NIMS STEP and Data Messaging Standards

NIMS STEP Background

Established in 2004 by a Homeland Security Presidential Directive, the National Incident Management System (NIMS) provides a consistent, nationwide template for local, tribal, and state governments and emergency responders to effectively manage emergencies and planned events. The NIMS Supporting Technology Evaluation Program (NIMS STEP) evaluates products, devices, systems, and data management tools—including off-the-shelf hardware and software—that support emergency managers and responders in decision making prior to, and during, emergency operations. These independent third party evaluations provide the emergency response community with objective reports to help agencies assess the products, devices, systems, and data management tools they may consider for procurement. NIMS STEP is managed by the Federal Emergency Management Agency's Incident Management Systems Integration (IMSI) Division within the Department of Homeland Security (DHS).

Data Messaging Standards Compliance

The Command, Control and Interoperability Division (CID) within the Science & Technology Directorate of DHS is partnering with IMSI to evaluate the adherence of products to the Common Alerting Protocol (CAP) and the Emergency Data Exchange Language (EDXL) suite of standards as part of the NIMS STEP process. Data messaging standards enable emergency responders to share critical data—maps, situational reports, alerts—seamlessly across disparate software applications, devices, and systems. Effective exchange of this data is essential for emergency responders to successfully respond to day-to-day incidents and large-scale emergencies. EDXL data messaging standards will be part of future NIMS implementation and grant guidance.

CAP and EDXL Standards

CID is working with Federal partners, standards organizations, and emergency responders to support the development and incorporation of data messaging standards into communications and information sharing products. The CAP standard enables practitioners to exchange all-hazard emergency alerts, notifications, and public warnings. Such data can be disseminated simultaneously over many different warning systems, e.g., computers, wireless, alarms, television, and radio. The EDXL suite of standards includes the following:

- The Distribution Element (DE) standard enables responders to distribute data messages by recipient, geographic area, or other specifications such as discipline type.
- The Hospital Availability Exchange (HAVE) standard enables responders to exchange information about a hospital's capacity and bed availability with medical and health organizations.
- The Resource Messaging (RM) standard enables responders to exchange resource data such as personnel and equipment.

The CAP and DE standards were adopted by the DHS Standards Council in 2008 and HAVE and RM will be entering the approval process now that they are approved data messaging standards.

Through a practitioner-driven approach, the Science and Technology Directorate's Command, Control and Interoperability Division (CID) creates and deploys information resources—standards, frameworks, tools, and technologies—to enable seamless and secure interactions among homeland security stakeholders. With its Federal partners, CID is working to strengthen capabilities to communicate, share, visualize, analyze, and protect information.