

# The EPAD Report

## Emergency Provider Access Directory News

A COMCARE Publication

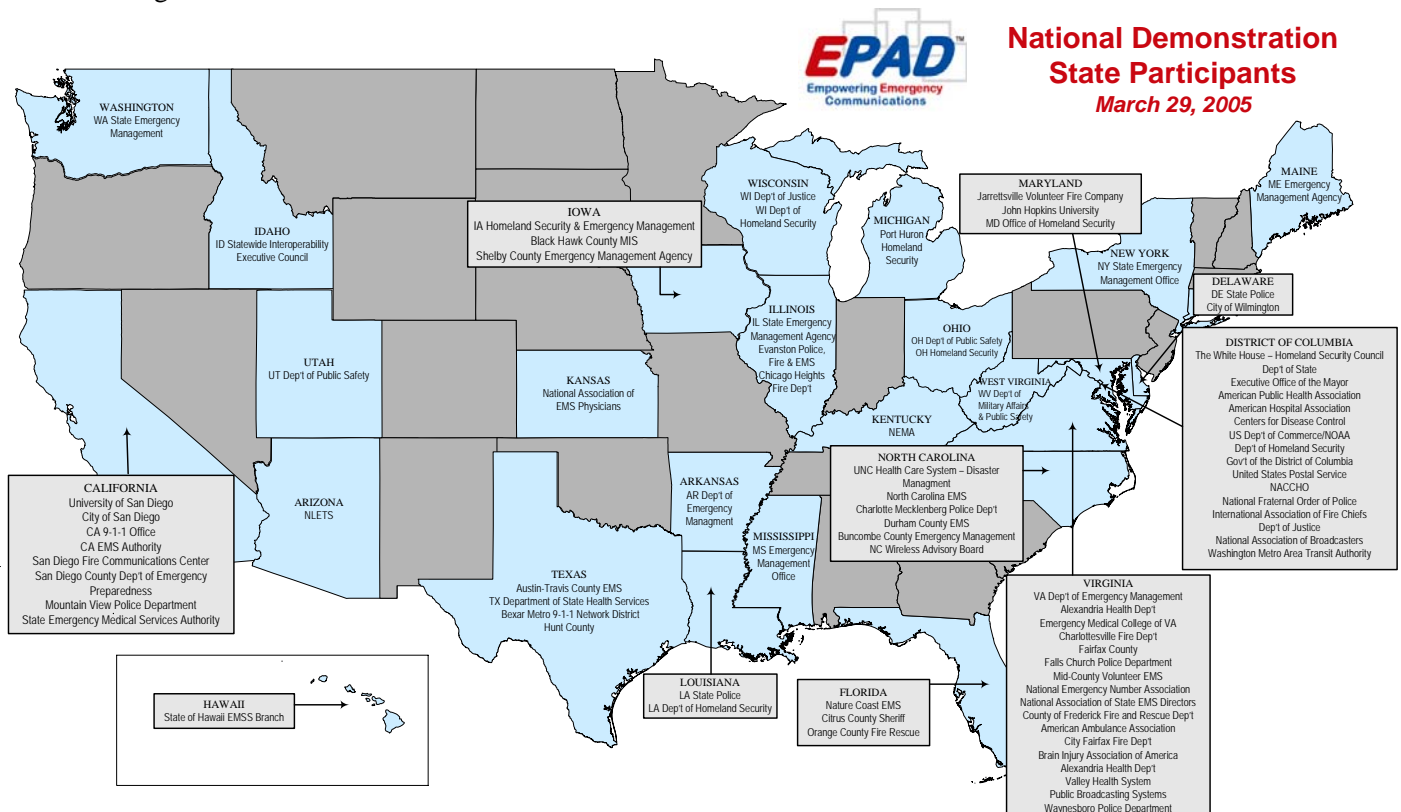
First Quarter 2005

## Over 85 Emergency Organizations Participate in Data Interoperability Demonstration

On March 29<sup>th</sup> COMCARE held a national demonstration of the Emergency Provider Access Directory (EPAD) with participants from more than 85 local, state and federal organizations in over 25 states and Ontario, Canada. The demonstration was hosted by the SAIC Public Safety Integration Center (PSIC) in McLean, VA (see insert page 2) and was viewed online by over a hundred participants from Maine to Hawaii. The goal of the event was to demonstrate that a shared directory of emergency response agencies, along with the use of common data

