

Statement by  
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Before the Committee on Commerce, Science and Transportation  
United States Senate  
“All Hazards Alert Systems”  
July 27, 2005

Mr. Chairman and members of the Committee, thank you for the opportunity to testify before you today on this critical topic. There are few issues more important to our membership than the one you are discussing today.

COMCARE is a national non-profit alliance dedicated to advancing emergency response by promoting modern, interoperable emergency communications systems, and the development of new procedures, training, and tools to maximize value for emergency responders. COMCARE encourages cooperation across professional, jurisdictional and geographic lines, and works to integrate the emergency response professions, government, private industry and the public. COMCARE's 100+ organizational members represent the wide diversity of the emergency response community. For more information visit [www.comcare.org](http://www.comcare.org).

COMCARE's goal is to promote an integrated, coordinated approach to emergency communications and support the development of a comprehensive "end-to-end system" to link the public to emergency agencies, and to link those agencies together. Introducing 21st Century information and communications technologies to the often-antiquated communications infrastructure of emergency agencies will save thousands of lives each year, substantially reduce the severity of injuries, and enhance homeland security.

Our members have a vision of an integrated emergency communications and information system linking the public to emergency agencies, and linking the agencies to each other in a seamless network. This integrated network would equally serve to protect Americans during both daily and mass emergencies. The goal is to incorporate today's systems with tomorrow's technology under the cooperative guidance of local and national leadership.

I am also testifying on behalf of the National Emergency Alerting and Response Initiative (NEARS). Our NEARS partners include the American College of Emergency Physicians (ACEP), the American Public Health Association (APHA),

the Brain Trauma Foundation (BTF), COMCARE, the Emergency Interoperability Consortium (EIC), the Emergency Nurses Association (ENA), the Fraternal Order of Police (FOP), the George Washington University Homeland Security Policy Institute (GWHSPI), the International Association of Emergency Managers (IAEM), the National Association of EMS Physicians (NAEMSP), the National Association of EMTs (NAEMT), the National Association of State EMS Directors (NASEMSD), the National Emergency Number Association (NENA), the National Volunteer Fire Council (NVFC), the Public Broadcasting Service, and others. See [www.nears.us](http://www.nears.us).

## **Summary of Testimony**

We believe there are five essential building blocks for an effective, interoperable national public warning system.

- Interoperable pathways for agencies to exchange information
- Multiple communications channels from emergency agencies to the public
- A standards based system
- A series of shared Facilitation Services
- Use rules defined by emergency leaders and implemented through the Facilitation Services

Functional interoperability will not come from building a single new network, or multiple ones for specific types of warnings. There are close to 100,000 emergency agencies. There are hundreds of high quality communications systems in the emergency response and communications community now, and in the media. The physical networks to connect these organizations mostly already exist. We must take advantage of the extensive networks that are already in place and the tools that are used everyday by our emergency agencies. We should think of this as an “internetwork”, and focus on connecting a wide variety of wireline and wireless networks that are controlled by a large number of separate entities.

This emergency internetwork will allow organizations to contact the public through all the burgeoning number of devices they have, not just one or two: wireless voice and data messaging, television, radio, beepers, ISPs, mass calling, and the like. Most discussions of public warning focus on this part of the process, the end point in the hands or living rooms of citizens. The COMCARE and NEARS focus has been on the other necessary pieces to make an all hazards system work.

Standards create a common language that enables data sharing between thousands of individual agency proprietary systems, and with the public. For public warning, the Common Alerting Protocol (CAP) standard fundamentally solves that problem, particularly when the EDXL Distribution Element becomes a standard as we hope it will later this year. Now the primary standards challenge is getting vendors to use them, to create interfaces to them.

The next issue is shared Facilitation Services. How does the sending agency know who the right organizations for public alerting in a target area are, much less their correct computer addresses, incident interests, and the geographic areas of those interests? Instead of the inefficient profusion of single purpose directories (and the inaccuracy that flows from such proliferation), there should be one shared routing directory system (actually a federated system of directories) for all hazards messaging, owned and managed on a non-profit basis by the emergency response professions. The same comments and shared system apply to the needed rights management system. The Emergency Provider Access Directory (EPAD) NEARS and we advocate performs these routing and rights management functions.

Finally, it is important to separate technical capabilities from policy rules governing their use. Technically, we need a system that connects every emergency related organization together in the internetwork. That does not mean that any agency is allowed to send or receive any message or have access to any data. We need organizations at local, tribal, state and national levels to develop the policies and protocols that determine the rights and roles of agencies in the system, and management rules for it.

The National Emergency Alerting and Response Systems (NEARS) Initiative has a unique plan to make a successful All-Hazards Alerting system possible. NEARS brings together a wide variety of leading emergency response organizations around a common architecture and specific plan, not a particular product. With several regional and national demonstrations, using a prototype of EPAD (a map-based directory of agencies for routing data), we have proved that sharing data messages between agencies according to data standards is an extremely effective way to communicate with a wide variety of public warning systems. Thanks to a significant grant to COMCARE from the Department of Justice, EPAD has been specifically defined by teams of emergency practitioners, and an extremely detailed design has been created. We have more than 100 pages of design and a detailed technical architecture for both routing and rights management modules that are awaiting funding.

