

Update on EAS CAP



Broadcasters Clinic

Madison, WI

October 14, 2009

Presentation Overview

Wisconsin Update

- **New Wisconsin SBE Google Groups**
- **(see me for handout)**

Update on EAS CAP

- **What is CAP; why do we need it?**
- **Why are broadcasters dealing with FEMA?**
- **Where are we with the “180-day clock”?**
- **What must broadcasters purchase?**
- **What are FEMA’s long range plans?**

Wisconsin SBE Listservs on

To subscribe to Wisconsin List:

sbe-wi+subscribe@googlegroups.com

To subscribe to Milwaukee List:

sbe-mil+subscribe@googlegroups.com

To subscribe to Madison List:

sbe24+subscribe@googlegroups.com

Wisconsin SBE Listservs on Google groups

The screenshot shows a Windows Internet Explorer browser window displaying the Google Groups page for the SBE24 group. The browser's address bar shows the URL <http://groups.google.com/group/sbe24>. The page header includes the Google Groups logo and the group name "SBE24". A search bar is located at the top right of the page content.

The main content area is divided into sections:

- Home**: A blue bar indicating "New since last time: 5 messages".
- Discussions**: A section with "9 of 35 messages" and a "view all »" link. A "+ new post" button is also present. The list of discussions includes:
 - [Job posting at WHA-TV in Madison](#) By Stoffel, Paul - Sep 29 - 1 author - 0 replies
 - [SBE 24 Re: Newsletter deadline is Oct. 1](#) By Stoffel, Paul - Sep 29 - 2 authors - 3 replies
 - [SBE meeting Thursday, SEP 17](#) By Steve Paugh - Sep 14 - 1 author - 0 replies
 - [Activists topple towers](#) By Steve - Sep 6 - 1 author - 0 replies
 - [Subscribing and Unsubscribing to the SBE24 list](#) By Kevin Trueblood - Aug 31 - 1 author - 0 replies
 - [FW: Invitation to visit WSUM](#) By Sperry, Fred J - ECB - Aug 28 - 1 author - 0 replies
 - [FW: Broadcast Clinic Reminder](#) By Sperry, Fred J - ECB - Aug 27 - 1 author - 0 replies
 - [Broadcast Clinic Reminder](#) By Sperry, Fred J - ECB - Aug 27 - 1 author - 0 replies
 - [FW: Broadcaster's Clinic Reminder](#) By Sperry, Fred J - ECB - Aug 27 - 1 author - 0 replies
- Files**: A section with "1 of 2 files" and a "view all »" link. It lists the file [sbe.jpg](#) with the note "Last updated by Kevin - Aug 28".

At the bottom of the page, there are links to "Report this group" (with a small orange icon), "Send email to this group: sbe24@googlegroups.com", and a footer with "Create a group - Google Groups - Google Home - Terms of Service - Privacy Policy" and "©2008 Google".

On the right side of the page, there is a sidebar with navigation links: Home, Discussions, Pages, Files, About this group, and Join this group. Below these is a "Sponsored links" section with advertisements for PBX Phone System, Make Google Your Homepage, and Changing Careers?. At the bottom of the sidebar is a "Group info" section showing "Members: 69", "Group categories: Not categorized", and a "More group info »" link.

What is CAP?

Common Alerting Protocol (CAP)

A worldwide standard format for issuing alerts. CAP is a text message, with the ability to attach audio and visual elements.

The current EAS is not going away. CAP is just a new delivery method for EAS, plus enhanced content.

Sample CAP Message (from CAP Standard)

A.4. AMBER Alert (Including EAS Activation)