standards and standardized system interfaces, enables efficient emergency messaging among *all* emergency response entities. The demonstration allowed a group of government and emergency response agencies from many different jurisdictions to effectively generate, receive, and update emergency messages in real-time using the different communications and information systems these agencies use on a daily basis.

Richard Taylor, COMCARE Chairman and Executive Director of the North Carolina



**“There are more than 100,000 independent US emergency agencies. Today, the vast majority cannot share data. EPAD enables any authorized official to send data messages to emergency responders in affected areas, whether it involves a bio-terrorism event or a car crash.”**

**Deputy Chief  
Barry Luke  
Orange County  
Florida Fire  
Rescue**

Wireless 9-1-1 Advisory Board, started by addressing COMCARE’s vision of an integrated emergency communications network. Specifically, he highlighted the five data interoperability building blocks that have been identified by COMCARE members, the FCC’s NRIC process, and others: transport, data standards, facilitation services, agency applications, and policies/protocols (Figure 1).

The demonstration focused on the value of a key facilitation service: a shared directory of emergency response agencies (EPAD). Using common data standards, agency applications were able to share information in real time over the public internet and a private law enforcement network. Taylor noted that a directory by itself is important, but only one piece of interoperability. For multiple agencies to be able to access EPAD and share data among disparate systems, common standards and published system interfaces are critical. He commended the work that the Global Justice

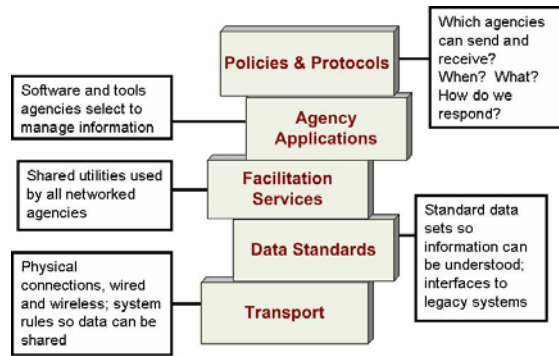


Figure 1: Interoperability Building Blocks

Initiative and the Department of Homeland Security to facilitate the development of national emergency data standards such as the Global Justice XML Data Model, the Emergency Data Exchange Language (EDXL), and the National Information Exchange Model (NIEM) by DHS and DOJ.

Barry Luke, Deputy Fire Chief for Orange County Florida Fire Rescue, said, “End-to-end data interoperability within the emergency response community is a critical goal. When fully deployed, it has the potential to save thousands of lives each year, substantially reduce the severity and length of injuries, assist the emergency and related professions in their daily activities, and enhance homeland security. The shared directory of EPAD is a critical part of that new vision.”

## SAIC PSIC Hosts EPAD Event

SAIC’s Public Safety Integration Center (PSIC) was the host for the National EPAD demonstration. Located in McLean, Virginia, the PSIC focuses on creating interoperable and collaborative systems and procedures to support effective homeland security. With the PSIC, visitors see first-hand how integrated systems can be quickly pulled together from a wide variety of legacy hardware and software and newer GOTS and COTS products.

The center showcases a number of SAIC systems for first responders as well as those from a variety of vendors. Working with these technology vendors, SAIC has identified and is building solutions in six major areas. These solution sets are designed to enhance collaboration, access control, intelligence and surveillance, vulnerability and consequence assessment, interoperable incident management, and public safety communications. COMCARE’s Emergency Provider Access Directory (EPAD) is one of the products showcased at the center.

