

CAP 1.0 - Fact Sheet

3/1/2004

The Common Alerting Protocol (CAP) is the OASIS Emergency Management Technical Committee's first standard for homeland security and civil emergency management.

CAP is a simple, flexible data interchange format for collecting and distributing "all-hazard" safety notifications and emergency warnings over information networks and public alerting systems.

The Need

Warning systems in the United States today are "a patchwork of technologies and processes," according to the national non-profit Partnership for Public Warning. Different systems have evolved to meet different threats in different places. Until now there's been no way to distribute warnings consistently over all available channels. Nor has there been any way to monitor the whole picture of local, state and national warnings at any one time. And decisions about new alerting systems have been fraught with concerns about compatibility and operational complexity.

Background and Process

In November 2000 the National Science and Technology Council released a report on "Effective Disaster Warnings." One key recommendation of the blue-ribbon panel was that "a standard method should be developed to collect and relay instantaneously and automatically all types of hazard warnings and reports locally, regionally and nationally for input into a wide variety of dissemination systems."

During 2001 an international working group of more than 120 emergency managers and emergency information technologists developed initial requirements and a strawman design for CAP. In 2002 that effort was adopted by the Partnership for Public Warning (PPW), a national public-private partnership of agencies, vendors and academic experts. In 2003 PPW sponsored CAP into the OASIS standards process for refinement and testing. Now CAP 1.0 has been brought forward for adoption as an OASIS standard.

Compatibility and Flexibility

CAP is a content standard, deliberately designed to be "transport-agnostic." In web-services applications, CAP provides a lightweight standard for exchanging urgent notifications. CAP can also be used in data-broadcast applications and over legacy data networks.

CAP provides compatibility with all kinds of information and public alerting systems, including those designed for multilingual and special-needs populations. CAP is fully compatible with the existing national broadcast Emergency Alert System (EAS); http://www.incident.com/cap/docs/aps/Advanced_EAS_Concept.pdf a 2003 whitepaper describes details of the CAP/EAS interface.

CAP incorporates geospatial elements based on Open GIS Consortium recommendations to permit flexible but precise geographic targeting of alerts. It provides for associating digital images and other binary information with alerts. It supports various mechanisms for ensuring

message authenticity, integrity and confidentiality (where required) including in particular the work of the OASIS Web Services Security and PKI Technical Committees.

Implementers and Supporters

CAP has been implemented by agencies and firms including:

- Department of Homeland Security
- National Weather Service
- United States Geological Survey
- California Office of Emergency Services
- Virginia Department of Transportation
- Capital Wireless Integrated Network (CapWIN)
- GeoDecisions, Inc.
- E Team
- Blue292
- Warning Systems, Inc.
- Comlabs, Inc.
- mobileFoundations
- Ship Analytics
- MyStateUSA
- IEM, Inc.
- Hormann America, Inc.
- Oregon RAINS
- NDS, Ltd.

CAP-capable applications have been deployed in multi-vendor events and field trials in Washington, D.C., Virginia, Florida, Nevada and California. CAP data elements have been incorporated in the U.S. Department of Justice's "Global Justice XML Data Model".

CAP has been endorsed by the National Emergency Management Association's Preparedness Committee, the Partnership for Public Warning, the ComCARE Alliance, the Emergency Interoperability Consortium and the Capital Wireless Integrated Network (CapWIN).

For More Information:

- CAP 1.0 Specification <<http://www.oasis-open.org/apps/org/workgroup/emergency/download.php/5666/emergency-CAP-1.0.pdf>> (PDF 234 kb)
- XML Cover Pages article on CAP 1.0 <<http://xml.coverpages.org/ni2004-02-26-a.html>>
- Partnership for Public Warning <<http://www.partnershipforpublicwarning.org/ppw/cap.html>>