The 16 national organizations that are NEARS partners represent over 40,000 individual agencies and over 400,000 individuals in the emergency response professions. Our proposal serves multiple agency missions, from public warning, to emergency agency communications, to public health. We request that Congress strongly encourage DHS and HHS to fund NEARS from already appropriated funds.

### **Overall Comments**

A public warning interoperability solution will not be achieved by the Federal Government purchasing a new national emergency alert network or buying a

software application for the 100,000-plus emergency agencies – much less all the other public and private organizations that need to be part of an emergency network. Instead, emergency agencies and their communications capabilities should be viewed as a single “enterprise”, with tens of thousands of agency owners. This enterprise needs to provide full interoperability among all agencies (and related organizations), delivering secure information and communication to/from response agencies and responders. It needs to include comprehensive public warning and education. To be cost efficient, it must be multi-user, multi-use, and all hazards.

The most effective public warning system will be one that gets emergency messages to the widest variety of possible alerting mechanisms ensuring that the greatest levels of penetration are achieved. It will be one that is used for all hazards reporting, not just tsunamis, or weather, or homeland security alerts. More importantly, it will be one that allows agencies to communicate directly with the public and those organizations authorized to send out disaster warnings directly to citizens. Finally, there will never be one “system” that solves the problem. We must have a capability that links all alerting solutions and allows for multiple methods of communication. That means it must be driven by data standards and based on an open architecture. It should not have single points of failure.

The National Emergency Alerting and Response Systems (NEARS) Initiative meets these criteria and can provide a solution to help our country achieve its goals. I am here today to ask you to support it as part of your broader, overall effort.

## **THE PROBLEM**

Public warning rests on a simple action: some government agency needs to send out a warning. Sometimes this goes directly to the public; sometimes it goes to other emergency agencies or organizations for them in turn to notify the public. Sometimes the key targets of alerts are the individual employees of an agency or profession (e.g. first responders, physicians).

In an era where technology can bring news, current events and entertainment to the farthest reaches of the world, to almost any electronic device, most U.S. emergency response agencies and personnel cannot share data with each other, even within the same jurisdiction, much less with the public they serve.

Most new cell phones can take and transmit pictures to any person on the Internet. If there were a small pox outbreak, it would be enormously valuable for CDC to be able to send pictures of pustules to 9-1-1, EMS, the media, and other key organizations so they could communicate them to the public. “If you have skin that looks like this, stay at home. Do not come into the hospital or contact others.”

But most emergency response agencies cannot send or receive such data.

9/11 challenged the security of the United States and the safety of its citizens. Those challenges have identified weak spots in effective communication. Such emergencies demand real-time data and inter-operable communication across all jurisdictions and professional boundaries so that agencies can provide information and service to the public. There is an urgent need for broadband digital network capability for real-time, inter-agency, emergency communication, with seamless and effective communication capability from and to the public. Telephone and fax will not meet the need. Unfortunately, because we don't have standards or an open architecture, to achieve functional interoperable data communications today requires the construction of innumerable, specialized interfaces as demonstrated in Figure 1. Each of these interfaces needs to be replicated in every community. This is an unworkable model.