The following is a speculative example in the form of a CAP XML message.

```
<?xml version = "1.0" encoding = "UTF-8"?>
<alert xmlns = "urn:oasis:names:tc:emergency:cap:1.1">
  <identifier>KARO-0306112239-SW</identifier>
  <sender>KARO@CLETS.DDJ.CA.GOV</sender>
  <sent>2003-06-11T22:39:00-07:00</sent>
  <status>Actual</status>
  <msgType>Alert</msgType>
  <source>SW</source>
  <scope>Public</scope>
  <info>
    <category>Rescue</category>
    <event>Child Abduction</event>
    <urgency>Immediate</urgency>
    <severity>Severe</severity>
    <certainty>Likely</certainty>
    <eventCode>
      <valueName>SAME</valueName>
      <value>CAE</value>
    </eventCode>
    <senderName>LOS ANGELES POLICE DEPT - LAPD</senderName>
    <headline>AMBER ALERT</headline>
    <description>DATE/TIME: 06/11/03, 1915 HRS. VICTIM(S): KHAYRI DOE JR. M/B BLK/BRO 3'0", 40
LBS. LIGHT COMPLEXION. DOB 06/24/01. WEARING RED SHORTS, WHITE T-SHIRT, W/BLEU COLLAR.
LOCATION: 5721 DOE ST., LOS ANGELES, CA. SUSPECT(S): KHAYRI DOE SR. DOB 04/18/71 M/B, BLK HAIR,
BRO EYE. VEHICLE: 81' BUICK 2-DR, BLUE (4XXX000).</description>
    <contact>DET. SMITH, 77TH DIV, LOS ANGELES POLICE DEPT-LAPD AT 213 485-2389</contact>
    <area>
      <areaDesc>Los Angeles County</areaDesc>
      <geocode>
        <valueName>SAME</valueName>
        <value>006037</value>
      </geocode>
    </area>
  </info>
</alert>
```

CAP Use in EAS

The advantages of CAP:

- **Will carry the information conveyed in a current EAS alert, plus much more.**
- **Can carry audio, graphics, maps, and text all in one alert.**
- **It is the same format, no matter who issues it (worldwide standard), and no matter what device is trying to read it.**

CAP Use in EAS

The advantages of CAP:

- **Can be used by not only EAS, but alerting methods such as cellular phones, personal alerting devices, websites, billboards, etc.**
- **It is a text file with attachments, which can be distributed in a variety of means for EAS. (Internet, satellite, DTV data, wireless, etc.)**
- **Emergency Managers can issue just one alert to communicate to numerous devices.**

