

**OPEN SIG July 21, 2010**



## **DM-OPEN 2.0 Update**

**Gary Ham, DM System Architect**

## **CAP Implementation in Canada**

**Doug Allport, Executive Director**

**Canadian Association for Public Alerting and Notification (CAPAN)**

## **Cross-border Collaboration**

**Mark Lucero, Engineering Chief**

**FEMA Integrated Public Alert and Warning System (IPAWS)**

**Call: 1-800-366-7242 PIN: 3647 6736#**

**<http://www.FEMA.gov/disastermanagement/>**

# Status report on IPAWS-OPEN 2.0

- **Complete:**
  - Stakeholder Requirements
  - Detailed Design
  - Development / Unit Test
  - Test Documentation
  - Deployment to Test Environment
  - Internal Test Execution (except for final report)
- **In Progress:**
  - FEMA QA Validation
- **Pending:**
  - Beta Environment Setup
    - Staggered growth of external developer base
    - I have the list and will let all of you know



**Homeland  
Security**



# UAT and External Developer Process

- Internal UAT in TDL Environment
  - Three round of testing were needed.
  - Updates to documentation still need. All code works as designed.
- Beta Site will be available
  - Will replace interopdev at Stennis.
  - Will allow you to build for IPAWS-OPEN.
  - X509 certificates will be required. We will provide for beta site.
- Operational site
  - Totally separate from beta environment.
  - Customer site X509 will need to replace your system certificate for each customer.



**Homeland  
Security**



Canadian Association  
for Public Alerting and Notification

Association Canadienne  
d'avis et d'alert au Public



# CAP Implementation in Canada

**Doug Allport**

CAPAN Executive Director

Special Advisor - MASAS National Implementation Team

NAAD Advisory Council Member

July 21 2010

# Today's Presentation

- CAPAN
- Canadian implementation of CAP
  - CAP-Canadian Profile (CAP-CP)
  - CAP Event Location Layer
  - CAP-CP Symbology
- New National CAP-CP Alerting Systems
  - Multi-Agency Situational Awareness System (MASAS)
  - National Alert Aggregation and Dissemination (NAAD) System
- Next steps

# CAPAN

- Canadian Association for Public Alerting and Notification
  - Federally incorporated not-for-profit association
  - Defined by 20+ municipal, provincial, federal, first nation, academic and business alerting experts
  - Leading / supporting alerting efforts
    - Primary focus has been “middle mile” technical matters
    - Will give more attention to social, business issues



# CAP-Canadian Profile (CAP-CP)

- Compliant with CAP
- Adds a few implementation rules
  - Must include “one only” CAP-CP event type per alert
  - Must include a CAP-CP location reference
- Purpose
  - Support automated translation, policy, ... in our bilingual country (EN/FR)
  - Address recognized implementation challenges with CAP
    - Ex. Time stamp issue resolved in 1.2, updating multiple events in one alert

