Achieving Data Interoperability with Emergency Data eXchange Language (EDXSL) Messaging Standards

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Disaster Management eGov Initiative

Background

• Presidential eGovernment Initiative
  DHS/ Science and Technology Directorate
• Improving national capability through information availability
• Four components:
  – Portal (disasterhelp.gov),
  – DMIS incident management tools,
  – Interoperability backbone (OPEN) and
  – Data messaging standards (EDXL)
The Problem

- Organizations & Systems cannot easily share incident information
  - 100,000 emergency response related agencies
  - Multiple vendor products
  - Some have no data standards
  - Some have their own (internal) data standards

- Cannot change everyone’s system/data to “speak the same electronic language”
The Need

- **Seamlessly** share incident related information
- Information displayed in format user is comfortable with
- Leverage existing standardization efforts
- *Messaging* versus *data* standards
- Requirements need to come from end users
The Solution: A Public/Private Partnership for EDXL Messaging Standards

• What is EDXL?
  – A set of technical rules governing how incident related information should be packaged for exchange

• How is it implemented?
  – Software vendors change their products to be able to receive and send information using these standards

• What is the value?
  – Any compliant software products can exchange information and display and work with it in their own native way
Development and adoption of EDXL messaging standards will allow people to seamlessly share and use information about incidents.
EDXL Scope

• Business Process-Driven
  – Emergency Response & Management
    • Incidents, Disasters, every day events
  – Accomplish specific mission tasks (e.g. “Request Resource”)

• Customers
  – The emergency response communities at the Local, State, Tribal, and Federal levels
EDXL Focus

• Ability to exchange/share information
  – Bridging gap between systems and orgs

• Public Messaging STANDARDS
  – “Interface spec” between systems and humans regardless of data differences

• *Facilitating*, not producing…

• Open Architecture – adopt & implement

• Low cost approach
  – Build once - use many
  – Leverage existing standards efforts
EDXL Value

- Practitioner-driven (end users)
- Bridge gap between different software products
  - Information sharing between diverse and proprietary systems
- Focused on specific mission tasks and processes
  - Message exchanges in a clear functional context
- Standard messages streamline the process
  - Enable efficient preparedness and response
  - Minimize the loss of life and property
- One-to-many communications without knowing recipients
- Reduce voice communication redundancies
  - E.g. Multiple resource requests / dispatches due to unintended cross-over of communication
Current Status

• Common Alerting Protocol (CAP) adopted, demonstrated and Implemented
• Distribution Element (DE)
  – OASIS Public Comment completed
  – Finalizing for vote as a public standard
• Resource Messaging (RM)
  – Adopted by OASIS sub-committee and in-progress
  – Draft incorporated into NIEM 0.2 pilot
  – NIEM 0.2 draft supporting pilot implementation of National Capital Region Data Exchange Hub
• Hospital Availability (HAVE)
  – Submitted to OASIS
What does this mean to you?

- **Now**: Alerting messages can be sent across software and hardware systems
- **Coming soon**: enhanced ability to send any content
- **Later this year**: can exchange resource messages ie requests, etc and information on hospital bed availability
- **More standards to be developed this year**
Groups Involved To Date

- Emergency management
- Fire
- 9-1-1, dispatch
- Transportation
- EMS/emergency medicine
- Public health
- Federal emergency agencies
- Supporting vendor communities
What Can You Do?

• Support the effort
  – Spread the word
  – Demand participation by your vendors
  – Start using the capability in daily work

• Opportunity for Involvement
  – Provide input on Priorities
  – Standards Working Group
  – Pilots and Demos
Questions?

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