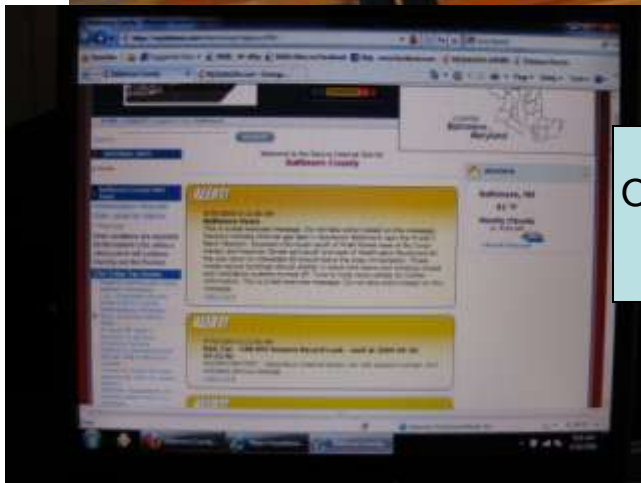
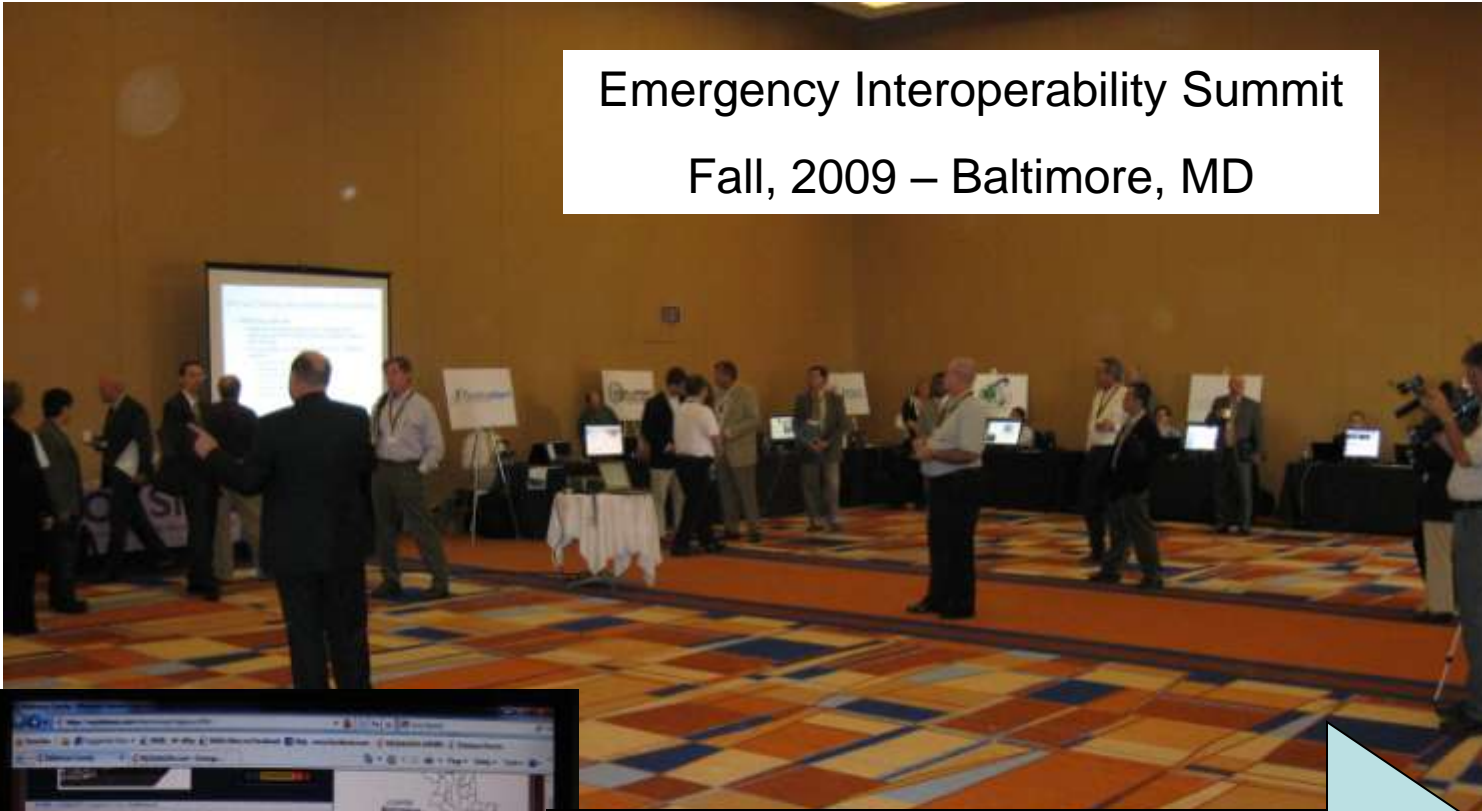
CAP Use in EAS

Advantages of CAP for broadcasters:

- **TV stations will have a text output of the audio message, so they no longer will be limited to the generic EAS crawl.**
- **TV stations will get disaster maps.**
- **Radio stations get printed hard copy.**
- **In addition to an imbedded audio file, most manufacturers intend to include a text-to-speech converter.**