The PSIC is located at: 8301 Greensboro Drive, Mail Stop E-9-4, McLean, VA 22102

# Four Emergency Scenarios Showcase EPAD's Versatility

The National EPAD demonstration focused on four specific scenarios to demonstrate the power and versatility of EPAD. By enabling the distribution of emergency messages using software currently installed and in use by emergency agencies, EPAD showed how emergency messaging could be achieved quickly and efficiently for all kinds emergency events – a one architecture, all-hazards approach. Using E Team, the demonstration also showed the basic search function of EPAD whereby a user can identify all or a subset of agencies and their emergency contact information in a given geographic area.

## *Terrorism Alert*

In the first scenario a mock Virginia Office of Commonwealth Preparedness had obtained credible information from intelligence sources about a terrorism threat in the state and needed to send an

**“The NCIC/VCIN system was very advanced when I entered law enforcement 24 years ago, but it isn’t the leader today that it was. I am glad to see movement towards modernization occurring.”**

**Deputy Chief  
William R. Maki  
Waynesboro (Va)  
Police Department**

emergency message to all appropriate entities. Using a software application called DisasterLAN by Buffalo Computer Graphics, a terrorism alert was generated for the entire state of Virginia. DisasterLAN queried EPAD to determine who was registered in EPAD to receive terrorism alerts in Virginia and to which computer addresses to send the data. Scores of emergency response agencies, both public and private, were registered in EPAD to receive the message. The Virginia Office of Commonwealth Preparedness determined that they wanted to send the alert to all possible agency types and decided not to limit the message

distribution. However, if they wanted to limit the message to certain emergency response functions (e.g. only police and emergency management) that could have been done as well.

Two of the agencies that were registered in EPAD to receive the alert were the Falls Church and Waynesboro Police Departments, each of whom had registered in EPAD to receive messages over the National Law Enforcement Telecommunications System (NLETS). Both Departments registered a URL provided to them by NLETS with a unique agency identifier called an ORI. This enabled DisasterLAN, an Emergency Operations Center (EOC) software application, to post a message to the



*20 emergency technology providers participated in the demonstration*

provided URL which was received by Advanced Technology Systems, an NLETS partner, who sent the message directly to the Falls Church and Waynesboro Police Departments over the NLETS network. This was an important element of the demonstration as it highlighted the fact that a directory is useful for facilitating data sharing among agency applications *and* the networks they are on, such as NLETS, a

Public Health Alert Network, and other similar networks.

**“It is very important that a system is in place that allows rural agencies to register to receive appropriate emergency information. It is also critical that rural agencies be equipped with broadband internet connections so they can share information in real time.”**

**Cindi deCapiteau  
Chief of the  
MidCounty  
Volunteer Rescue  
Squad,  
Northumberland  
County, VA**

Other applications that successfully received this message were Blue292, Context Connect and EM Aware by Long Branch Systems. Data sharing between DisasterLAN and Blue292 highlighted the ability for EOC to EOC communications which is an important issue to many in the emergency management community. The Mid County Rescue squad (Northumberland, Va) received the terrorism alert on Context Connect, a messaging application designed for the volunteer community

EM Aware, an emergency management application designed for use by private sector entities, represented a Virginia utilities company in the demonstration. As is often pointed out by the Department of Homeland Security, over 75% of our country's critical infrastructure is owned by the private sector and it is critical that they are notified of potential incidents along with

traditional emergency response agencies.

### *Public Health Hazard*

During the second scenario, a mock Los Angeles Public Health Department confirmed three separate anthrax cases in mail sorting centers in Los Angeles and Long Beach and needed to distribute an alert to California emergency response agencies. Using the same method described in the previous scenario, a message is generated by EPAD Connect and sent to all agencies registered to receive public health hazard notifications in California. EPAD Connect is a basic messaging application that is provided to agencies as soon as they are

registered and approved in EPAD. As was discussed, this is meant as a temporary solution for agencies that do not currently have an emergency messaging tool or whose current application is unable to perform targeted geospatial messaging. Using EPAD Connect, the LA Public Health Department was able to initiate a message indicating the event type and the affected area for the message.