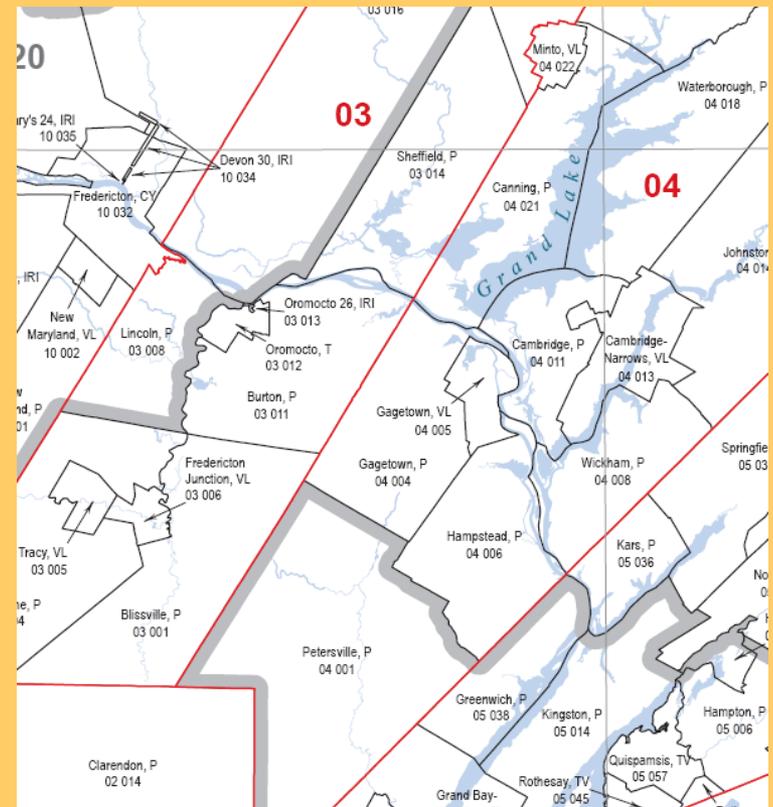
# CAP-CP Event References

- Comprehensive List (140 events)
  - Hazardous events
  - Civil events
  - Public service disruptions
    - Roads, utilities, schools, etc.
- Two tiers
  - General and more specific
    - Ex. Fire: Wildfire, Forest Fire, Industrial Fire, ...

# CAP-CP Location References

## 13 - New Brunswick

Census divisions			
Code	Name	Type	
<a href="#">1301</a>	Saint John	County	
<a href="#">1302</a>	Charlotte	County	
<a href="#">1303</a>	Sunbury	County	
<a href="#">1304</a>	Queens	County	
<a href="#">1305</a>	Kings	Census subdivisions	
<a href="#">1306</a>	Albert	Code	Name
<a href="#">1307</a>	Westmorland	<a href="#">1301001</a>	Saint Martins
<a href="#">1308</a>	Kent	<a href="#">1301002</a>	St. Martins
<a href="#">1309</a>	Northumberland	<a href="#">1301004</a>	Simonds
<a href="#">1310</a>	York	<a href="#">1301006</a>	Saint John
<a href="#">1311</a>	Carleton Place	<a href="#">1301016</a>	Musquash
<a href="#">1312</a>	Victoria	County	
<a href="#">1313</a>	Madawaska	County	
<a href="#">1314</a>	Restigouche	County	
<a href="#">1315</a>	Gloucester	County	



Statistics Canada - Standard Geographical Classification (SGC)

# Auto Translation & Text to Speech

- Compose short messages, in any language, using translated values for the following:
  - CAP-CP <eventCode> associated term
  - CAP-CP <geocode> associated name
  - CAP <responseType> values, statements
  - CAP <urgency>, <severity>, <certainty> values, statements
- Plus:
  - CAP <expires>
  - CAP <senderName>