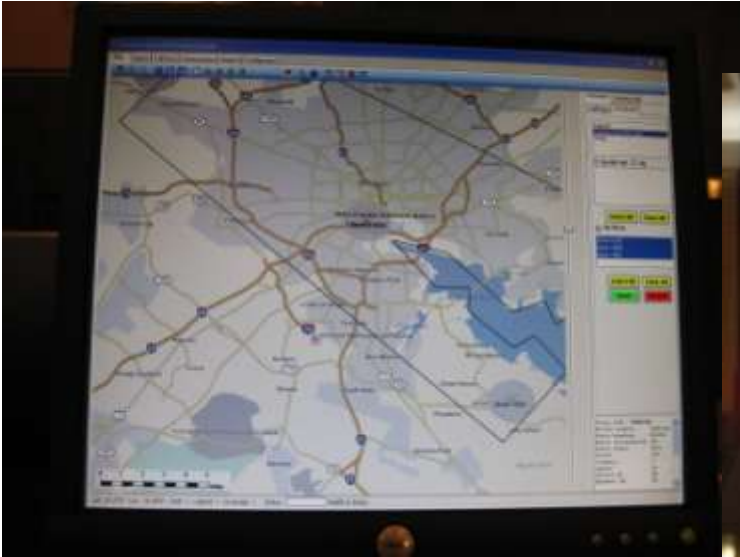
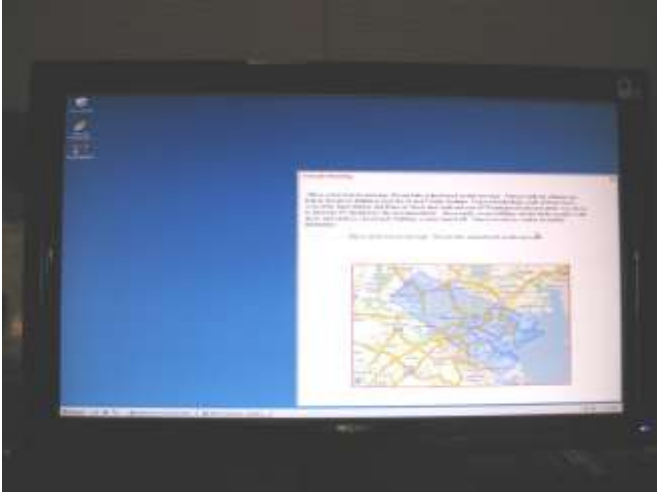
Who is already using CAP?

Emergency Interoperability Summit
Fall, 2009 – Baltimore, MD



Out to federal Open Platform for Emergency Networks (OPEN) backbone and then back to each device.

Who is already using CAP?



Why is FEMA involved in EAS?

In 2006, a Presidential Executive Order declared “the Secretary of Homeland Security shall administer the EAS as a critical component of the public alert and warning system”.

Thus, FEMA now has a more active role in EAS, and much in the FCC EAS CAP rules depends on policies to be established by FEMA.

How is FEMA involved in EAS?

EAS is now part of IPAWS

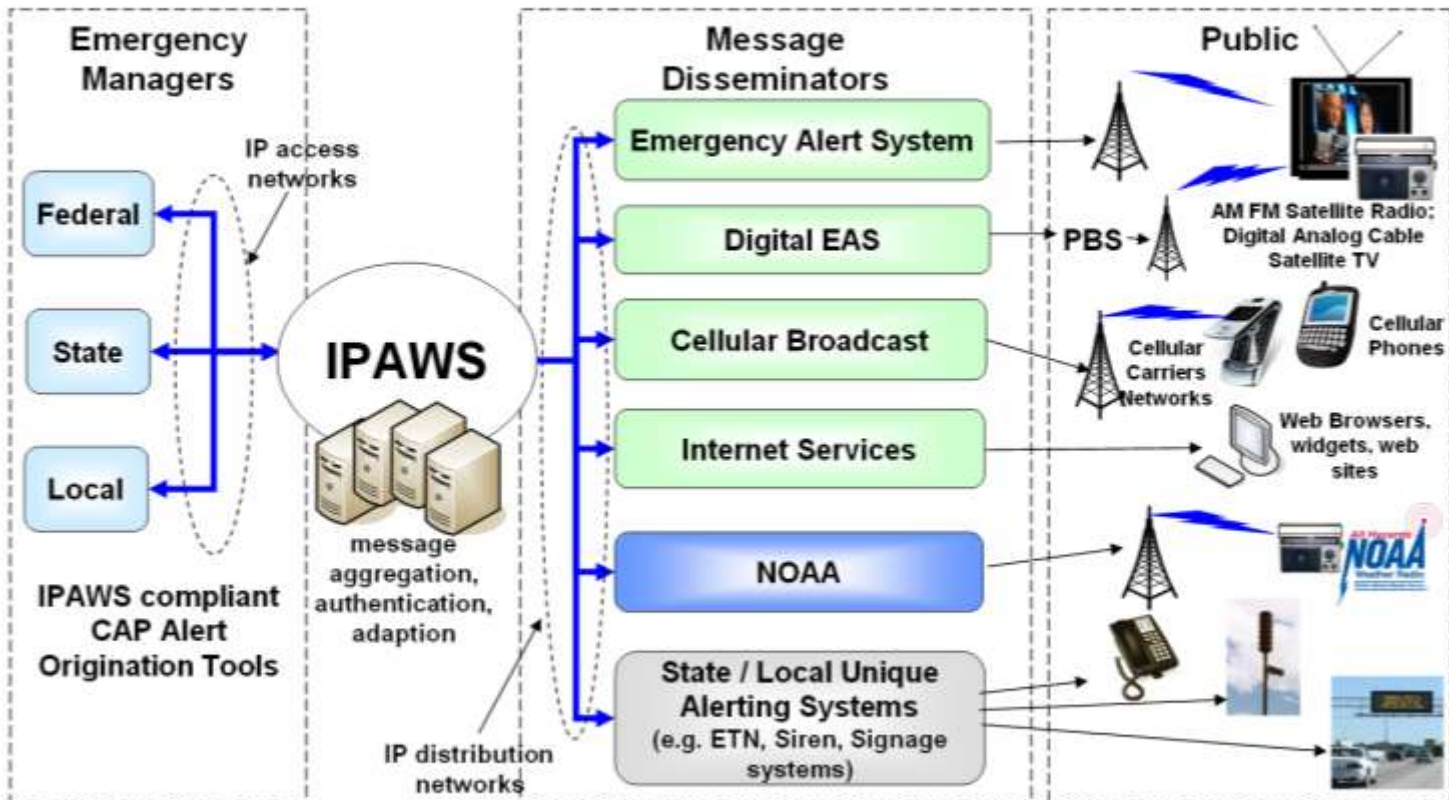
The Integrated Public Alert and Warning System (IPAWS) is FEMA's program to pull all emergency alerting under one umbrella. IPAWS uses CAP to deliver alerts to all devices and systems.