***Current Model:***

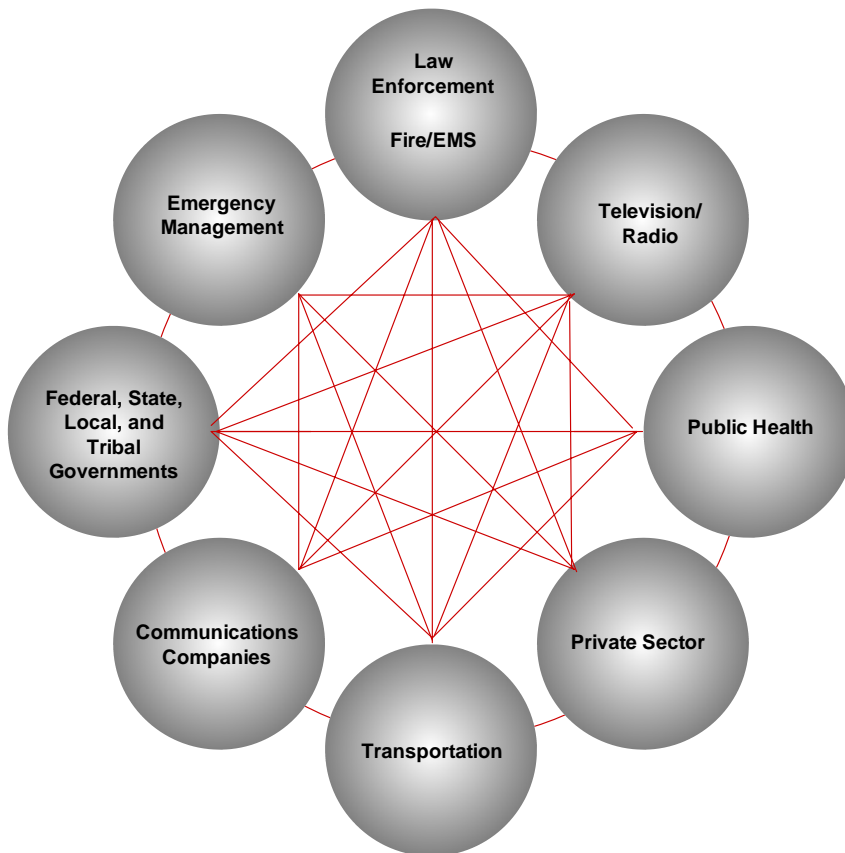


Figure One

It is simply impossible to achieve the National Incident Management System (NIMS) requirements for Communications and Information Management<sup>1</sup> without

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<sup>1</sup> NIMS Chapter 5

interoperable, interagency data communications. Yet today there are more than 100,000 emergency response agencies and the vast majority of them are not able to rapidly, accurately and easily communicate data with each other, much less the public. Except at the highest levels of government (e.g. state EOCs and Governors that have been given data sharing tools by DHS), there is no regional or national emergency data communications capability. In simple terms, the President, the Secretary of Homeland Security, the Governor, or the EOC of any state, county, tribe or city do not have the ability to send or receive secure emergency messages to most of the more than 100,000 emergency agencies in our country or those in a particular state. Indeed, there is no comprehensive electronic directory of these agencies that would enable the routing of such messages.

Underlying this is a clear lack of a comprehensive local, state or national emergency communications and IT infrastructure. Most of the communications platforms used today are designed as one-off systems and solutions. The current system is voice-centric, and filled with stove pipes of information. There is little data sharing between agencies, much less with the private sector. Different agencies' information systems – computer-aided dispatch, emergency-management tools, public health applications, wireless data systems in the field, alerting and warning systems of all kinds – need to exchange up-to-the-minute information, but they cannot.

### **Solution Overview**

Emergency responders are being asked to do one of the most important jobs in our society with generally the least advanced communications and information technology. The emergency community needs an integrated communications and information system for efficient preparedness, public warning, and response. This system needs to connect all emergency agencies with voice, data and video, not simply provide wireless voice and data connections to agency staff at the scene of incidents (which is a critical need). It also needs to connect the public to agencies and vice versa. The system needs to exploit the latest commercially available technologies, be highly secure, and provide emergency agencies with control over their data. Finally, we believe it needs to empower responders, giving them the flexibility to use emergency information in the ways they (not vendors or some central authority) choose, reflecting the different needs and capabilities of agencies in the communities of our country. Evacuating a town in rural Montana is quite different than evacuating Atlanta.

### **Recent Progress**

There has been important progress in the last year. DHS and DOJ are leading the development of both emergency data dictionaries/models and emergency message standards. Project SAFECOMM and related efforts are making significant progress on the radio interoperability front. DHS and leading

technology companies are supporting a range of data interoperability trials. A vision and plan for future emergency communications structure is emerging from the FCC's Network Reliability and Interoperability Council (NRIC) and similar proceedings. As evidenced by NEARS and other developments, the leadership of a significant number of emergency professions has put "turf" aside in favor of cooperation. These developments are new and incomplete, but encouraging nonetheless.

### **Public Warning or Interagency Emergency Communications?**

Some draw a distinction between public alerting and interagency emergency communications. Certainly at a policy and specific use level, these can be different, but in general we do not think the two topics can be distinctly separated. Often at the state or local level the agency with information that needs to be communicated to the public (or the one with the tools that contact the public) is the state or local 9-1-1 center, police department or Emergency Manager. We must first make certain that emergency response agencies have the ability to efficiently receive and share emergency information of all types. Without that assurance there will be no accurate information to share with the public. We must also ensure that these agencies know who the right outlets are to notify the public and how to share information with them in real-time. As the train collision in South Carolina in January showed, this is usually not the case in complicated emergencies.

### **WHAT SYSTEMS ARE INVOLVED?**

Right now there are scores, indeed thousands, of emergency notification outlets to the American public. And they are generally controlled by thousands of independent emergency response agencies, few of which are connected to each other electronically (except by voice telephone). Here is a partial list.

