

**Common Alerting Protocol (CAP) Based  
Warning and Notification System of Systems  
For States, Counties, Cities, Campuses and other facilities**

**System Description**

Next Generation CAP Alert is an extensive suite of alert, warning and notification products integrated into one, easy to use multi-faceted tool box. It provides all methods of warning available today: Sirens, Telephone Calls, PC Pop-Up Windows, Short-Messaging-Text (SMS) for cellular phones, Pagers, Radio Broadcast and Emergency Alert System (EAS), Digital Signage, email and fax. integration with other systems such as Incident Management Systems, National Weather Services HazCollect, FEMAs DMIS and more.

Next Generation CAP Alert has three components:

- Warning Devices - a broad selection of alerting tools tailored for the target audience.
- Warning Activation - via "push button", Secure web browser access, telephone and /or input from other systems.
- Warning Server to handle scenarios, authorization protocols, target databases (GIS and/or lists), reporting, maintenance and many other functions required for effective alerting, administration and interfacing with other systems.

Next Generation CAP Alert places the Emergency Manager/Dispatcher in control of **multiple warning systems without confusion** or duplication of effort. Coordinated warnings are accurate, cost-effective and fast and pin-pointed when seconds count. It is **operated easily by a single operator with a single message to all recipients** using a **common interface for all devices**.

**Features**

- OASIS standard CAP 1.1 and 1.2 compliant
- Multilingual and multi-audience messaging
- Digital encryption and authentication
- Digital images, audio and video
- Enhanced message update and cancellation features
- Flexible geographic and hierarchical targeting
- Secure HTTPS connection
- Sophisticated Administration Tools
- Authentication Sign-In for activation
- Public Registration for targeted notification
- Auto-update for clients when new versions are released

Next Generation CAP Alert Provides Push Button, Telephone, Remote Auto Access and Secure Browser Activation

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## Next Generation CAP Alert System and Options

### Which tools to activate?

Many activation schemes or scenarios can be defined, each with its own messages, components to activate, public and staff notifications etc. Alerting Solutions' experienced staff can work with you to provide the matrix which is appropriate to your organization and you can further tailor it to your future needs. The CAP Posting Tool enables you to request activation of the tools as appropriate to the emergency situation.

### How to activate?

Wired and remote Push buttons for prepared scenarios, manual access via secure internet for "on the fly" activation and automatic response to various inputs (such as water level sensors)

### Which alerting tools can be used?

All alerting tools available in the market today can be either integrated into the Next Generation CAP Alert or be interfaced with Next Generation CAP Alert. Alerting Solutions presently offers the following tools:

- **PC Alert Pop-Up**  
The Broadcast Alert Message (BAM) Box is a Windows® screen that pops up on computers to alert the user about an emergency and provides detailed information and instructions. The "Public" version allows users privacy while the "Agency" version allows response monitoring.
- **Telephone Emergency Notification System (TENS) - CapCon 3130**  
Many types of TENS are supported. Starting with a user-owned call-out system with a few telephone lines to a large hosted system with hundreds of lines, with pre-recorded, on-the-fly or text to voice.
- **Emergency Alert System, National Weather Radio—CapCon 4203**  
Counties and large Municipalities can use these federally mandated free tools to broadcast alert messages.
- **Pagers, Cell Phones, PDAs—CapCon 3120**  
The system provides text alert to these devices using either an e-mail server or SMPP service.
- **Sirens—CapCon 4101**  
Tone and voice sirens activated as a part of the Next Generation CAP Alert system via radio or network connection, directly or through a siren central controller.
- **Strobe Lights**  
The Next Generation CAP Alert system supports strobe lights of various intensity and colors.
- **Public Address and Fire Alarm Systems—CapCon 4102**  
Public Address systems for indoors and outdoors are tools of the Next Generation CAP Alert system.
- **Traffic Information System - CapCon 4201 Highway Advisory Radio Transmitter**  
Broadcasts a voice message over a local transmitter dedicated for your area.
- **Indoor and Outdoor Electronic signs (Variable Message Signs) - CapCon 4301**  
With on/off lights or with complete, scrolling text.
- **Website Update**  
Posting updates (and automated removal of them, when expired) for the public, and providing "Public" registration tools so each individual can register selectively to warnings.

