



Regional Logistics Program

New York • New Jersey • Connecticut • Pennsylvania

EDXL-RM Interoperability Simulation

Finding a better way to use technology in disaster logistics

PROJECT GOAL

Define a path forward to seamlessly connect local, state, and federal technology systems and automate how information is received, shared and tracked as resources are requested and deployed during disaster

PROBLEM

After a catastrophe, relief personnel, supplies and equipment could be delayed and operations could fail if local, state and federal governments use different systems that don't talk to each other.

Sharing dozens if not hundreds of resource requests via phone, fax, and email during a catastrophe can cause unnecessary delays and mistakes.

PROJECT RESEARCH

The Regional Logistics Program's findings included an 1) examination of technology systems used in EOC's across the Region, 2) an assessment of existing messaging standards, and 3) the required capabilities and potential of middleware solutions. When taken together, these components can allow disparate incident management systems to communicate electronically and seamlessly.

All of these findings are presented in the *Regional Data Interoperability & Resource Management Assessment Paper* which can be found at www.emergencylogistics.org.

INTEROPERABILITY SIMULATION:

On Thursday, March 20, 2014 the NY-NJ-CT-PA Regional Logistics Program (RLP) held a simulation to test communication between regional incident management systems using the Emergency Data Exchange Language-Resource Messaging (EDXL-RM) standard.

The purpose of the interoperability simulation was to prototype an EDXL-RM test bed and to perform a proof-of-concept exercise demonstrating ability to communicate via EDXL-RM messaging.

Hosted by the New York City Office of Emergency Management, planning partners from across the Region joined the interoperability discussion which included a demonstration that used the EDXL-RM standard to successfully pass resource request related data between two of the IMS systems used in the region, Disaster LAN and E-Team.

SIMULATION FINDINGS:

1. DLAN and E*Team can exchange EDXL-RM messages despite communication differences via a message broker.
2. Based on above, the EDXL-RM messaging standard can be used as a common messaging standard to connect local, state, and federal technology systems and automate how information is received and shared.
3. Further work would need to be done to map resource request related data between jurisdictions interested in establishing data interoperability.
4. The message broker can provide a valuable centralized repository of resource message exchanges

RECOMMENDATIONS:

1. Adopt the messaging standard known as Emergency Data Exchange Language - Resource Messaging (EDXL-RM) as a common language that can be used by the technology systems of all stakeholders of the region for managing resource requests and deployments.
2. Require vendors of the technology systems deployed throughout the region to become 100% compliant with the EDXL-RM standard.
3. Establish operational connections to one of two free and federally-developed messaging brokers as secure pathways to exchange information using the EDXL-RM standard: *IPAWS-OPEN* or *UICDS*.

NEXT STEPS

Convene a steering committee representative of regional stakeholders to establish the scope and priorities of regional resource management interoperability needs. We recommend this steering committee perform the following steps to accomplish the goal of interoperability:

1. Solicit funding for the implementation of regional resource messaging interoperability.
2. Make a decision on a regional resource messaging aggregation system.
3. Establish a "first step" set of message exchanges that are top-priority for immediate implementation.
4. Develop a "light weight" alternative messaging tool, such as a web or mobile app, that provides an automated resource messaging interface to the aggregation system for stakeholders in the region that do not have an ICS committed to regional interoperability.
5. Develop a message "listener" that captures message traffic that flows through the aggregation system to provide graphical representation of RM messaging traffic.
6. Additional EDXL-RM message types should be added to the suite of interoperable capabilities based on regional priorities over time.

If you are interested in more information on this test simulation or would like to discuss this interoperability initiative in further detail, please contact Jim Penta at jpenta@regionalcatplanning.org.