- \*Reverse 9-1-1 systems installed at or controlled by some of our 6,500 9-1-1 centers.
- \*A wide variety of public individual notification registration systems (e.g. DC Alert) in many of the 4,000 state, city and county emergency operations centers.
- Commercial registration warning systems (e.g. some of the Amber Alert initiative; wireless company SMS systems)
- \*Similar systems for senior officials (e.g. RICCS and Roam Secure in DC)
- \*Public Health Alert Networks from health departments linking physicians, hospitals, labs (e.g. Virtual Alert in Virginia)
- \*NOAA, National Weather Radio
- Commercial and public media: TV, radio, cable, satellite
- Non-traditional media: XM Radio, Sirius, Internet Service Providers
- Wireless carriers; paging companies

- \*Specialized community warning systems (e.g. around DOE and DOD facilities)
- \*The traditional Emergency Alert System using broadcast systems
- \*DOT 5-1-1 and private traffic services
- \*DOT intelligent transportation public systems (e.g. electronic road signs)
- Telematics suppliers and/or their customers (e.g. OnStar and ATX)
- Internal corporate notification systems

We have placed an asterisk next to the ones that are generally considered government emergency agencies – and might be initiating public warnings on their own, or because some agency like DHS told them to do so. We believe the definition of “agency” should include the entire above list, although the private ones would probably not be initiating alerts on their own). We also have over 140,000 schools – and they generally aren’t on all hazards warning systems although some have weather radios now and they are now almost all connected to the Internet due to the e-Rate program.

## **THE DIRECTORY PROBLEM**

Almost every one of the systems listed above has a different owner, with different jurisdiction or geographical interests, different incident interests, and different electronic addresses.

How are you going to find out that critical warning/alerting information distribution data and then keep it current? The answer is that no central entity can, local, state or federal. That is why a shared registry where the organizations themselves enter this information – in other words, the EPAD we advocate -- makes so much sense. If an organization wants to receive alerts and/or public warnings, either for itself, or to pass on to others, it simply needs to register in EPAD, and be authorized to do so. In about 10 minutes using a web interface, any such organization can enter what kinds of alerts it wants to get, for what geographic area, and delivered to what electronic address(es). Then any authorized messaging system can query the data base and deliver the alerts.

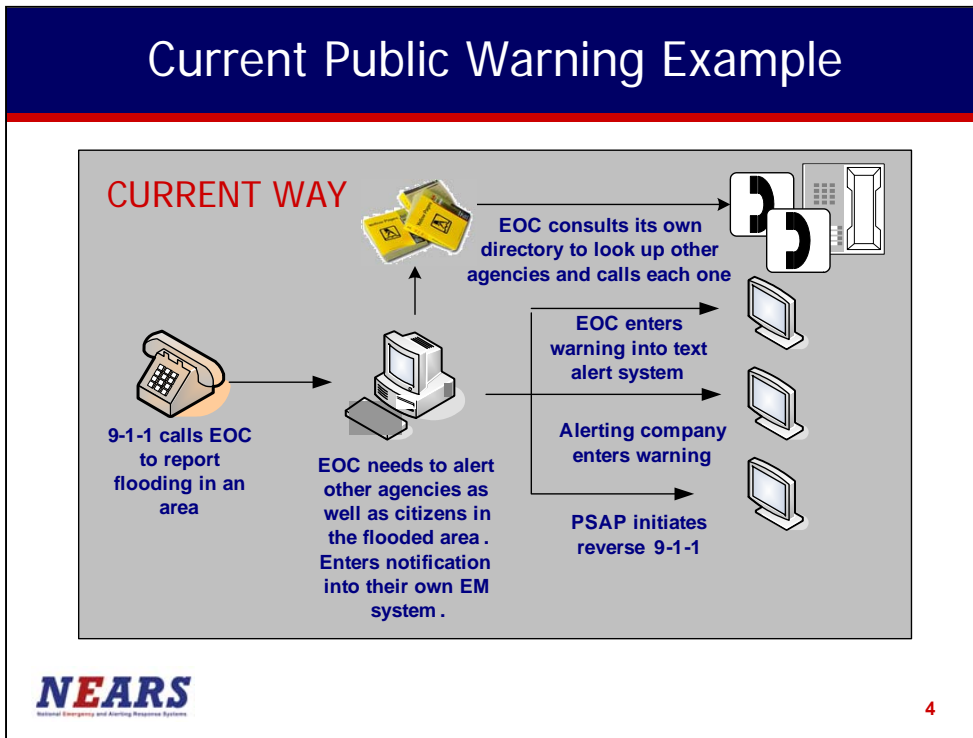
Indeed, using the directory to enable (provide the addressees for) all emergency messages, not just the subset that are national alerts, makes it much more likely that agencies and other organizations will register and keep their information up to date – so that they can be reached by public alerts and warnings.

NEARS offers the ability to reach any organization (i.e. the above list) that is registered to receive or disseminate a public warning message based on a geographic location. The detailed design of EPAD is done; it is ready to be built.



## CURRENT WARNING PROCEDURE

Let's look at a generic public warning message that does not originate at the federal level.



9-1-1 receives a call about flooding in a large area that affects roadways, public buildings and a residential area. 9-1-1 calls the responsible emergency operations center (EOC) to notify them about the flood. It may also call other agencies.

The EOC determines that other agencies like traffic management and law enforcement must be called. The EOC enters the incident information into its system. It then looks up the telephone numbers for the agencies to be notified in its own directory – if it has one - and calls them one-by-one. It determines that a public warning message must be disseminated to those located in that area. However, it can only do so by using zip code to target the message. Some may get the warning and are not affected. Others may not get the warning and could be affected.