## Common Alert Protocol System

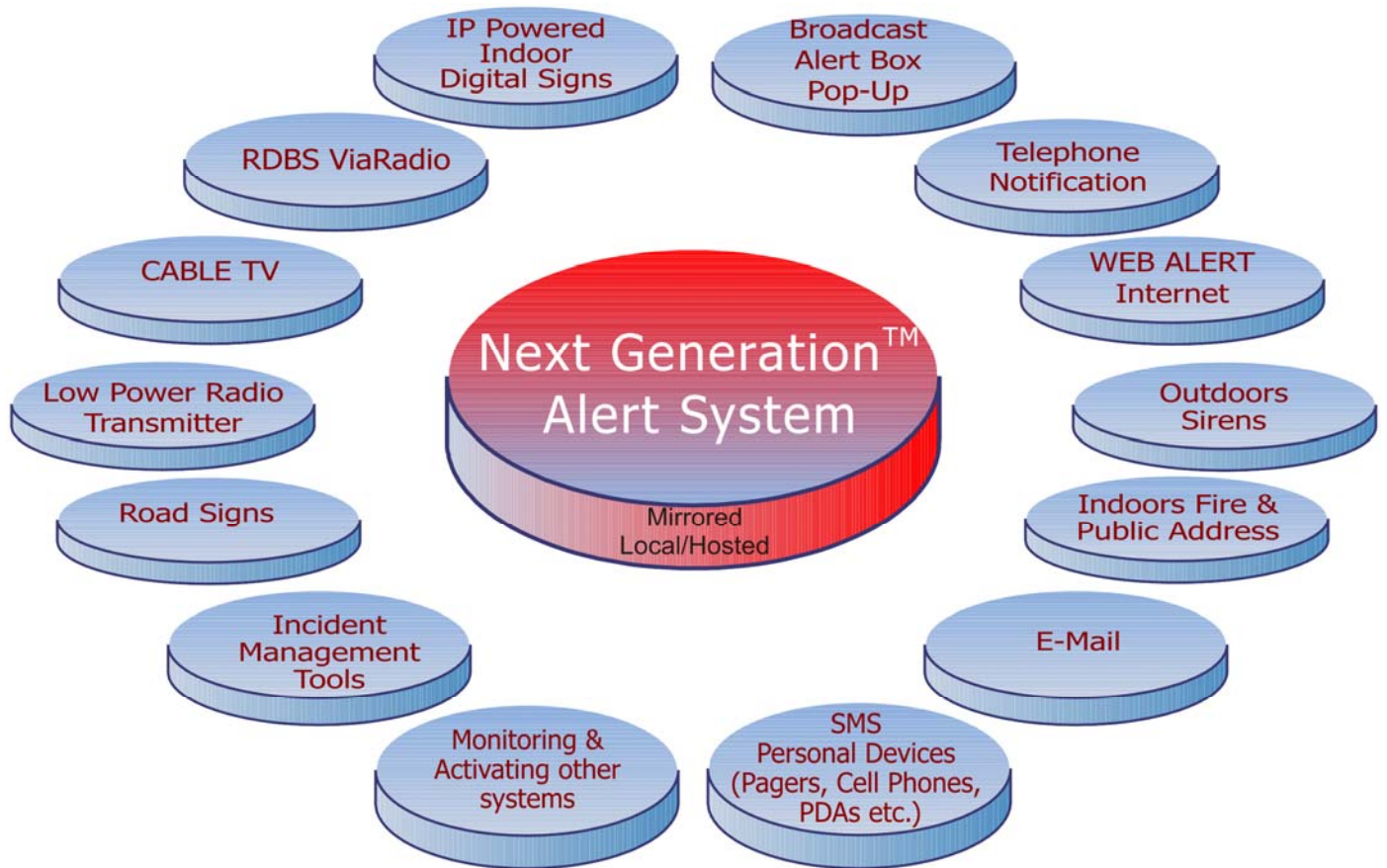
During an emergency, the public has come to expect to receive news and information updates virtually instantaneously. As a result, the public has a difficult time understanding why it can take so long to get critical life-safety information to them accurately and in a timely manner.

One of the most significant contributing factors is the fact that independent systems and technologies have been deployed without considering how, or whether these various capabilities should interact and without adhering to recognized alert and warning protocols.

OASIS (Organization for the Advancement of Structured Information Standards) stepped in and provided the CAP (Common Alert Protocol) standard. All warning devices and systems that are CAP Compliant can interact with each other.

The Next Generation CAP Alert system takes this one step further: *creating a "super system" of warning systems and tools controlled and managed by one interface!*

Next Generation CAP Alert is scalable and can serve a wide range of organizations, from small private companies to state or nation-wide systems. Existing tools can be integrated and a "plug and play" approach makes future expansion easy.