# Bilingual forms for unilingual issuers

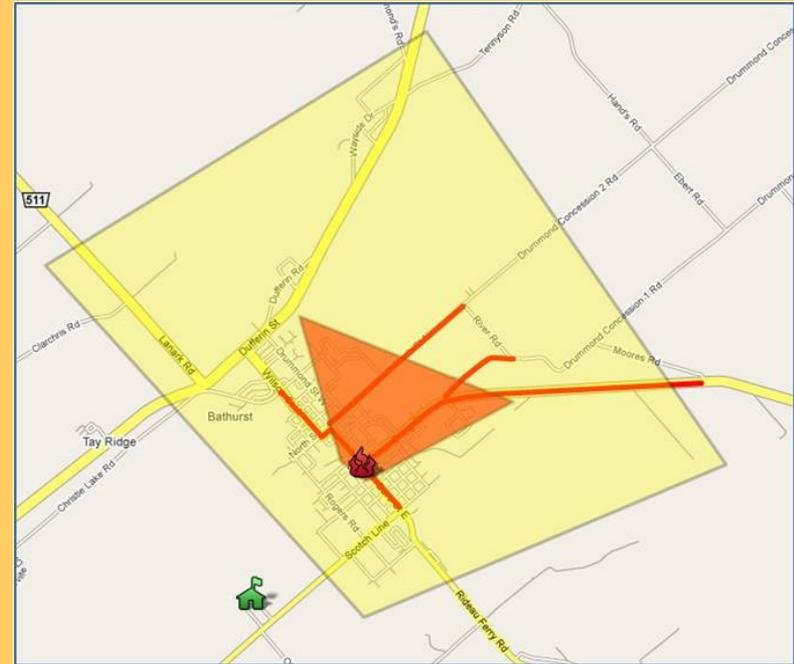
English Information	L'information française
Headline <b>Forest Fire Alert for Smith Township</b>	Titre
Description <b>A small forest fire is out of control just south of Highway 10 at Smith Road.</b>	Description
Instruction	Directive
Web <b>www.gnb.ca/public/fire-feu/index-e.asp</b>	Site Web <b>http://www.gnb.ca/public/fire-feu/index-</b>
Contact <b>888-888-8888</b>	Personne
Event <b>Fire - Forest Fire</b>	Événement <b>Incendie - Feux de forêts</b>
Category <b>Fire</b>	Category <b>Fire</b>
Urgency <b>1 Immediate</b>	Degré d'urgence <b>1 Immédiate</b>
Severity <b>3 Moderate</b>	Degré de gravité <b>3 Modérée</b>
Certainty <b>1 Observed</b>	Degré de certitude <b>1 Observé</b>
Response Type <b>Monitor</b>	Type de réponse <b>Surveiller</b>
Effective	En vigueur
Onset	Début
Expires <b>5/22/2009 11:53:14</b>	Expire <b>5/22/2009 11:53:14</b>
Sender Name <b>NB Forest Fire Management</b>	Nom de l'expéditeur <b>NB</b>
Icon Placement	Emplacement de l'icône

# Policy Implementation

- Issuer restrictions based on authority:
  - Geopolitical locations
  - Event types
  - Severity
  - Response types
- Ex. Only AMBER Alert coordinators may issue AMBER Alerts.
- Ex. The Department of Transportation for Smalltown, Canada may only issue road alerts for Smalltown, with severity minor, and without a response type.

# CAPAN CAP Event Location “Layer”

- CAP defines the area to be alerted
  - Ex. Yellow polygon
- Layer offers event location references within a CAP message
  - Ex. Icons, orange lines, orange polygon
  - Points, lines, circles, polygons to identify event location, segment of road or coastline, plume cloud, fire perimeter, etc.
  - Use CAP <parameter>



# CAPAN CAP-CP Symbology Service

- Experimental service!!!
- Symbols and URI associated with CAP-CP events
  - Symbols come from new national symbology effort
- Systems can poll service for symbols
- URI's can be inserted in feeds for other systems to poll

civilEvent		<a href="http://www.capan.ca/geopresent/icon/civilEvent/">http://www.capan.ca/geopresent/icon/civilEvent/</a>
coldWave		<a href="http://www.capan.ca/geopresent/icon/coldWave/">http://www.capan.ca/geopresent/icon/coldWave/</a>
crime		<a href="http://www.capan.ca/geopresent/icon/crime/">http://www.capan.ca/geopresent/icon/crime/</a>
damOverflow		<a href="http://www.capan.ca/geopresent/icon/damOverflow/">http://www.capan.ca/geopresent/icon/damOverflow/</a>
dangerPerson		<a href="http://www.capan.ca/geopresent/icon/dangerPerson/">http://www.capan.ca/geopresent/icon/dangerPerson/</a>

# Seeing CAP-CP event locations was key to our adoption success!

Web Images Videos Maps News Shopping Mail more ▾ doug@allportgroup.com | My Profile | New! | Web History | My Account | Help | Sign out

Google maps <http://nb-masas.ess-host.com/capcp-demo/CurrentKML.aspx?output=KML> Search Maps Show search options

Find businesses, addresses and places of interest.