Currently, the EOC uses three different systems to send out public warning messages – a text alert system, a voice alert system, and a web site. The EOC enters the flood-warning message into each system so that warning messages can be disseminated.

The process involves making many phone calls and manually entering the incident message into each agency's system and each alerting system. The result – valuable time wasted, with an increasing possibility of message errors due to multiple manual entries.

To for there to be an effective public alerting system there must be only one communications system for all events. One system should be created to contact the public for all events, ranging from child abductions, to hurricanes, to terrorist attacks. Having multiple systems for different types of alerts is wasteful because it creates several systems which have a limited range of contact, instead of creating one, all-inclusive system. One system will allow all registered agencies and organizations to send and receive messages about any event.

Saying that there should be one system, does not mean there should be one set of rights, one set of use protocols, or any similar capability which is unique to an incident type. The point of Facilitation Services is to have electronic tools that allow those different capabilities and rules to be implemented.

## **ESSENTIAL PARTS OF A NATIONAL ALL-HAZARDS ALERT SYSTEM**

There must be one system for all warnings, not one for each kind. There are tens of thousands of alerts that are sent to emergency agencies, the media, and the public each year, and there are thousands of agencies who are responsible for reporting these warnings. Cellular phones, internet, CAD systems, text messaging, beepers, television, radio, cable should all be used for public alerting. The technology exists to create this integrated alerting system.

There are five essential building blocks or layers for an effective interoperable national emergency communications system; they are the same for a national public warning system. Some of these layers will be provided on highly competitive terms by multiple parties, some are shared Facilitation Services offered by collections of emergency response agencies, while others are components that will be unique to individual agencies:

1. Pathways for agencies to exchange information.
2. Pathways from the agencies to the public.
3. Emergency communications standards
4. A set of shared Facilitation Services for routing, rights management, security and the like.
5. Institutions to define rules and policies.

### **1. INTERAGENCY COMMUNICATION**

For a successful integrated public warning system to exist there must be interoperable communication between agencies. Local 9-1-1 centers, HSOC, NOAA, FEMA, and emergency responders should be linked by an alerting network that allows these agencies to receive and disseminate the information

they need as quickly as possible. We don't need to build a new network. Commercial telecommunications entities, and state and local governments, have already deployed massive fiber, satellite and wireless infrastructures. We need to assume an "internetwork", connecting a wide variety of wireline and wireless networks, controlled by a large number of separate entities.

This can be the public Internet; that has the advantage of being available to almost any agency immediately, and for very low cost. However, many localities and states have developed their own private IP networks; these provide better performance. The primary policy issue – and one that is very familiar to this Committee – is getting all emergency agencies to establish broad band connections.

## 2. STANDARDS

Standards create a common language that enables data sharing between the thousands of individual agency proprietary systems. It is no solution to require all agencies to use the same information technology tools. Most agencies will not be willing to let someone else make these decisions for them, nor will they be comfortable or efficient using tools that they do not use on a daily basis. The costly alternatives are to develop individual interfaces for each source of data, or to acquire complicated and expensive systems that sit between agencies and translate each agency's data language into the others.

Common standards allow data communication among the disparate systems that are already in use, along with new applications as they are introduced into the system, by essentially building a single interface for all such purposes.

Standards have to be national. National standards mean local and state technology choices will expand and prices should improve, following the experience of the private sector with the commercial computer industry. It is equally important that representatives from the full range of emergency response professions be at the table during the national standards development process.

The Department of Homeland Security (DHS) through OMB's Disaster Management eGov Initiative identified the need for data interoperability using common standards. DHS is facilitating a process, in which COMCARE is proud to be a partner, that brings together leaders of the emergency professions that need to share data during emergency response operations. The project is developing and field testing a common set of emergency message standards (the Emergency Data Exchange Language, EDXL). It is also supporting broader efforts to develop common data terms and models, specifically the National Information Exchange Model (NIEM) project, that is based on the excellent pioneering work of the Global Justice XML Data Dictionary and Model. We strongly support these efforts, and are using these standards in NEARS and our other demonstrations.

### 3. COMMUNICATIONS TO THE PUBLIC

To get to the public, you first have to get the alert to emergency agencies and other organizations (e.g. the media). Agencies and organizations will receive alerts and warnings on a wide variety of information technology tools before they can decide to (or automatically) re-transmit those warnings to the public each serves. There are numerous emergency applications in use today, including complex Computer Aided Dispatch Systems (CAD), web-based emergency management tools, alerting systems for notifying emergency staff, mass residential communications systems, and other applications. Each of these systems has their own unique functionality; agencies should be encouraged to purchase the tools that are best suited for them. However, it is critical that these applications all have a standardized interface: the ability to send and receive XML messages to other applications in standardized formats. When 9-1-1 is in charge of public alerting, it should not matter to a 9-1-1 CAD system that it is receiving data from an emergency management tool about a flood, a bio-terrorism alert from CDC, or data about a 9-1-1 call from a wireless company. The same data interface should be used. That is what the standards are all about.