In previous public health incidents, such as the SARS outbreak in Toronto, a major problem was the inability for public health departments to provide information to agencies outside of public health. During the demonstration several agencies received this alert on applications including EM System (hospital information sharing application), RAMSAFE (incident command software), MyStateUSA and Disasterhelp.gov. It is important to note that MyStateUSA and Disasterhelp.gov were both able to receive the message through a connection to Disaster Management Interoperability Services (DMIS). Using DMIS, emergency response agencies can



*Defining notification areas in EPAD*

post messages to DMIS and other authorized agencies can poll DMIS for those messages and display them in their own systems. When LA County Public Health generated a message using EPAD Connect, one of the URL's that EPAD returned was for DMIS. EPAD Connect then posted the message to

DMIS which enabled MyStateUSA and Disasterhelp.gov to poll DMIS to receive the message.

### ***Chemical Spill***

The next scenario involved a train collision releasing 11,500 gallons of chlorine in Prince George's County, Maryland in which a mock Maryland Emergency Management Agency (MEMA) needed to get an alert out to emergency response agencies in PG County. This was not an alert covering an affected area, but instead an incident at a specific location. For this event, EPAD Connect queried EPAD to determine which agencies were registered to receive a chemical spill notification at the intersection of Rt. 301 and Rt. 50 and distributed the message to appropriate agencies. The message was received by multiple agency applications including the Emergency Management Mapping Application (EMMA), Intergraph Computer Aided Dispatch (CAD) system, WebEOC, Roaming Messenger and SendWordNow.



*Train collision releasing chlorine gas*

“Our members have continually stressed the importance of being able to receive messages from multiple sources on the communications and information systems they use on a daily basis,” said COMCARE Director David Aylward. “We are delighted that data is being shared among so many different types of applications in this demonstration, including a statewide GIS system, a law enforcement network, web-based EOC applications, individual alert notification tools and a CAD system.” Aylward also pointed out that agencies can

register in EPAD to have data sent to multiple applications. For example, an agency might register to have some incidents displayed on the statewide GIS system (EMMA) and others directly to an EOC software application like WebEOC.

Many emergency response and government agencies have systems that are capable of notifying the public about emergency events. They also may have pre-defined lists of emergency responders in a community that need to know about certain incidents, such as a hazmat spill. An important element of this demonstration was to show that agencies that have such systems in place can receive messages and then automatically initiate alerts to appropriate response teams. Messages that were received during the demonstration by MyStateUSA, Roaming Messenger and SendWordNow initiated phone calls and text messages to multiple individuals on their cell phones, PDAs, and desktops. These messages are not just simple notifications; they are actionable messages that extend the functionality of their existing solutions out into the mobile environment.

### ***Radiation Sensor***

The last scenario involved a radiation sensor being triggered in the New York subway system at the Grand Central Station/42<sup>nd</sup> Street stop. A mock New York City Metropolitan Transit Authority (NYCMTA) needed to send an alert out to appropriate emergency response entities indicating that a sensor had been triggered and all trains inbound to New York had been stopped. The message was sent using EPAD Connect and received by agencies using applications from SDI, Fire Monitoring Technologies International, and DisasterLAN. The key point made during this portion of the demonstration was that information that needs to be shared with emergency response agencies often originates from a private sector source, such as a CBRN sensor.

In addition to sensor data, companies like OnStar and its competitors often have critical crash data, including location and

details about the crash, that need to be provided to emergency response agencies. Other companies are monitoring the exact location of commercial trucks or trains carrying hazardous materials and know the exact location and vehicle contents when an emergency event occurs. There are also companies like FMTI and DICE that monitor alarms and may have valuable information that needs to be shared with emergency response agencies. EPAD is designed to provide authorized private sector entities the ability to query the directory for information on who needs to be notified during emergency events. Deputy Fire Chief Barry Luke said: "The Orange County Fire Rescue Department is very interested in being able to receive crash data from OnStar and other similar sources directly into our CAD system. I am pleased to see that EPAD will enable this kind of information flow. Having automatic crash notification (ACN) data as soon as a crash occurs, or the amount and exact contents of a train carrying hazmat materials, will allow our dispatchers to make timely and educated decisions about what kind of response to send which will save lives."

