



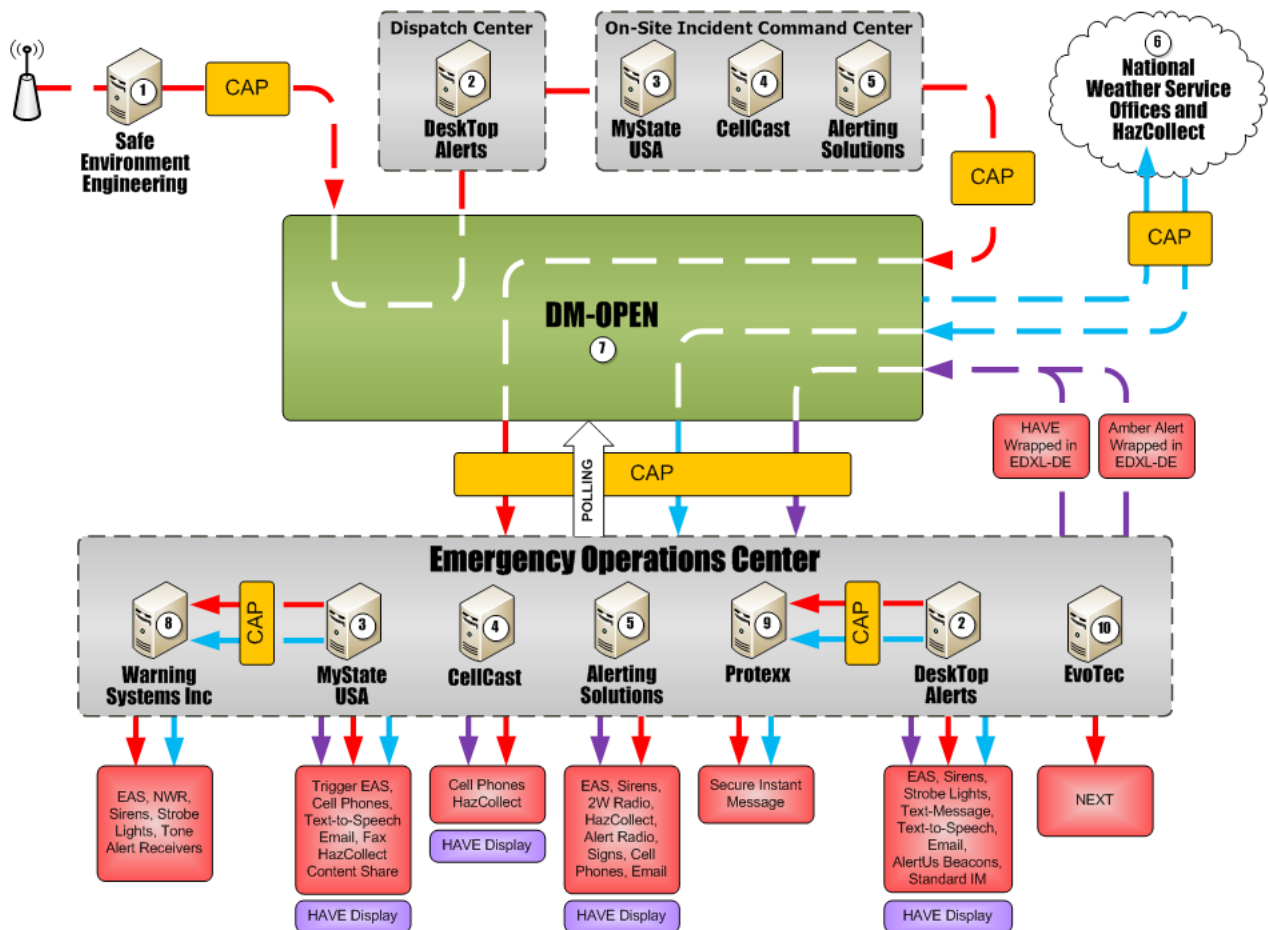
Emergency Standards Interoperability Demo

EDXL OASIS Standards--CAP, DE, HAVE

Ten vendors and government agencies demonstrate interoperability of the OASIS Emergency Data Exchange Language (EDXL) suite of standards including the Common Alerting Protocol (CAP), Distribution Element (DE), and Hospital Availability Exchange (HAVE) standards. Simulating an incident defined by DHS FEMA and the National Weather Service (NWS), the demo shows how authorities, responders, broadcasters, and other services providers can use EDXL to enact a concerted, coordinated emergency response.

“EDXL in Action”
Tuesday 10:40-11:00 AM
EMEX Expo Theater
Rear of exhibit hall

Interoperability Utilizing OASIS EDXL Family of Standards and HazCollect



EDXL OASIS Standards Interop Scenario



Ammonia leaks from the HVAC roof-top system of the Orange County Convention Center (OCCC).

► **Safe Environment Engineering (SEE)**'s fixed sensor generates a CAP message indicating a severe incident. Notification to first responders is automatically generated and sent to OCCC Emergency Ops Center and Orange County 911 Dispatch.

The leak continues, creating an ammonia cloud that threatens convention attendees and the surrounding areas.