What is FEMA's vision for IPAWS?...

FEMA PowerPoint® Slide:

IPAWS Vision Architecture

Standards Based Alert Message data exchange format, alert message aggregation, shared, trusted access & distribution networks, alerts delivered to more public interface devices



FEMA

FEMA PowerPoint® Slide:

FEMA IPAWS Vision for State and Local Connectivity

Origination Vision: *“FEMA IPAWS will aggregate appropriate CAP messages from authorized officials in Federal, State, local, territorial, and tribal jurisdictions via an IP Service”*

Dissemination Vision: *“FEMA IPAWS will deliver CAP messages to broadcasters in Federal, State, local, territorial, and tribal jurisdictions via an IP Service”*

- ▶ What connectivity to deliver to States and locals?
- ▶ To Stakeholders: “What form of connectivity do you want from FEMA?”



FEMA

FEMA PowerPoint® Slide:

Connectivity

Options:

Medium	Government Services	Commercial Services
Internet	• DM/OPEN Backbone, VPN	• N/A
Leased Line	• Partner Government Networks (e.g., FEMA Switched Network (FSN))	• Private MPLS
SATCOM	• Government Leased Transponders	• TBD
Multimedia Delivery Accelerators	• DHS Internet Traffic Assurance Service	• e.g., Internet Traffic Assurance

Originators:

- From what ingestion point(s) shall FEMA IPAWS aggregate CAP messages?
 - Federal Partners (NOAA and AMBER key nodes)
 - State EOCs (~57 nodes)
 - Local EOCs (~3,500 nodes)

Disseminators

- To what demarcation point(s) shall FEMA IPAWS deliver CAP messages?
 - State EOCs (~57 nodes)
 - Local EOCs (~3,500 nodes)
 - PEPs (~64 nodes end state)
 - Broadcasters (~30,000)

Recommend Internet VPN and the DM/OPEN Backbone for Initial Operating Capability



FEMA

180-day Clock in the 2007 FCC R&O

Within 180 days after adoption by FEMA

- **Stations “will be required to accept alerts in the CAP format”.**
- **CAP messages received from your state Governor must be re-broadcast. (State-level, & geo-targeted local alerts)**
- **Stations must be able to receive any new “Next Generation EAS” networks.**