Another set of applications and services are those that compete to deliver information from these agency-based applications to the public. These can range from traditional ones that provide links through landline telephones, radio, or data connections, to NOAA weather radios, to beepers, warning radio systems, and even the traditional sirens. Broadcast television, radio, cable, internet service providers and others provide other outlets to the public. In some cases these are linked to more sophisticated systems which enrich incident messages with associated data from multiple sources.

Much of the debate about public warning has tended to revolve around the issues of consumer devices: which is “best”? should there be mandates?

We believe that public warning is today like a doughnut. There is a lot of capability at the edges where the vast array of systems touch the public. There is a large hole in the middle. Our preference would be to focus on filling the whole, making warnings available in standardized forms to all these outlets as appropriate, and then see what other steps need to be taken.

### 4. FACILITATION SERVICES

“Facilitation services” are shared tools, services and/or resources that are offered by collective effort of the emergency response community, and are available to authorized emergency entities to enable interoperability. These include, but are not limited to, security, diagnostics, routing directory, agency rights management, data rights management, and authentication.

Without a directory of agencies and their electronic addresses, public warning messages cannot be routed. Rather than the inefficient profusion of single purpose directories that is growing today, we believe there should be one shared directory system, owned and managed by the emergency response professions. This should be a secure registry where authorized agencies enter their name, contact information, professional function, level of government, incident interests (and the geographical area of both jurisdiction and interest for each type of incident), and emergency data delivery address(es). Only authenticated and authorized agencies will have access to it on a non-discriminatory basis.

Authentication and rights management are critical as well. There must be a trusted way to credential agencies and individuals, provide them with appropriate authorizations (both sending and receiving), and allow them access to and use of the network. Linking networks will require systems that will assure only authorized parties may participate, assign them appropriate rights and roles, and authenticate communications from them. Rights management also needs to be applied to data itself.

COMCARE has been working on these exact issues for more than four years. The result is the Emergency Provider Access Directory (EPAD). A routing prototype developed as a contribution to the public interest by our member DICE Corporation is available at <http://www.epad.us>. We are using this in field trials and demonstrations all over the country.

Thanks to a major grant from the Department of Justice the EPAD concept has been advanced a long way. There is now a detailed design of the production version of EPAD. More than 100 pages of design and a detailed technical architecture are awaiting funding to do the coding. This will provide both routing and rights management modules.

## 5. POLICIES AND PROTOCOLS

It is important to separate technical capabilities from policy rules governing their use. Technically, we need a system that connects every agency together in a network. And the word "agency" must include many private sector entities. But that does not mean that any agency should be allowed to send or receive any message or have access to unregulated data.

COMCARE believes that emphasis should be placed on system flexibility, and local control, using the rights management Facilitation Services to allow for messages to be generated from local and state emergency managers (to their appropriate audiences) as well as national sources. After all, most emergencies are local.

We need to develop the policies and protocols that determine the rights and roles of agencies in the system, and management rules for it; a local 9-1-1 center should not have the same access within the system as a Governor. Some of these policies (and the decision making bodies) are already in place today, whether they are officially written policies or not. Many are not, and most lack all the parties they need to be effective in this regard. The local, state and federal law enforcement communities are most advanced in this regard. Most other emergency agencies are not involved because sharing emergency information between them has not been done before. All of these policies and protocols will need to be addressed in terms of electronic communication.

Applying this architecture results in a very different approach than Figure One. Figure Two shows a more rationalized system where appropriate functions are shared.

