert system that will work across multiple platforms, including television, cell phones and the Web.

The current Emergency Alert System was created in the 1950s to warn Americans of nuclear attacks. The technology used to alert the public today—television, radio, newspapers and, more recently, the Internet—is still pretty much "last century." For imminent emergencies, the method is even more outdated: Remember that "beep, beep, beep" broadcast on television and radio stations?

Hurricane Katrina and the Sept. 11 terrorist attacks underscored the vulnerability of America's emergency response system. In particular, Katrina severely tested the reliability of the communications infrastructure in the Gulf Coast region, crippling television broadcasts, cable TV and phone service and even the generally resilient public safety networks.

Media consumption patterns have changed, notes APL's Tammy Parsons, the project manager for the alert-system work. "As connected mobile devices such as cell phones and PDAs become ever-present, and as the lessons of recent disasters take root, the government is rethinking the shape of the emergency alert system, and APL is playing an integral role in that effort," she said.

Under a 2006 executive order signed by then President George W. Bush, the Federal Emergency Management Agency began developing the Integrated Public Alert and Warning System, or IPAWS.

"IPAWS is a major systems engineering challenge, as multiple systems—some existing and some still being defined—must be integrated to meet the needs of the president and all levels of government emergency managers," said APL's Wayne Buhrman, who did significant up-front work analyzing both the current system and commercially available options.

IPAWS consists of several components, including the next generation of the Emergency Alert System, providing voice, video and data messages in a standard digital format over Web-based networks; a 24-hour private telephone system at 2,200 sites across the country used to convey warnings to federal, state and local governments; and the Commercial Mobile Alert System, or CMAS, a mobile device alerting system created by the Warning, Alert and Response Network Act of 2006.

Working with Homeland Security's Directorate for Science and Technology and FEMA, APL is developing requirements and analyzing potential solutions for systems that will round out the IPAWS capabilities. Eventually, the president, as well as state, local and tribal emergency managers, will be able to address the public over multiple media: radio, cable television, pagers, cell phones, the Internet and as many other outlets as feasible.

"Our current system relies largely on radio and television, but on average Americans only spend 12 percent of their day listening to the radio and 31 percent watching television," Parsons said. "But 84 percent of Americans have cell phones." CMAS, she added, will enable mobile service providers to voluntarily transmit alert and warning information to their subscribers.

APL is also working with the joint task force of the Alliance for Telecommunications Industry Solutions and Telecommunications Industry Association to define the requirements for the interface between the FEMA-administered CMAS entities and the equipment from mobile service providers. "The mutual agreement on interface requirements by the government and wireless industry is paramount to the systems' success and has been largely successful to date," said Gina Marshall-Johnson, who is working on a team developing security requirements for CMAS.

Denis Gusty, the program manager for emergency alerts in the DHS Science and Technology Command, Control and Interoperability Division, said, "The work that we are doing with APL and FEMA is critical to the future of emergency alerting. [These evolving systems] are integral components in improving the capabilities of emergency alerting systems and ultimately keeping our nation safe."

###

DHS Releases Reference Library of Interoperability Documents

August 27, 2009
MissionCritical Communications
URL: http://www.rrmediagroup.com/newsArticle.cfm?news_id=4669

The Department of Homeland Security (DHS) Office of Emergency Communications (OEC) released the formal agreement and standard operating procedure (SOP) template suite and reference library. These resources help guide the effective and efficient development of formal agreements and SOPs among interoperable communications stakeholders in emergency response.

The suite will also help agencies meet interoperable communications milestones as outlined in the national emergency communications plan (NECP). In particular, their release satisfies NECP milestones 1.1.1 and 3.3.41, which state:
"DHS will establish a central repository of model formal agreements and information that will enhance interstate and intrastate coordination."

"DHS identifies and refines model SOPs for emergency communications during specific types of incidents and all-hazards response (beyond tactical communications)."

