



New Opportunities for Public Alerting

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48 Years of Public Alerting



- **1963 - Emergency Broadcast System (EBS)**
- **1990 - Primary Entry Point Advisory Committee (PEPAC)**
- **1997 - Emergency Alert System (EAS) replaces EBS**
- **2006 - Integrated Public Alert and Warning System (IPAWS)**

“IPAWS is...to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people in situations of war, terrorist attack, natural disaster or other hazards to public safety and well being.”

Executive Order 13407

IPAWS Vision

*Timely Alert And Warning To American Citizens In
The Preservation of Life And Property*



**Common Alerting
Protocol (CAP)**



IPAWS Alert Aggregators

**Alerting Authorities;
Federal, State,
territorial, tribal,
and local**



Television



Radio



**Cell Phone
(CMAS)**



Computer



Home Phone



Public Signage

Commercial Mobile Alert System (CMAS) Scheduled for April 2012

- Alerts public of “imminent threats”
- Opt-out (not opt-in)
- Requires CMAS compatible phone
 - *All major carriers have volunteered to participate*
- Relevant to the user’s current location
- Initially limits message length to 90 characters



How does CMAS work?

Alerting Authorities



Federal Agencies
(e.g., NWS, FEMA),
State EOC, Local EOC

Alert Aggregators

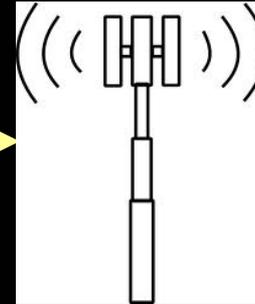


FEMA

Carrier Infrastructure



Provider
Gateway



Cell
Towers

Public

Mobile Devices

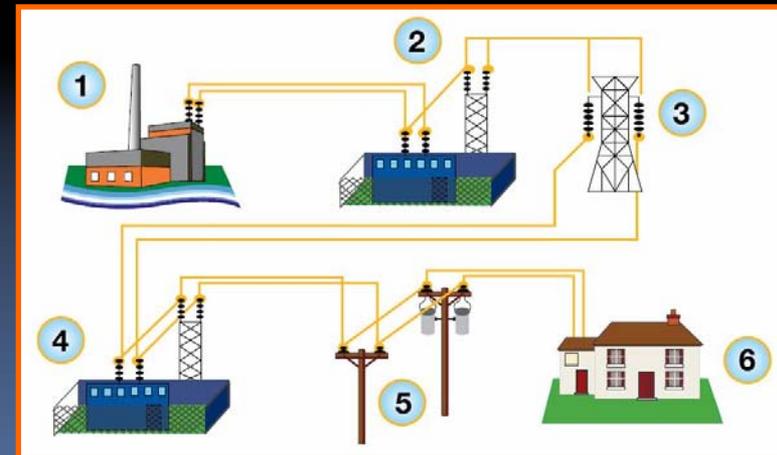


Point to multipoint radio broadcast from cell tower

– Not point to point text message

Common Alerting Protocol (CAP) What is it and why should I care?

- An information standard for public alerting
- Alert information at its most granular levels
- Enabler for personalizing threat & increasing warning effectiveness



CAP Format Example

<event>Flash Flood Warning</event>

<urgency>Immediate</urgency>

<severity>Severe</severity>

<certainty>Likely</certainty>

<effective>2010-06-03T14:00:00-05:00</effective><expires>2010-06-03T17:00:00-05:00</expires>

<senderName>NWS Memphis (Western Tennessee, Eastern Arkansas and Northern Mississippi)</senderName>

<headline>Flash Flood Warning issued June 03 at 2:00PM CDT expiring June 03 at 5:00PM CDT by NWS Memphis</headline>

<description>Doppler Radar estimates 2 to 3 inches of rainfall has occurred over the past hour...</description>

<instruction>Most flood deaths occur in automobiles . Never drive your vehicle into areas where the water covers the roadway...Turn Around...Don't drown</instruction>