*E Safety Vision:*

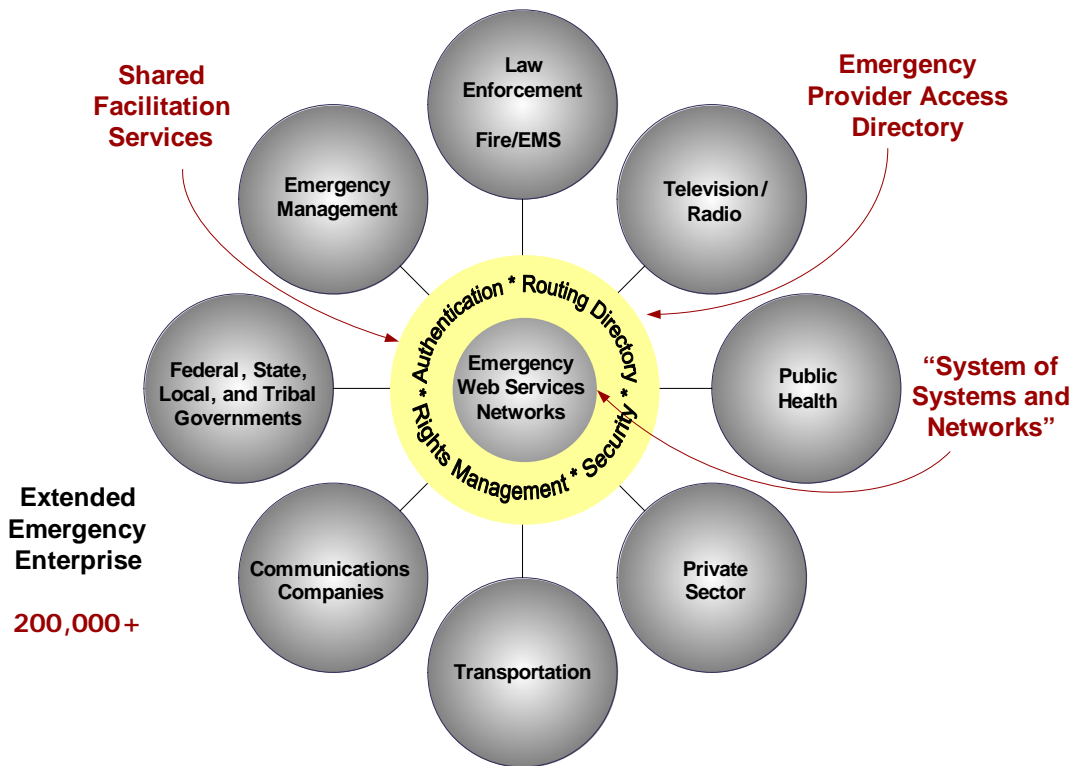


Figure two

## **NEARS**

The National Emergency Alerting and Response Systems (NEARS) Initiative implements national emergency message standards, commercial information technologies, and the EPAD shared, electronic directory of agencies being developed by a non-profit public/private partnership.

NEARS is endorsed and led by a growing and diverse coalition of emergency response and industry organizations. Participation by others is actively encouraged. It is a three-track initiative that promotes the concept, develops the service, and tests the service for national implementation with actual deployments in several regions.

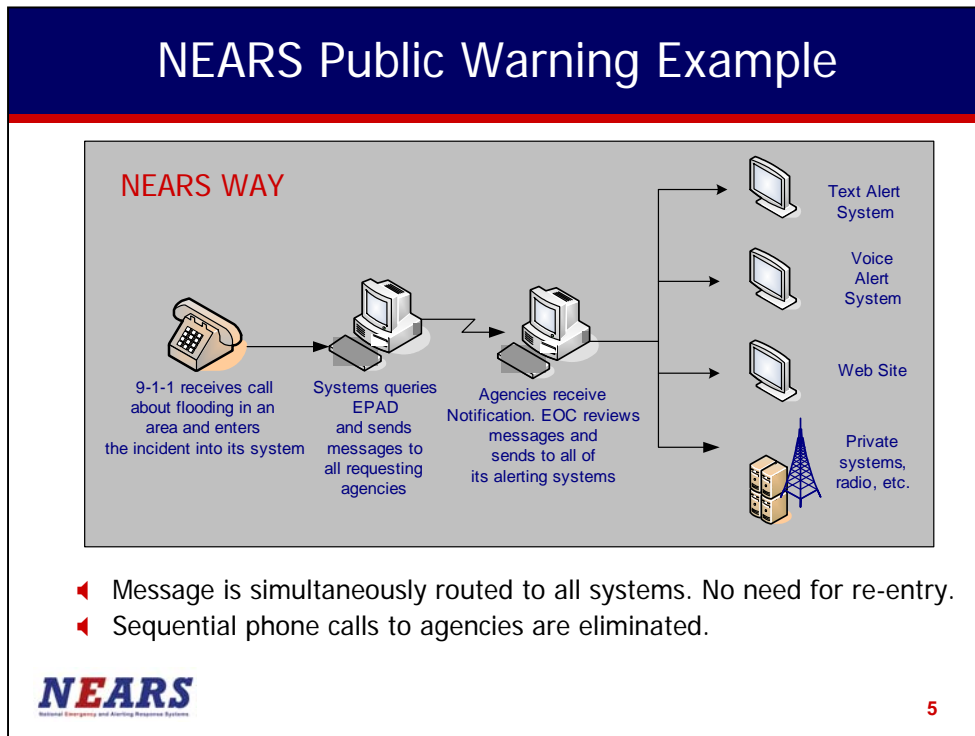
NEARS was created to bring together the respective players in the emergency alerting area, and to provide a forum for government, industry and other interested parties to work together to improve the nation's public warning and emergency messaging capability. Together we plan to demonstrate and deploy interoperable emergency data messaging, using national emergency message and data standards, commercial information technologies, and the EPAD shared, electronic directory of agencies. This directory gives agencies the ability to distribute emergency messages based on geography, incident or agency type, for all types of emergency events.