**Demonstration Summary**

Summarizing the event, Richard Taylor said, "The organizations and companies that participated in the demonstration have shown their leadership by using innovative methods for dealing with the challenges posed by data sharing. I commend the state and local agencies from Maine to Hawaii who participated and are helping to shape this solution. Similarly, we need to give credit to the Department of Homeland Security that facilitated the development of the data standards we used today." COMCARE Director David Aylward added that since EPAD is a rules-based registry, it is important that representatives meet to determine what the rules should be and how they should be established.

**Technology Company Participants**

- DICE Corporation - [www.dicecorp.com](http://www.dicecorp.com); partner and host for EPAD prototype
- Appian - [www.appiancorp.com](http://www.appiancorp.com)
- Advanced Technology Solutions Inc. (ATS Inc.) (EPAD Connect GIS) - [www.atsincorp.com](http://www.atsincorp.com)
- Advanced Technology Systems (ATS) - [www.atsva.com](http://www.atsva.com)
- Blue292 - [www.blue292.com](http://www.blue292.com)
- Buffalo Computer Graphics (BCG) - [www.buffalocomputergraphics.com](http://www.buffalocomputergraphics.com)
- Context Connect (CCI) - [www.contextconnect.com](http://www.contextconnect.com)
- ESi (WebEOC) - [www.esi911.com](http://www.esi911.com)
- EMSystem - [www.emsystem.com](http://www.emsystem.com)
- E Team - [www.eteam.com](http://www.eteam.com)
- Fire Monitoring Technologies International Inc. - [www.openaccess.ca](http://www.openaccess.ca)
- Intergraph - [www.intergraph.com](http://www.intergraph.com)
- Long Branch Systems - [www.longbranchsystems.com](http://www.longbranchsystems.com)
- Moxi Media Inc. (EPAD Connect) - [www.moximedia.com](http://www.moximedia.com)
- MyStateUSA.com - [www.mystateusa.com](http://www.mystateusa.com)
- Proxicom Inc. (EPAD Connect) - [www.proxicom.com](http://www.proxicom.com)
- RAMSAFE Technologies, LLC - [www.ramsafe.com](http://www.ramsafe.com)
- Roaming Messenger - [www.roamingmessenger.com](http://www.roamingmessenger.com)
- SendWordNow (SWN Communications) - [www.sendwordnow.com](http://www.sendwordnow.com)
- Systems Documentation, Inc. (SDI) - [www.sdicorp.com](http://www.sdicorp.com)
- TopoZone (EPAD Connect) - [www.topozone.com](http://www.topozone.com)
- Towson University (EMMA) - <http://cgis.towson.edu>
- Xybernaut - [www.xybernaut.com](http://www.xybernaut.com)

Demonstration participants were asked to participate in these policy and protocol discussions as well as in the design review sessions for the next version of EPAD. In addition, participants were asked to become involved in the next phase of EPAD -- the National Emergency Alerting and Response Systems (NEARS) Initiative, which was publicly launched on March 30, 2005.