The information, available on the National Interoperability Information Exchange (NIIX) Web site and the Safecom Web site, includes guidance documents for the creation of a:

- Charter
- Executive Order
- State-to-Local memorandum of understanding (MOU)
- Local-to-Local MOU
- System-to-System Console Patch SOP
- Mobile Gateway SOP
- Shared Channel SOP
- Shared System SOP
- Radio Cache SOP

The formal agreement and SOP reference library contains more than 200 formal agreements and SOP examples provided by public-safety stakeholders from across the country. All documents contained in the reference library were collected earlier this year from stakeholders responding to OEC's nationwide solicitation of formal agreements and SOPs relating to communications interoperability. Working groups comprised of stakeholders vetted each of the template suite's nine guidance documents. Contact OEC with questions or comments at OEC@hq.dhs.gov.

###

Data Interoperability Documents Available for Download

August 27, 2009
MissionCritical Communications
URL: http://www.rrmediagroup.com/newsArticle.cfm?news_id=4670

The IJIS Institute released the “Guide to Information Sharing and Data Interoperability for Local Communication Centers” and the “Priority Data Exchanges for Local Communication Centers.” Both documents are now available at www.ijis.org.

The "Guide to Information Sharing and Data Interoperability for Local Communication Centers" provides managers of public-safety communications centers with an overview of the issues and opportunities surrounding data interoperability. It provides practical insights and action-oriented advice for managers looking to enhance data interoperability in their facilities.

The "Priority Data Exchanges for Local Communication Centers" document overviews high-value information exchanges that are relevant to these centers. Communications center directors and other planners may use this document to assess the current strengths, weaknesses and growth potential of their facilities. In addition, this document provides a window into the future of data exchange in the communications center. Many of the exchanges described in this document are not yet in wide use, if at all. Directors and planners can use this information to understand emerging trends in data interoperability and to plan for future growth.

Both documents were produced by the Association of Public-Safety Communication Officials (APCO) International and IJIS Institute Public Safety Data Interoperability (PSDI) Project. The project, funded by the U.S. Department of Justice's Bureau of Justice Assistance, is focused on advancing open, standards-based information sharing.

###

Best practices being crafted to enable broader use of mobile biometric devices

August 26, 2009
Government Computer News
By William Jackson
URL: http://gcn.com/articles/2009/08/26/mobile-biometric-best-practices.aspx

Biometrics — the automated comparison of physical attributes such as fingerprints to establish identity — is being integrated into government ID management schemes, and mobile devices are moving this technology into the field and away from central databases.

The National Institute of Standards and Technology has released Special Publication 500-280, a set of best practices to help agencies the most use out of systems that might not be easily interoperable.

"Over the past several years mobile ID devices and systems have been employed for various applications," the report states. "In the FBI and law enforcement environment[s] these devices enable an officer to acquire a subject's fingerprints, facial image or other biometric at a variety of different physical locations. In a typical Department of Defense application they are used for identity verification of foreign workers, access control to secured communities and bases, and for ad hoc checkpoint operations."

The Homeland Security Department uses mobile biometrics in its US-VISIT program to screen foreign visitors, and in its Transportation Worker Identification Credential program. “Across all departments, the Personal Identity Verification [PIV] program for uniform civilian credentialing may be relying more on mobile ID devices in the future.”

To get the most use out of the technology, the FBI is piloting a system based on the Repository for Individuals of Special Concern (RISC) to access records of wanted people. In addition, the Defense Department wants warfighters to be able to search DOD, FBI, and DHS biometric databases. This will require a set of common interoperability requirements at the local, state and federal levels that do not yet exist.

“Unfortunately, data acquired from a mobile ID device using one system cannot always be read or processed by another system,” NIST said. Different scanning resolutions, use of images and templates, data formats and image size all contribute to a general lack of interoperability.

An Advisory Policy Board to the FBI’s Criminal Justice Information Services Division has requested guidance principles for mobile biometric system applications to address these issues, and NIST has produced Version 1 of its best practice recommendations for mobile ID devices.

Mobile devices now are being manufactured to capture fingerprints and facial and iris images, and added features such as voice identification are being planned. The best practices identified by NIST focus on the capture and exchange of fingerprints and facial and iris images. Images produce a more accurate result than templates when data is exchanged between dissimilar systems, NIST said.