Get Directions My Maps Save to My Maps

Displaying content from [nb-masas.ess-host.com](http://nb-masas.ess-host.com)

The content displayed below and overlaid onto this map is provided by a third party, and Google is not responsible for it. Information you enter below may become available to the third party.

### New Brunswick MA-SAS KML Feed

- [Be On the Look-Out For a 2008 Yellow Hummer \(H3\)](#)  
Sent: 3/23/2010 10:12:41 AM (GMT)Sender:
- [Accident](#)  
Sent: 3/23/2010 7:48:19 AM (GMT)Sender: Denis
- [Gondola Point Ferry Service Reduction](#)  
Sent: 3/22/2010 8:33:06 AM (GMT)Sender:
- [New Missing Person Symbol](#)  
Sent: 3/23/2010 6:11:36 PM (GMT)Sender:
- [Budwom City Airport Closure](#)  
Sent: 3/22/2010 11:13:26 AM (GMT)Sender:
- [test 002](#)  
Sent: 3/23/2010 1:05:10 AM (GMT)Sender: Denis
- [Air Canada Flight](#)  
Sent: 3/23/2010 6:42:02 PM (GMT)Sender:
- [Miramichi Airport Snow Clearing](#)  
Sent: 3/22/2010 8:37:08 AM (GMT)Sender:
- [AMBER Alert](#)  
Sent: 3/23/2010 6:54:58 PM (GMT)Sender:
- [High Tides - Alama](#)  
Sent: 3/22/2010 8:55:00 AM (GMT)Sender:
- [test 008](#)  
Sent: 3/23/2010 7:44:26 AM (GMT)Sender: Denis
- [Sour Gas release](#)  
Sent: 3/23/2010 7:20:10 PM (GMT)Sender:
- [test 008](#)  
Sent: 3/23/2010 9:21:26 AM (GMT)Sender:
- [Fire - Forest Fire Jacques Doiron Exercise](#)  
Sent: 3/23/2010 5:22:28 PM (GMT)Sender:
- [Explosion](#)  
Sent: 3/22/2010 3:26:12 AM (GMT)Sender: PEI
- [causeway closed](#)  
Sent: 3/22/2010 12:02:59 PM (GMT)Sender:
- [417 East Bound Closed at Boundary Road](#)  
Sent: 3/22/2010 3:42:58 PM (GMT)Sender:

### Confederation Bridge Wind Watch

Sent: 3/23/2010 5:34:09 AM (GMT)  
Sender: Trans@GNB  
Status: Actual  
Scope: Public  
Description: Commencing approximately 22:00hrs, March 23, 2010 winds are projected in the 60-80KM range gusting to 90KM. Forecast indicates conditions will remain the same until approximately 10:00hrs, March 24, 2010.  
Instruction: wind conditions on March 23, 2010 may result in restrictions of traffic on the Bridge.  
Download: [CAP XML](#) [HTML](#)  
[Directions](#) [Search nearby](#) [Save to...](#) [more ▾](#)

©2010 Google - Map data ©2010 Google, Tele Atlas - [Terms of Use](#) [Report a problem](#)

# MASAS – March 2009

- Multi-Agency Situational Awareness System
  - GeoConnections initiative
  - Aggregation system
    - Official to official CAP-CP alerts
    - Shared situational awareness information
- MASAS initiatives
  - New Brunswick MASAS / National “Sandbox”
    - State of Maine, International Emergency Management Group (IEMG)
  - BC MASAS, federal, ...
  - MASAS II specifications in development
    - Will include US interoperability

# NAAD – June 2010

- National Alert Aggregation and Dissemination System
  - Result of national regulatory decision
  - Privately owned: Pelmorex - The Weather Network / MétéoMédia
  - National advisory council: Sr. Gov, BDU's, CAPAN
  - Aggregate and disseminate official public alerts in CAP-CP freely
  - Communal user interface for authorized users
- Alerts supported
  - All hazards, civil events, public service disruptions
  - All urgencies, severities, certainties
- [www.AllChannelAlert.com](http://www.AllChannelAlert.com)

