

NIMS Support Center Technology and Evaluation Overview

April 2009

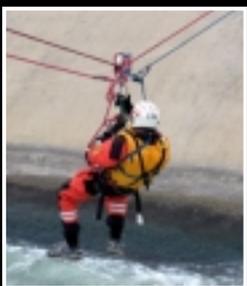


FEMA

NIMSSC

National Incident Management System
SUPPORT CENTER

National Incident Management System



- NIMS Document first released in 2004; updated December 2008.
- According to NIMS “Communication and data standards, related testing, and associated compliance mechanisms are necessary to enable diverse organizations to work together effectively.”
- The National Preparedness Directorate (NPD) is responsible for managing the administration and implementation of NIMS.
- The NIMS SC has been tasked by NPD to support Information Technology Systems Development and Evaluations. The NIMS SC and the testing facility are located in Somerset, Kentucky.
- The NIMS Support Center (NIMS SC) is designed to develop new responder tools, enhance technology integration and interoperability, and provide technical assistance and support to the incident management and response community.



Systems Development



- Incident Resource Inventory System (IRIS):
 - Client software tool for inventorying FEMA's 120-typed resources with no cost to the user community.
 - Allows officials to enter resources into a common database, and to search for/identify resources for incident operations and mutual aid purposes.
 - Version 2.2 released in 2009.
- Exercise Simulation System (ESS):
 - Server Web tool for training and exercises.
 - Provides community information in a virtual setting.
 - Available upon request.
 - Additional components under development:
 - Update to ESS and ESS Document
 - Development of ESS Online component
 - Integration of scenarios



Simulated Emergency Operations Center

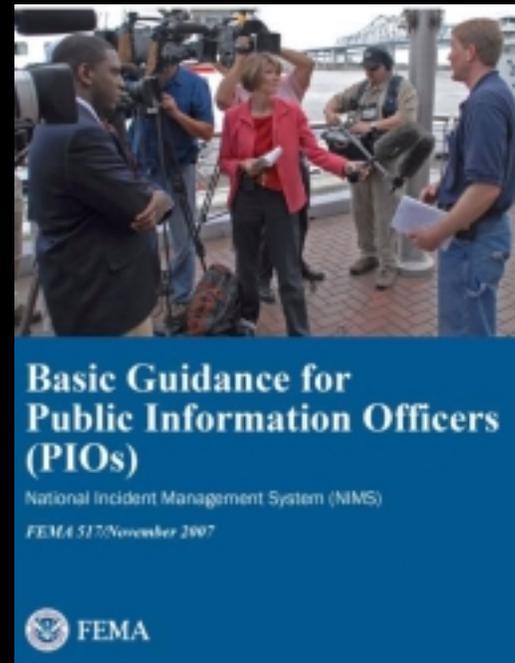


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Additional Program Areas



- Training and Exercise Support
- Guidance Documents and Job Aids
- Smart Practices
- NIMSCAST
- NIMS Inbox
- Standards
- Test and Evaluation



NIMS STEP Capabilities

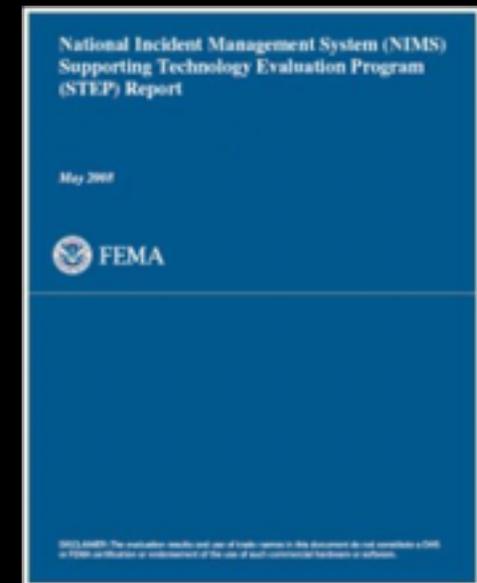


- Independent, objective evaluations of software and supporting hardware against NIMS standards and criteria to aid government officials when purchasing incident management products.
- Equipped to evaluate the following types of Information Management products, among others, that support emergency managers and responders in decision-making prior to and during an incident:
 - Incident Management Products (command and control, resource management, etc.)
 - Alert and Warning Systems
 - Communications and Network Infrastructure
 - Collaboration Tools
- Test engineers verify system capabilities and adherence to standards in laboratory environment.
- Emergency management and response Subject Matter Experts evaluate systems in controlled, simulated Emergency Operations Center.