Best practices are being developed rather than technical standards largely because of the large installed base of good biometric systems that are not obsolete and will continue to be used for the foreseeable future. NIST urges the development of a road map for future technology that progressively raises the bar for interoperability and for the quality and accuracy of comparisons while maintaining backward compatibility.

###

New hardware upgrades communications for military, law enforcement

August 22, 2009
Great Falls Tribune
By Tribune Staff
URL: http://www.greatfallstribune.com/article/20090822/NEWS01/908220311/New-hardware-upgrades-communications-for-military--law-enforcement

A new communications antenna and radio site was installed atop Mount Baldy on Friday.

The project was a joint effort between the 341st Missile Wing of Malmstrom Air Force Base and the Montana Army National Guard.

The new site in the Highwood Mountains northeast of Great Falls will provide advanced digital, secure voice and data communications for all of Malmstrom Air Force Base and public safety entities.

Federal, state and local public safety and emergency responders can communicate more easily from the Montana interoperability project, according to Army guard officials.

The project adds another link to the interoperability backbone for digital communications that will soon be available throughout the state.

"Expanding the backbone is needed statewide, and this project is the next step in that process," said Lt. Col. Jeff Fisher, chief information officer for the Army guard.

Organizations benefiting from the upgrade include Cascade, Chouteau and Judith Basin counties, local law enforcement and emergency responders, the Montana Highway Patrol, the U.S. Forest Service and the Montana Department of Natural Resources and Conservation.

A Chinook helicopter transported and lifted building materials and equipment because of the rough terrain at the new site.

Building materials included 34 yards of concrete, water tanks, propane tanks, prefabricated buildings and radio dishes.

Construction on the site began on Aug. 13 and is expected to be completed by the first week of September.

###

Improving communications

August 22, 2009
Independent Record
By Angela Brandt
URL: http://www.helenair.com/news/local/article_4872a2ee-a415-57e1-84be-9013cdf0f4f7.html

A new antenna and radio site being constructed northeast of Great Falls will benefit not only Malmstrom Air Force Base, which is funding the project, but also many other local, state and federal agencies.

The communication suite, which is currently in the works atop Highwood Baldy, will allow agencies to communicate with one another in a time of crisis, such as a wildfire, in addition to beefing up the capability of Malmstrom's missile command.

Lt. Mauri Slater said the project comes with a price tag of $1.9 million.

"We need this as part of our coverage project but Montana also needs this for the interoperability project," Slater said while onsite by the communication suite Friday.

The new suite will provide advanced digital, secure voice and data communications for Malmstrom, and also public safety agencies.

Those benefiting from the new communication suite are Chouteau, Cascade and Judith Basin counties, Montana Highway Patrol, U.S. Forest Service and the Montana Department of Transportation, as well as other local law enforcement and first-responder agencies.

Down the road, the communication suite will help link agencies as part of the Interoperability Montana project, which will offer law enforcement and other agencies responding in emergencies to securely communicate seamlessly, meaning the radios will be automatically switch to the closest repeater without interruption.

Lewis and Clark County was the first in the state to embark on the state-of-the-art emergency radio communication network in 2005. The network is expected to be running state-wide by 2013.

The Montana National Guard was called in to assist with helicopters to transport building material and equipment to the site, which is in rough terrain. Slater said while there is a road to the suite, it cannot accommodate the size and weight of the equipment.

On Thursday, the Montana National Guard lifted a building, weighing about 20,000 pounds, to the mountain-top site.

The work continued Friday, when a CH-47 Chinook helicopter was used to move equipment, including three radio microwave dishes.

Dave Cunningham, public information officer for the Lewis and Clark National Forest, said the new suite will benefit public safety in the event of a natural disaster.

"Communications is imperative to that. This ability will put another tool in our tool box," he said while watching the helicopter transport supplies.

Charity Watt Levis, public information officer for the Montana Department of Transportation, said the department doesn't currently have a statewide communication system and this suite will help with that.

"The ability to have centralized communication is huge for this state," she said.

“One of the great things about this is that everyone is working together," Watt Levis added.

Construction of the new suite is expected to be completed by the first week of September.

###