FEMA Progress toward CAP

FEMA Progress on Equipment Testing:

- **The IPAWS CAP Profile outlining the technical requirements for EAS CAP has been approved.**
- **FEMA recently awarded the contract to a lab which will perform conformance testing on vendors' EAS CAP gear.**
- **Equipment meeting the IPAWS CAP Profile requirements will be placed on a web-based Qualified Products List.**

FEMA PowerPoint® Slide:

CAP Profile and Standards Development Status

OASIS CAP v1.2 IPAWS Profile Status

- First 60-day Comment Period ended on May 2, 2009
- Additional 15-day Comment Period to address changes (Digital Certificate and CMAS changes) will run July 27- Aug 11, 2009
- Estimated OASIS IPAWS Profile completion is Aug/Sep

Proposed Conditions to be satisfied before IPAWS adoption of CAP:

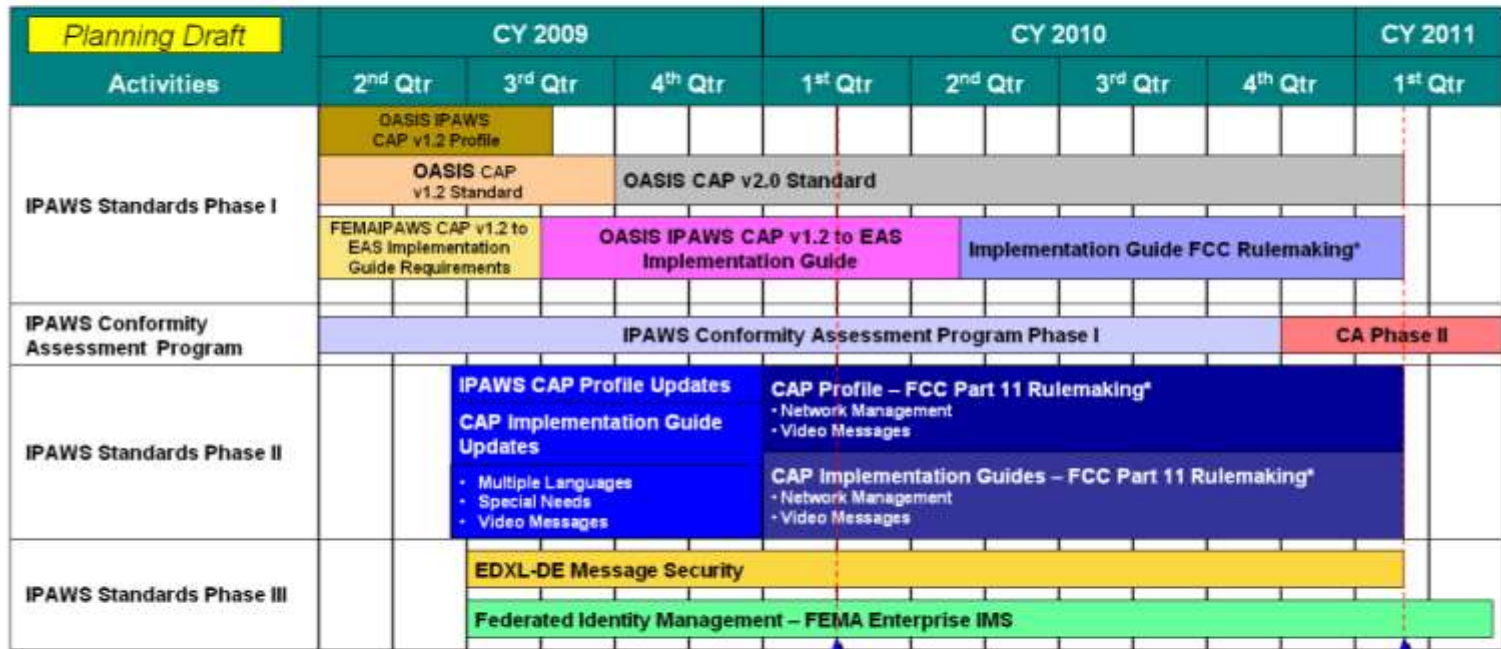
- Stand-up IPAWS Conformance Lab and begin testing
 - Develop CAP to EAS Implementation Guide for CAP to EAS Translation
 - Demonstrate delivery of federal message in OASIS IPAWS CAP v1.2 Profile format to a National Primary Entry Point Station
 - Propose and start OASIS process on IPAWS CAP Security Requirements
- ➔ **FEMA's adoption of CAP**