<polygon>+36.20,-88.93 +36.18,-88.91 +36.05,-88.84 +35.99,-89.17 +35.99,-89.19 +35.98,-89.21 +35.94,-89.30 +36.17,-89.31 +36.21,-89.04 +36.20,-88.96 +36.22,-88.95 +36.20,-88.93</polygon>

CAP Benefits for the Public

- Works across multiple alerting systems
- Personalizes the threat

Example of Possible Future CAP Content

Link to video demonstrating the call to action

“Just in time” training on your TV or cell phone

Multiple languages



CAP Benefits for the Alert Originator

- **Focus on content**
- **Additional parameters for decision support**
 - *Urgency, Severity, Certainty*
- **Can add parameters without impacting user parsing**
 - *Storm reports, Storm motion, Snow amounts*
 - *Links to pictures or video*
- **Simplifies warning process**
 - *“Write once, distribute many ways”*



CAP Benefits for Developers, Vendors, Broadcasters

- Low cost
- Programmer friendly
- Derive many products from single message
- Alerts on cell phones and consumer navigation systems
- **Decision support tools**
- Integration with social media



NWS CAP Roadmap

Milestone/Goal	Date
CAP v1.2 Adopted by FEMA for IPAWS	September 2010
CAP v1.1 Operational in NWS at alerts.weather.gov/cap	March 2011
NWS CAP guide on public collaborative wiki in preparation for CAP v1.2	Spring 2011
CAP v1.2 (IPAWS Compliant) Experimental in NWS	Fall 2011
NWS CAP push to FEMA IPAWS Aggregator in time for CMAS	Winter 2011/ Spring 2012
CAP v1.2 Operational	Early 2012
Native production of NWS CAP messages using NWS next generation warning tool gives forecasters enhanced control over CAP content	2013

New Opportunities for Public Alerting

A summary of acronyms

- **IPAWS** -- Integrated Public Alert and Warning System



- *Comprehensive system to alert and warn the American people*



- **CMAS** -- Commercial Mobile Alert System



- *Cell phone alerts of imminent threats*



- **CAP** -- Common Alerting Protocol



- *Standard format for public alerting*



Questions?

CAP feeds operational and move to
<http://alerts.weather.gov/cap>
on or about March 15, 2011

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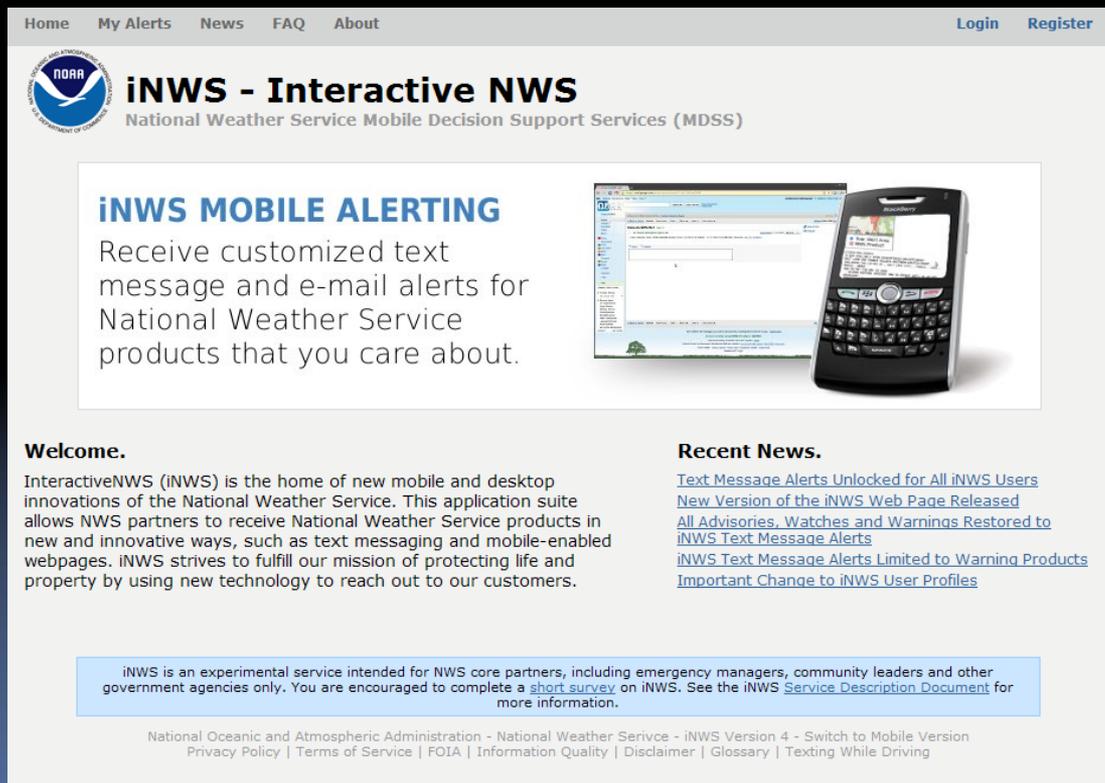
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Supporting Slides

