



Integrated Public Alert and Warning System: Sandia's Role as Information Architect

HOMELAND SECURITY & DEFENSE

Issue

One of the most painful lessons of Hurricane Katrina was learning that the biggest gap in national emergency response capabilities occurred in information sharing and communications.

In response, a Presidential Executive Order was issued to establish common alerting and warning protocols and procedures to enable the secure delivery of coordinated messages to the American people through as many communication pathways as possible. Department of Homeland Security Secretary Michael Chertoff defined 5 goals for the protection of the American people, including one that states: "Build a nimble, effective emergency response system and a culture of preparedness.....we will fully implement the Executive Order on alerts, establishing a capability to reach 85 percent of the listening public within 10 minutes."

Solution

Sandia National Laboratories is performing the role of Information Architect for the federal government's Integrated Public Alert and Warning System (IPAWS). Sandia's work is also providing a solution for the national need to integrate emergency communications into all levels and jurisdictions of government and to all affected members of American society.

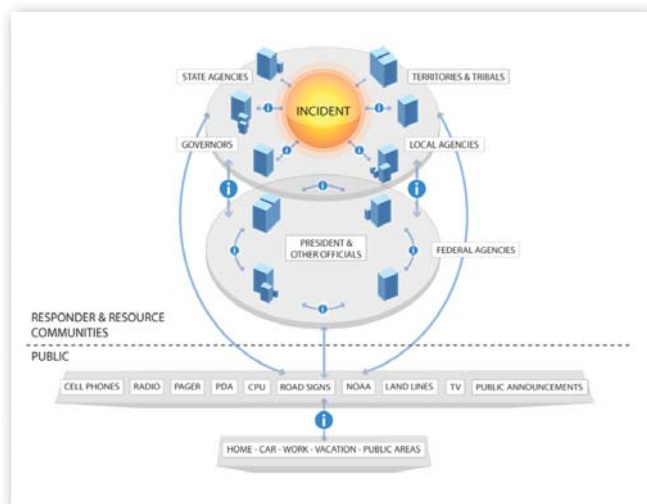
As a national laboratory, Sandia provides a means to offer a non-proprietary solution that based on open standards that accommodates all jurisdictions and stakeholders. Sandia's capabilities in C5I (Command, Control, Communications, Computers, Coordination, and Intelligence) and the breadth of its capabilities as a national lab make it uniquely qualified for this task. Sandia must find a technical solution that allows information sharing based on agreements among all jurisdictions and builds consensus among multiple entities.

IPAWS is the Nation's Next-Generation Emergency Warning Capability

IPAWS will work with public and private sectors to integrate warning systems to effectively communicate alerts via TV, radio, telephone, internet/computer, cell phone, and other personal communications devices. The IPAWS will allow:

- The President (or designated Federal officials) to communicate to the American people before, during, and after a crisis;
- The President and authorized federal government officials to gain situational awareness from state and local emergency operations centers;
- Effective communications to state and territory agencies, governors, tribal councils, and other alert and warning stakeholders; and
- State and local emergency managers to send messages to residents during non-federal emergencies.

The end vision of IPAWS is to deliver coordinated messages over more channels to more people, anywhere, anytime.

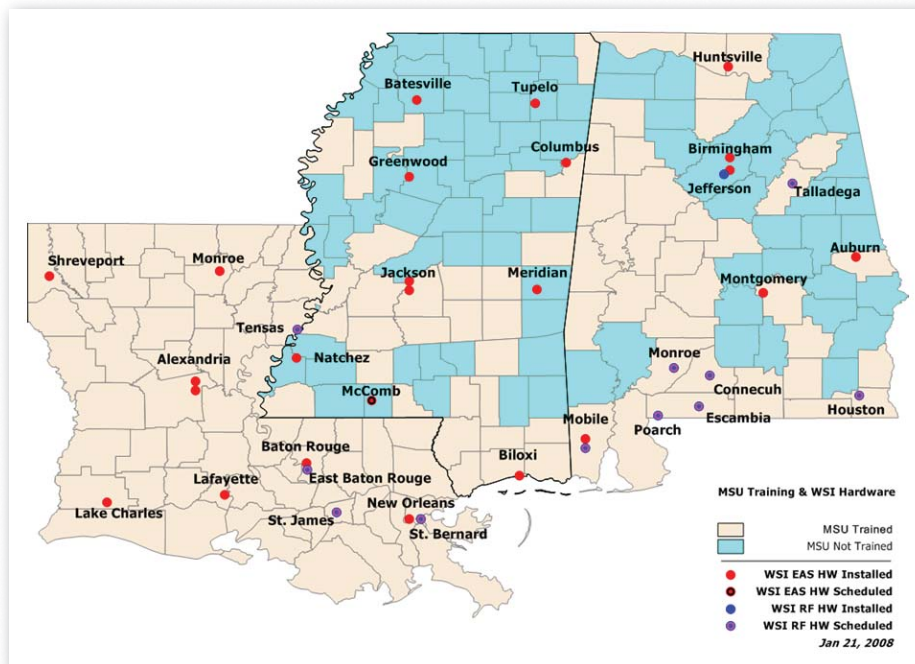




First Phase Work: Spiral 0 Successes

Sandia is already at work on the first phase of implementing the IPAWS. Recent progress includes the following:

- The Emergency Telephone Notification (ETN) was used by Mississippi's governor for Hurricane Dean,
- Opt-In demonstrated for Secretary of the Dept. of Homeland Security Michael Chertoff as well as Alabama's governor and Congressional delegation,
- The ETN was tested with over 250,000 calls,
- Over 700 American Sign Language (ASL) alerts were generated,
- Sandia worked with vendors to train Emergency Operation Center (EOC) personnel in 133 counties/parishes, and
- Sandia developed working relationship with state EOCs and 10 county/parish EOCs.



Making a Difference

Sandia's work with IPAWS is already making an important difference to safeguard the U.S. and the public. Already key milestones have been met such as demonstrating:

- Electronic delivery of emergency alerts to the public utilizing commercially available services,
- New capabilities to meet public alerting gaps in the current EAS system,
- The promise of a national public/private emergency alert communication system,
- Ability to communicate emergency alerts quickly to an increased number of individuals during various times of the day, and
- Many venues are needed to effectively alert and warn the public.

Progress continues to move forward at Sandia to make enduring contributions to secure our society against high-consequence terrorist threats and national incidents, including natural disasters, through the effective use of science, technology, and systems solutions.

Learn more at: <http://www.sandia.gov/mission/homeland/index.html>

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