# The Weather Network / MétéoMédia

**Weather Centre**  
Desktop

**WeatherEye**  
Looking for weather information from your computer desktop, dashboard or sidebar?

**Desktop: TrafficEye PC**  
Know before you go - use the TrafficEye to plan ahead!

Download TrafficEye  
TrafficEye provides you with:  
Traffic Flow  
Road conditions  
Traffic Cameras

**New Brunswick Emergency Measures is alerting the public to a flood warning for the lower Saint John River and its tributaries.**

**WarningsDirect**  
Sleep better knowing The Weather Network will alert you, anytime BAD weather is headed in your area.  
Receive EC Warnings and/or Watches for your region\* (see...)

**weather to GO**  
Don't be undecided anymore! Plan a perfect day with WEATHER at your finger tips.

**WarningsDirect**  
Stay Alert! Stay Alive!

For just \$3.00 a month, your family and you can all be alerted to your area.

Sign-up Here! OR Wireless Sign Up: Text Warn (eg. Toronto W...)

**People With A Sunny Outlook**  
Highway Conditions  
Maritimes

**Weather Forecast: Kanata, Ontario**  
Updated: Tuesday, December 9, 2008, 9:32 PM EST

**Current Weather**  
-10°C  
Light snow  
Feels Like: -17  
Wind: NE 15km/h  
Sunrise: 7:30  
Sunset: 16:19  
Ceiling: 700 ft

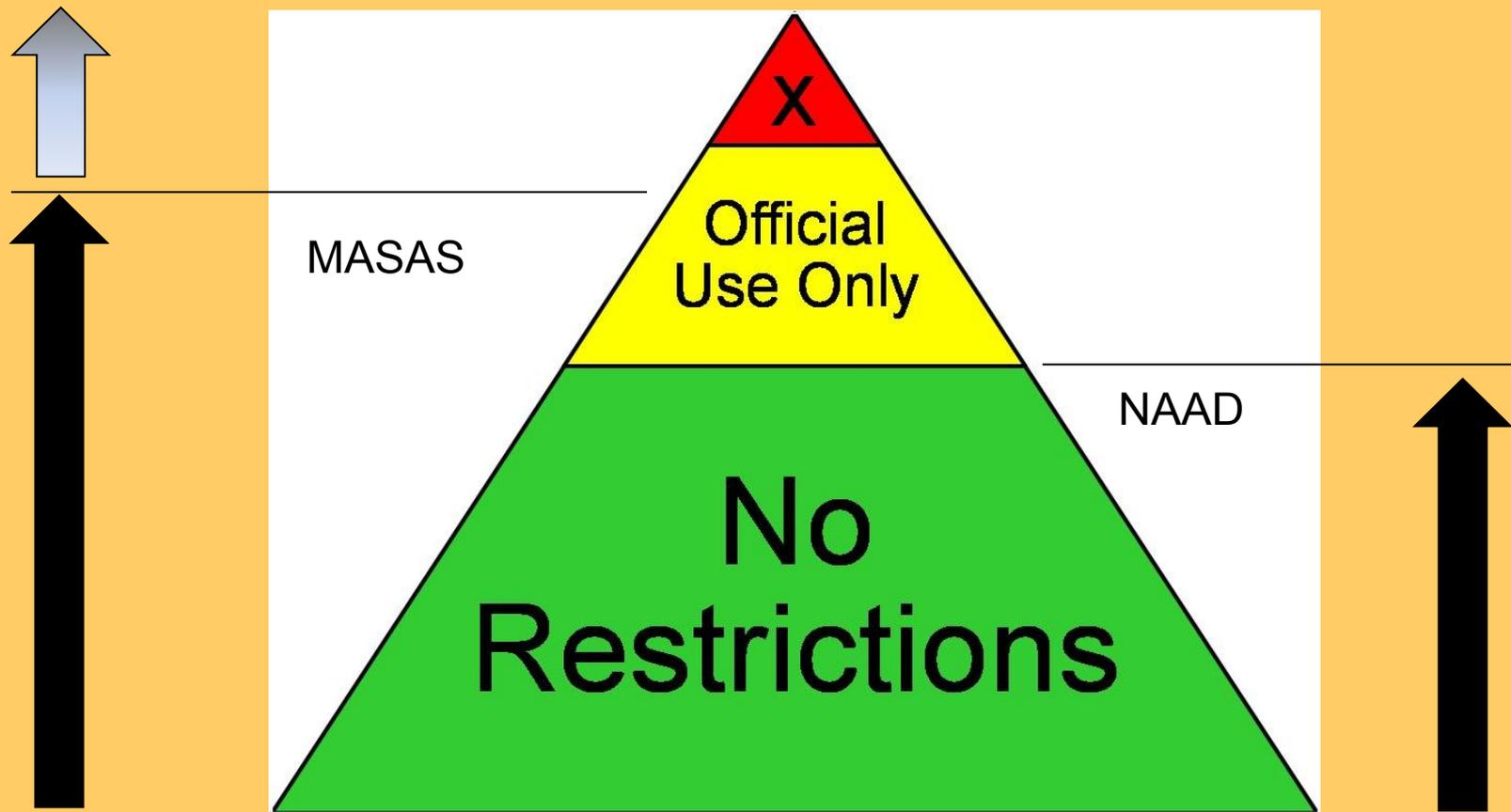
**Short Term Forecast**  
Tuesday Evening: Freezing rain, 6°C  
Tuesday Overnight: Freezing rain, 6°C  
Wednesday Morning: Light snow, -11°C  
Wednesday Afternoon: Variable cloudiness, -7°C