Emerging Mobile Alert Technologies

iNWS (NWS) NWS Core Partners

CMAS (FEMA) General Public



The screenshot shows the iNWS website interface. At the top, there are navigation links: Home, My Alerts, News, FAQ, About, Login, and Register. The NOAA logo is on the left, followed by the title "iNWS - Interactive NWS" and the subtitle "National Weather Service Mobile Decision Support Services (MDSS)". A central banner reads "iNWS MOBILE ALERTING" and describes receiving customized text and e-mail alerts. To the right of the banner is an image of a mobile phone displaying a weather alert. Below the banner are sections for "Welcome." and "Recent News." with several links. A blue box at the bottom contains a disclaimer about the experimental nature of the service. At the very bottom, there are links for Privacy Policy, Terms of Service, FOIA, Information Quality, Disclaimer, Glossary, and Texting While Driving.

Home My Alerts News FAQ About Login Register

iNWS - Interactive NWS
National Weather Service Mobile Decision Support Services (MDSS)

iNWS MOBILE ALERTING

Receive customized text message and e-mail alerts for National Weather Service products that you care about.

Welcome.
InteractiveNWS (iNWS) is the home of new mobile and desktop innovations of the National Weather Service. This application suite allows NWS partners to receive National Weather Service products in new and innovative ways, such as text messaging and mobile-enabled webpages. iNWS strives to fulfill our mission of protecting life and property by using new technology to reach out to our customers.

Recent News.
[Text Message Alerts Unlocked for All iNWS Users](#)
[New Version of the iNWS Web Page Released](#)
[All Advisories, Watches and Warnings Restored to iNWS Text Message Alerts](#)
[iNWS Text Message Alerts Limited to Warning Products](#)
[Important Change to iNWS User Profiles](#)

iNWS is an experimental service intended for NWS core partners, including emergency managers, community leaders and other government agencies only. You are encouraged to complete a [short survey](#) on iNWS. See the iNWS [Service Description Document](#) for more information.

National Oceanic and Atmospheric Administration - National Weather Service - iNWS Version 4 - Switch to Mobile Version
[Privacy Policy](#) | [Terms of Service](#) | [FOIA](#) | [Information Quality](#) | [Disclaimer](#) | [Glossary](#) | [Texting While Driving](#)



Differences Between iNWS and CMAS

iNWS

- Serves community decision leaders
- Opt-in
- Provides information relevant to user defined areas.
- Users receive alerts based on the NWS products to which they subscribe.
- SMS message length up to 160 characters
- Embedded URLs link to more information (e.g., full text product, expected impacts, graphical outline of warning area, track of storm, radar image, etc.)

Commercial Mobile Alert System (CMAS)

- Serves the general public.
- Opt-out (not opt-in)
- Provides information relevant to the user's current location)
- Users only receive alerts for "imminent threats."
- First version of CMAS will limit message length to 90 characters.
- First version of CMAS will not allow embedded links to supporting information. Capabilities of future versions have not yet been determined.