Our NEARS partners include the American College of Emergency Physicians (ACEP), the American Public Health Association (APHA), the Brain Trauma Foundation (BTF), the ComCARE Alliance, the Emergency Interoperability Consortium (EIC), the Emergency Nurses Association (ENA), the Fraternal Order of Police (FOP), the George Washington University Homeland Security Policy Institute (GWHSPI), the International Association of Emergency Managers (IAEM), the National Association of EMS Physicians (NAEMSP), the National Association of EMTs (NAEMT), the National Association of State EMS Directors (NASEMSD), the National Emergency Number Association (NENA), the National Volunteer Fire Council (NVFC), the Public Broadcasting Service, and others.

Some criticize responders for only communicating within their professional silos. However, the growing number of organizations who support NEARS clearly demonstrate that there is willingness to change. Collectively, the NEARS partner organizations represent a large cross section of the emergency response community – Law Enforcement, Fire, EMS, Public Health, 9-1-1, Emergency Management, and the media. We do not have all the groups we want, but the current partners represent over 40,000 individual agencies and over 400,000 individuals in the emergency response profession. This is a solid foundation and the initiative continues to add partners. We hope you will strongly encourage DHS to fund this project, providing the ability for emergency response organizations of all types to share information amongst themselves and with the public during emergencies. It serves a variety of homeland security purposes.

The NEARS partners seek to attract involvement from all the leadership groups of these professions and from additional segments such as hospitals, transportation, state and local government and keep it growing.

Once NEARS is deployed, this is how this same scenario would play out.



9-1-1 receives the call and enters incident information into its system and requests that the message be sent to all appropriate agencies in the area. The 9-1-1 system then queries EPAD and using an EDXL Distribution Element sends a CAP message to all agency addresses that are returned.

The message is entered once – into the 9-1-1 system and disseminated electronically to all appropriate agencies as well as to the public alerting systems if the EOC elected to do so. The EOC can then schedule public dissemination once the message is reviewed and approved. The whole process is quick and efficient and the public is notified in time for them to react – no phone calls, no multiple entries, no errors.

When a user or other entity initiates a login or message, EPAD Identity Rights Management authenticates it and indicates what privileges are allowed.

If the user and/or system or device is allowed to create and send an incident message, the message can be created and EPAD can be queried for instructions



as to where to send it. The system or device can query EPAD directly or it can use a message broker service that will query EPAD and disseminate it for the entity. In either case, a web service query is sent indicating the type and time of the incident, where it occurred and, if applicable, what types of agencies should be notified. EPAD will search the directory to determine the entities that requested this type of information. It will send back a list of all entities indicating how the entity wishes to be contacted. It can be a system to system transmission, an automated phone call to certain individuals and/or other types of contact.

The system or message broker then sends the message to all entities simultaneously. If the user and/or entity is authorized to do so, it can review the list first and make changes to the distribution list before dissemination.

## **PUBLIC BROADCASTING**

A special word about public broadcasting is in order. I am delighted that they are represented at this hearing.

Public broadcasting can play a critical role in emergency preparedness, emergency communications and public warning. As John Lawson of APTS has testified, there have been successful experiments in data casting using digital capacity of stations and the PBS interconnection. We commend APTS and DHS for those forward thinking trials. We encourage the proliferation of this capability. But to limit public broadcasting to this role would be to give up some critical strengths it can offer. In addition to whatever data casting capability public broadcasting might have in the future, we should take full advantage of three unique attributes it can offer us today:

- Network capacity provider: PBS has a national backbone digital satellite and terrestrial network reaching every state and significant community in the country.
- Local television and radio signals reach out from that core network to cover over 99% of Americans.<sup>2</sup>
- Public broadcasting is made up of trusted and respected local and national public service organizations that could be a “Switzerland” in bringing together all the relevant parties.

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<sup>2</sup> Beyond pure technical contributions, we just recognizing that public broadcasting is made up of respected and “neutral” local station organizations directed by community leaders; a similar national organization which can play a convening role in the key public and private partnerships needed. They also have highly experienced and successful local and national programming capabilities which can be used to build training and other content for alerts

PBS is a NEARS partner. We think PBS could be a national leader in convening the coalition partners to identify the connectivity and interconnection requirements locally, regionally and nationally of the various agencies and organizations. Second, PBS would work in collaboration with the initiative partners to incorporate agreed to standards, routing and authorization applications, data messaging formats and any necessary trial/pilot demonstrations. The NEARS Initiative is exactly such a non-profit public service coalition project.

## **Conclusion**

The detailed NEARS proposal is available at [www.nears.us](http://www.nears.us). It is based on the important investment by the Justice Department in EPAD, and the DHS investment in common emergency messaging standards. The NEARS proposal provides for national demonstrations, building production quality EPAD routing and rights management tools, and detailed beta field testing of them. Because it serves the missions of multiple government agencies, it is the priority of none of them. Because it serves multiple missions, it can and should be funded from multiple “pockets” of already appropriated funds. We believe it can move to a self-sustaining basis in two years, with federal funding of less than \$20 million.

Thanks to the leadership of my colleagues from the other NEARS partner organizations we have created a unique, multi-professional effort. We have overcome the turf concerns. We need your support to deliver on this promise for the American public.