## Participating Organizations

Alexandria, VA Health Department	National Capitol Region Council of Governments Bioterrorism Committee
American Ambulance Association	National Emergency Management Association (NEMA)
American Hospital Association	National Fraternal Order of Police
American Public Health Association	National Law Enforcement Telecommunications System (NLETS)
Arkansas Department of Emergency Management	Nature Coast, FL EMS
Austin-Travis County, TX EMS	North Carolina 9-1-1 Wireless Advisory Board
Bexar, TX Metro 9-1-1 Network District	North Carolina EMS
Black Hawk, IA County	New York State Emergency Management Office
Brain Injury Association of America	Northumberland Mid-County, VA Volunteer EMS
Buncombe County, NC Emergency Management Agency	Northwest, IL Central Dispatch
California 9-1-1 Office	Maryland Office of Homeland Security
Centers for Disease Control (CDC)	Ohio Department of Public Safety
Charlotte-Mecklenburg, NC Police Department	Ohio Homeland Security
Charlottesville, VA Fire Department	Orange County Florida Fire Rescue
Chicago Heights, IL Fire Department	Peninsula, VA EMS Council
Citrus County, FL Sheriff	Port Huron, MI Homeland Security
City of Fairfax, VA Fire Department	Public Broadcasting Service (PBS)
City of San Diego	San Diego County Emergency Preparedness
City of Wilmington, Delaware	San Diego Fire Communications Center
County of Frederick, VA Fire and Rescue Department	Shelby County, IA Emergency Management Agency
DC Office of the Chief Technology Officer	State of California Emergency Medical Services Authority
Delaware State Police	State of Hawaii EMSS Branch
Department of Homeland Security	Tennessee Emergency Communications Center
DHS--NIMS Integration Center--Standards and Research Board	Texas Department of State Health Services
Durham County, NC EMS	The White House Homeland Security Council
Emergency Medicine Medical College of Virginia	U.S Department of Commerce/NOAA
Evanston, IL Police, Fire & EMS	U.S. Department of State
Executive Office of the Mayor, DC	UNC Health Care System, Disaster Management
Fairfax County Virginia	United States Postal Service
Falls Church, VA Police	University of San Diego
Government of the District of Columbia	US Department of Justice, Bureau of Justice Assistance
Hunt County, Texas	Utah Department of Public Safety
Idaho Statewide Interoperability Executive Council	Valley Health System, VA
Illinois State Emergency Operations Center	Virginia Department of Emergency Management
International Association of Fire Chiefs	Washington Metropolitan Area Transit Authority (WMATA)
Iowa Homeland Security and Emergency Management	Washington State Emergency Management
Jarrettsville, MD Volunteer Fire Company	Waynesboro, VA Police Department
Johns Hopkins University	West Virginia Department of Military Affairs and Public Safety
Louisiana State Police	Wisconsin Department of Justice
Maine Emergency Management Agency	Wisconsin Department of Health and Family Services
Mississippi Emergency Management Agency	Wisconsin's Justice Information Sharing Program
National Association of State EMS Directors	

## About COMCARE

COMCARE is a national non-profit alliance dedicated to **advancing emergency response**. We promote the adoption of modern, interoperable emergency systems and the development of new procedures, training, and tools to maximize their value for emergency responders. We encourage cooperation across professional, jurisdictional and geographic lines, seeking to improve effectiveness through solutions that integrate emergency response professions, government, the public, and private industry. COMCARE's 100+ organizational members represent the wide diversity of the emergency response community.

## About EPAD

EPAD is a non-proprietary and non-profit resource with initial organizational development funded in part through the U.S. Department of Justice. It enables real-time automatic routing of messages to and from authorized agencies based on their geographic and resource-specific areas of responsibility. Approved agencies will register their emergency contact information (particularly their computer IP addresses) and indicate what information they want to receive and the area for which they want it. This simple act of EPAD registration enables the geographic targeting and cooperative exchange of vital information about a mass emergency or a single event to all appropriate authorities quickly and securely, using a range of electronic tools of the sender's choosing. It is the keystone to establishing true data interoperability. A prototype version of EPAD has been designed and hosted by DICE Corporation and is available for use today. The next version of EPAD is currently in a define and design phase.

### Information Resources

Information on COMCARE is available at <http://www.comcare.org> or contact [info@comcare.org](mailto:info@comcare.org)

Information on NEARS is available at <http://www.comcare.org/nears/index.html> or contact [NEARS@comcare.org](mailto:NEARS@comcare.org).

Information on EPAD is available at <http://www.comcare.org/projects/epad.html> or contact [epad@comcare.org](mailto:epad@comcare.org).