► **Desktop Alert, MyStateUSA, CellCast, Alerting Solutions, Evolution Technologies**, and the **National Weather Service (NWS)** receive the CAP message.

► **NWS** issues a HazCollect Hazardous Materials Warning.



Orange County 911 dispatches a Hazmat team, police, and fire fighters.

► **SEE** transmits ammonia readings from the Hazmat team's hand-held sensors via CAP. Messages are received by the Incident Commander (IC) and research team.



The IC determines the ammonia levels pose a high risk and issues an EAS notice.

► Vendors transmit CAP EAS alerts.

► **Alerting Solutions, CellCast, MyStateUSA** and NWS transmit a Shelter-in-Place HazCollect message.

► **Warning Systems, Inc. (WSI)** receives the CAP alert and sets off sirens, strobe lights, and text-to-speech devices, as well as broadcasters' EAS ENDEC devices.



The IC decides to evaluate a half-mile radius around the Hot Area.

The IC calls for additional support from police (traffic control), fire (F.A.S.T Team), and Public Works (cordon off area). ALS (Advanced Life Support) units and utility companies are placed on stand-by.



EOC coordinates shelter logistics with the Red Cross. The local emergency command center, in coordination with the OCCC Emergency Ops Center issues an EAS that is sent via CAP 1.1.

► **MyStateUSA** generates the CAP EAS message and broadcasts it to **Warning Systems, Inc.** which sets off sirens, strobe lights and text-to-speech devices.

► **CellCast** receives and forwards the CAP alert to cell phones.

► **Evolution Technologies** receives and displays the CAP alert within NEXT.

► **Desktop Alert** consumes the CAP EAS message and distributes it to secure instant message session (CAP Over XMPP).

► **Alerting Solutions** receives the CAP alert and sets off sirens, electronic signs, telephone, text messages, emails, desktop pop-ups and text-to-speech devices.

► **NWS** issues HazCollect Shelter-in-Place warning.



Several of the firefighters suffer inhalation injuries. Emergency Medical

Technicians use the EDXL Hospital Availability Exchange (HAVE) standard wrapped in the EDXL-DE to determine the best medical facility to transport the injured.

IC dispatches additional resources to replace injured responders.

► **Evolution Technologies** generates an EDXL-HAVE form wrapped in the DE.

► All vendors receive and display the HAVE form.



NWS issues a tornado warning via CAP. **DM OPEN** generates the alert.

► **MyStateUSA** receives the CAP message and distributes to cell phones.

► **Alerting Solutions**, **CellCast**, and **Evolution Technologies** receive the CAP message.

► **Desktop Alert** consumes the CAP message and distributes it to secure instant messenger (CAP Over XMPP).

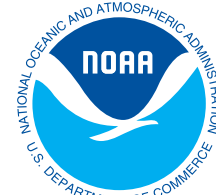
► **MyStateUSA** issues EAS alert to **Warning Systems, Inc.**

Alert target area for tornado is displayed via geographical information system (GIS); message is sent via CAP with polygon information.

Interop Participants



FEMA



CellCastTechnologies



OASIS EDXL: Open Standards for Emergency Management

Information exchange standards are critical for coordinating emergency response – particularly when more than one profession or governmental jurisdiction is involved. OASIS EDXL open standards make it possible for information to be shared across local, state, tribal, national and non-governmental organizations and among the wide variety of emergency response and management services providers.

■ CAP (ITU X.1303)

The Common Alerting Protocol allows consistent warning messages to be disseminated simultaneously over many different systems, increasing warning effectiveness while simplifying the notification task.

CAP addresses the challenges posed by the diversity of independently developed warning systems. It serves as a universal adaptor for alert messages, defining one message format with features essential for the broad range of alert systems and sensor technologies.

The CAP 1.1 OASIS Standard is also published as International Telecommunications Union (ITU-T) Recommendation X.1303.

■ EDXL-DE

The EDXL Distribution Element describes a standard message distribution framework for data sharing among emergency information systems. EDXL-DE facilitates the routing of any properly formatted XML emergency message to recipients. The DE may be thought

of as a "container" providing information to route "payload" message sets (such as Alerts or Resource Messages), by including key data such as distribution type, geography, incident, and sender/recipient IDs.

■ EDXL-RM

EDXL Resource Messaging describes a suite of standard messages for sharing data among information systems that coordinate requests for emergency equipment, supplies, and people.

EDXL-RM specifies a document format that allows the communication of information about resources, such as requests for obtaining resources, responses to these requests by potential suppliers, and information on the status and location of resources.

■ EDXL-HAVE

The EDXL Hospital Availability Exchange standard specifies an XML document format that allows a hospital's status, services, and resources (including bed capacity, emergency department status, and available service coverage) to be communicated.

HAVE allows emergency dispatchers and managers to make sound logistics decisions on where to route victims, based on accurate hospital bed availability, status, services, and capacity data. HAVE provides an open format that will enable easier integration at a lower cost.

OASIS EDXL standards are developed through an open process-- one that provides for fairness, transparency, and full participation from the entire community.

Become a member of OASIS and ensure your voice is heard as EDXL standards continue to be advanced.

Government agencies, vendors, and implementers are all invited to participate.

OASIS 

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