Program Benefits – Vendors



- No cost to participate; evaluations do require vendor support for initial planning calls, logistics coordination, training support, etc.
- Evaluation Report - identification of capabilities and areas for product improvements:
 - Incorporation of NIMS concepts and principles.
 - Adherence to Common Alerting Protocol (CAP) standard.
 - Adherence to EDXL-DE standard.
 - Adherence to other standards as they are approved / adopted.
- Exposure to government officials and other users through website.



Program Benefits – Practitioners



- A list of product descriptions and key capabilities based on results from an objective evaluation. This information will be shared through a dedicated web site.
 - Responder Knowledge Base (RKB) (<https://www.rkb.us/>).
- Technical standards and criteria to reference when purchasing hardware and software off-the-shelf or when developing original products (e.g., request for proposals).



Program Development – History



- **Phase I (FY 2006)**
 - Developed infrastructure and evaluation processes.
- **Phase II (FY 2007)**
 - Conducted five (5) pilot evaluations.
 - Developed Common Alerting Protocol (CAP v1.1) test procedures.
- **Phase III (FY 2008)**
 - Developed EDXL-Distribution Element (DE) test procedures.
 - Conducted 17 pilot evaluations.
 - Convened meeting of NIMS STEP and Standards Working Group.



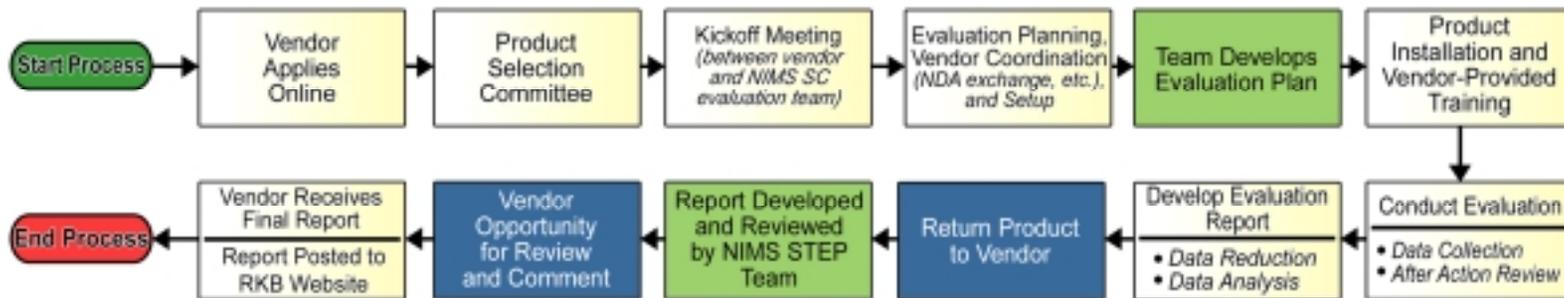
Program Implementation



- **Phase IV (FY 2009)**
 - Launched program website (completed)
 - Conduct evaluations
 - Post Reports and Summaries to the Responder Knowledge Base (RKB) Website
 - Expand Assessor program
 - Convene working group
 - Develop Test Procedures for EDXL-HAVE and EDXL-RM
 - Maintain Laboratory Accreditation
 - Conduct outreach



Evaluation Process and Outcomes



- Community will have access to NIMS STEP reports through the Responder Knowledge Base (RKB) (<https://www.rkb.us>) website.



Data Messaging Standards



1. The **CAP** is a general format for exchanging all-hazard emergency alerts and public warnings over all kinds of networks.
2. The **Distribution Element (EDXL-DE)** specification describes a standard message distribution framework for data sharing among emergency information systems using the XML-based EDXL.
3. The **EDXL-HAVE** standard allows the seamless communication of the status of a hospital, its services, and resources, such as bed capacity and availability, emergency room status, services provided, and available medical staff.
4. The **EDXL-RM** standard allows the seamless exchange of resource information, such as requests for personnel or equipment.

Test Procedures – Technical Standards



Evaluation Case Identifier	Evaluation Case Title	Evaluation Objective
EVAL_001	Generate CAP Alert Message	Generate a CAP Alert message for use in the eXtensible Markup Language (XML)/Schema validation, CAP conformance, and transaction testing.
EVAL_002	XML/Schema Validation	Determine if the message is well formed and valid against a CAP 1.1 applied schema.
EVAL_003	CAP Conformance	Determine if the CAP standard is applied in the correct format to include proper application of cardinality of elements, CAP standard structure, mandatory and optional elements, and conditional rules.
EVAL_004	Transaction	Verify transaction (send and / or receive) with disparate systems.