FEMA

FEMA PowerPoint® Slide:

Tentative Standards Timeline



* Or Alternate Strategy for Enforcement

Jan 2010 – FEMA adopts CAP v1.1/1.2, IPAWS CAP 1.2 Profile, and Implementation Guide

Jan 2011 – FEMA IPAWS meets industry needs for Standards and Protocols



FEMA

180-day Clock Roll

How soon might the 180-day clock roll?

- **FEMA's original target was Jan. 2010.**
- **Latest "best guess" (FEMA's language) is August 2010.**
- **It would appear from the FEMA timeline that Jan. 2011 might be a more reasonable target.**
- **FEMA looking at suggestion from FEMA Working Group to make it 1/1/2012, same as CMAS (Commercial Mobile Alert System).**

Broadcaster EAS CAP Equipment

EAS CAP Decoder Choices

- **Buy a new integrated CAP+EAS unit to replace your current EAS unit.**
- **Keep current EAS unit and buy a new CAP-to-EAS Converter which receives the CAP messages, converts them to EAS, and feeds them to your current EAS unit. (Note: Be sure to ask if the Converter can communicate to your current EAS unit the must-carry status of a CAP message received from the Governor.)**

May need equipment to receive “Next Generation EAS” networks if adopted by FEMA.

Broadcaster EAS CAP Equipment

Should I beat the rush and buy now?

- **Unless your legacy EAS unit dies and you have no choice, you may benefit by waiting for the FEMA Qualified Products List to pick the unit that best meets your needs.**
- **If you are an early adopter, the EAS+CAP units currently available are all software-based so should have no problem upgrading to any FEMA IPAWS-CAP tweaks (but get that in writing from the vendor).**

EAS+CAP units currently range \$2500-3000

CAP-to-EAS Converters range \$2000-2500

Wisconsin EAS CAP Planning

State EAS Committee must:

- **Develop new CAP delivery network (not yet sure of FEMA's intended network)**
- **Assist Governor with CAP capability**
- **Submit revised State EAS Plan to FCC**
- **CAP alerts in a state will not happen until an FCC-approved State EAS Plan exists to distribute the CAP alerts.**

Latest IPAWS Updates from FEMA

- **Expect to deliver CAP messages to the PEP stations by Jan. 2010.**
- **Planning the first-ever nationwide EAN test by the end of FY 2010.**
- **Adding 38 new PEP stations, for a total of 74 (90% coverage) by Oct. 2011.**
- **On schedule to achieve their IPAWS vision in FY 2012 (program completed).**

FEMA PowerPoint® Slide:

IPAWS Plan for Training and Testing

E.O. 13407 Function 6: Ensure the conduct of training, tests, and exercises for the public alert and warning system.

▶ Training

- Partner with the FEMA NIMS to develop and offer alert and warning training for message originators
- Coordinate with other FEMA and DHS partners to incorporate public alert and warning procedures in state and local emergency communications planning and documentation
- FEMA IPAWS has established a relationship with FEMA Emergency Management Institute to develop training for EAS

▶ Tests and Exercises

- Continue weekly closed-loop testing of the national portion of the EAS
- Partner with the FCC to explore methods and procedures enabling a more comprehensive test for the legacy EAS dissemination
- Incorporate network management and automated testing and status reporting in new IPAWS architectures and protocols



FEMA

EAS CAP Resources

CAP Information:

www.incident.com/CAP

IPAWS Home Page:

www.fema.gov/emergency/ipaws/

NWS CAP Alerts:

www.weather.gov/alerts-beta

Update on EAS CAP



Today's Presenter:

Gary Timm, Broadcast Engineer

Journal Broadcast Group – Milwaukee

Broadcast Chair, Wisconsin EAS Committee

gteas@sbcglobal.net