## Next Generation CAP Alert Applications

- Public sector:
  - State-wide Warning System and Backbone
  - Regional Integrated Warning Services
  - County-wide Community Warning System
  - City-wide Community Warning System
  - Departmental (staff) alerting system
- Private Sector
  - In-Campus Alert and Notification System
  - Neighborhood Notification System
  - Staff Call-out System
  - Monitoring and/or Incident Reporting System
- Services
  - Staff Notification and Call Out System
  - Reporting and Incident Notification System

### Configurations:

- Model 3110—Basic server
- Model 3110H—Hosted server
- Model 3110C—Backup Server

Next Generation CAP Alert is CAP compliant. New services and tools can be plugged-in anytime after installation without the need to change the infrastructure or the procedures.

Next Generation CAP Alert can be implemented in various levels: a whole new system, integrating existing alerting devices and sources with new additions, or just as a comprehensive operating system for all existing tools. One user interface makes training easy - the operator needs to be familiar with one tool only and does not need to practice on each individual device. Any new tool that will be introduced

in the future can be added to the Next Generation CAP Alert “arsenal” and integrates easily into the system. Networking and reporting both upstream and downstream between the various agencies is automated and follows hierarchical protocol enabling error-free incident handling.

## How Next Generation CAP Alert Works

1. The Emergency Notification Officer provides the information about the incident to the server (using the CAP Posting Tool or their existing interface) and decides which warning devices should be activated. Alternatively, the operator presses a push button for previously configured alerts or an automated sensing system detects situations that require alerting.
2. A CAP (Common Alert Protocol) message is then created and distributed.
3. The various alerting and notification tools notify targeted recipients about the emergency and recommended actions. This may constitute public alert, staff notification or both.
4. Additional systems receive the information and react based on programmed response.
5. If message "enrichment", such as broadcast in another language, is required the server can be configured to provide this function without disturbing the operator or

## The Worldwide Standard for Alert, Warning & Notification

The Common Alerting Protocol (CAP) is the OASIS Emergency Management Technical Committee's first standard for homeland security and civil emergency messaging. It is used by several national agencies dealing with emergencies of all kind, such as:



Department of Homeland Security



National Weather Service



United States Geological Survey

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).

CAP data elements have been incorporated in the U.S. Department of Justice's "Global Justice XML Data Model". The European Commission Joint Research Center, Institute for the Protection and Security of the Citizen (IPSC) is also using the CAP for issuing alerts.

### Proven in the Field

Over the past years, the CAP system standard has been implemented in Contra Costa County, California's Community Warning System. Most components of the system were directly integrated with the CAP server, and some legacy components are interfaced for automatic operation. In this installation, the CWS was integrated with many alert tools providers, including Telephone Emergency Notification System.

California Office of Emergency Services has expanded the services since 2006 with the Next Generation CAP Alert product for state-wide All Hazard Warning System including Tsunami, EAS and Amber Alert.

New York State-wide Next Generation CAP Alert System is being used for state-wide EAS activation.

CAP enabled applications have been deployed in multi-vendor events and field trials in Washington, D.C., Virginia, Florida, Nevada and California. Alerting Solutions provided an EAS CAP solution for FEMA and the Association for Public TV that was tested successfully earlier this year as a national EAS CAP data-cast for the presidential channel over the public television digital network, using the CapCon EAS by Alerting Solutions.



### OUR MISSION:

Alerting Solutions' mission is to assist emergency response professionals with state-of-the-art alerting and notification systems & products, consulting and design services to ensure that the public in their jurisdiction are alerted to take shelter from the con-

## Specifications

- Meets OASIS standard 200402-CAP-CORE-1.1
- Server application using Linux operating system
- User application (CAP Posting Tool) is Web browser based
- Paging available in SMTP (email) format or direct provider access using SNPP (Simple Network Paging Protocol)
- SMS available in SMTP (email) or direct provider access using SMPP (Short Message Peer to Peer Protocol)
- Public registration via web access with verification tools using email and phone.
- Administration tools to manage users, call lists, allocation of tools, reporting, scenarios building, etc.
- Telephony device (for small applications) - Intel Dialogic Voice Board, 4 channels. One CAP server can accommodate up to 64 channels in this configuration. External telephony server for higher capacity.
- Standard Graphics and Video formats for distribution: JPEG, GIF, MPEG, FLASH. Additional formats can be added per customer needs.
- Language: Dual language interface for posting alerts. Text to speech available in multiple languages as desired. Voice messages can be in any recordable language.
- GIS - Open Geospatial Consortium (OGC) - Web Mapping Service (WMS) with the ESRI OGC WMS Connector. Other connectors can be added per customer needs.