NIMS Concepts and Principles



- All products are described using and evaluated against NIMS concepts and principles
- NIMS criteria:
 - Applicability to Emergency Support and Incident Command functions.
 - Scalable to local, regional, and national incidents/events.
 - Hazards (all-hazards philosophy).
 - Resource Management (e.g., FEMA typed resources).
 - Communication and Information Management (e.g., plain language, information security).
 - Command and Management (consistent with ICS).
 - Implementation factors (time and training).



Table 1: NIMS Elements Summary Table

NIMS Element(s)	Consistent with NIMS?	
	Agree	Disagree
1. Emergency Support	<input type="checkbox"/>	<input type="checkbox"/>
2. Scalability	<input type="checkbox"/>	<input type="checkbox"/>
3. Hazards	<input type="checkbox"/>	<input type="checkbox"/>
4. Resource Management	<input type="checkbox"/>	<input type="checkbox"/>
5. Communications and Information Management	<input type="checkbox"/>	<input type="checkbox"/>
6. Command and Management	<input type="checkbox"/>	<input type="checkbox"/>

State and Local Assessors



- Participants must meet minimum qualifications
 - Five or more years of experience in their discipline.
 - Experience in responding to real-world incidents.
 - Experience using incident management software during exercises and/or incidents.
 - Completed the following courses:
 - Introduction to Incident Command, IS-100.
 - ICS for Single Resources and Initial Action Incidents, IS-200.
 - National Incident Management System, an Introduction, IS-700.
 - National Response Framework, an Introduction, IS-800.B.
 - Intermediate ICS, ICS-300 (preferred for appropriate personnel).
 - Proficient in basic Microsoft Office applications and capable of clearly documenting findings in writing.
- Program reimburses participants for allowable travel, per diem, and lodging
- Complete Background and Interest Form to express interest; obtain form by emailing nimsstep@nimssc.net
- Materials coming soon to NIMS STEP Website

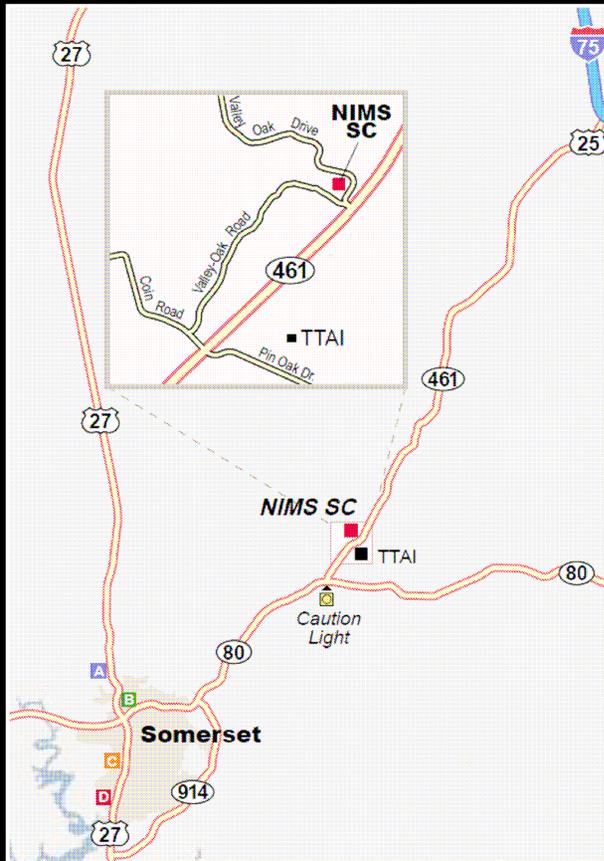


Logistics and Location



Test and evaluations take place at the NIMS SC facility located at:

**75 Valley Oak Drive
Somerset, KY 42503**



Laboratory Accreditation



- Dec. 2008 – Became first laboratory to achieve accreditation by American Association for Laboratory Accreditation (A2LA) for testing emergency response information technology.
- Met general requirements for the competencies of testing laboratories as provided in ISO/IEC 17025:2005.
- Accreditation valid for evaluations of software and hardware against interoperability standards (OASIS CAP and EDXL standards).
- Continue work on meeting ISO/IEC 17020:2005 requirements (criteria for inspection bodies).
- May be leveraged for FEMA IPAWS conformance assessments.
- Promoting use of laboratory.

Contact Information



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For More Information, visit:

<http://www.nimsstep.org>



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