**RSS Feeds:**

- What is RSS?
- How do I use RSS?
- Where can I access RSS feeds from The Weather Network?
- What are the terms of use for The Weather Network's RSS feeds?
- Get started!

**What is RSS**  
RSS, which stands for Really Simple Syndication, is a method of tracking frequently updated content from a particular website. RSS feeds typically provide some topline information, such as a headline and the first few lines of a story, along with a link to the website for full details. The power of RSS is in the ability to keep track of your favourite news sources in one place.

# Scope: Content Sensitivity



# Next Steps

- CAP-CP revision for CAP 1.2 (Q3-2010)
- MASAS II details (Q3-2010)
  - CAP-CP, CAP-IPAWS, EDXL-DE, ...
- CAP-CP standardization/compliance plan (Q4-2010)
- NAAD weather, provinces/territories (Q4-2010)
- MASAS / IPAWS Open interoperability ...



# Integrated Public Alert and Warning System

Program Update to DM SIG

21 Jul 2010



# Agenda

- ▶ **Quick IPAWS Program Overview**
- ▶ **Cross Border Alert and Warning**
- ▶ **Developing the IPAWS Standards of Practice**
- ▶ **National Council on Independent Living Demo**



# The IPAWS Program Vision, Mission, and Goals

## *Vision*

Timely alert and warning to American citizens in the preservation of life and property.

## *Mission*

Provide integrated services and capabilities to Federal, State, territorial, tribal, and local authorities that enable them to alert and warn their respective communities via multiple communications methods.

## *Goals*

To attain the Vision and accomplish the Mission, FEMA has established three overarching strategic goals:

Goal 1 – Create and maintain an integrated interoperable environment for alert and warning

Goal 2 – Make Alert and Warning More Effective

Goal 3 – Strengthen the Resilience of IPAWS Infrastructure



# IPAWS Vision

*Provide Timely Alert And Warning To American People To Preserve Life And Property*



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



**IPAWS Aggregator**



**Television**



**Radio**



**Cell Phone**



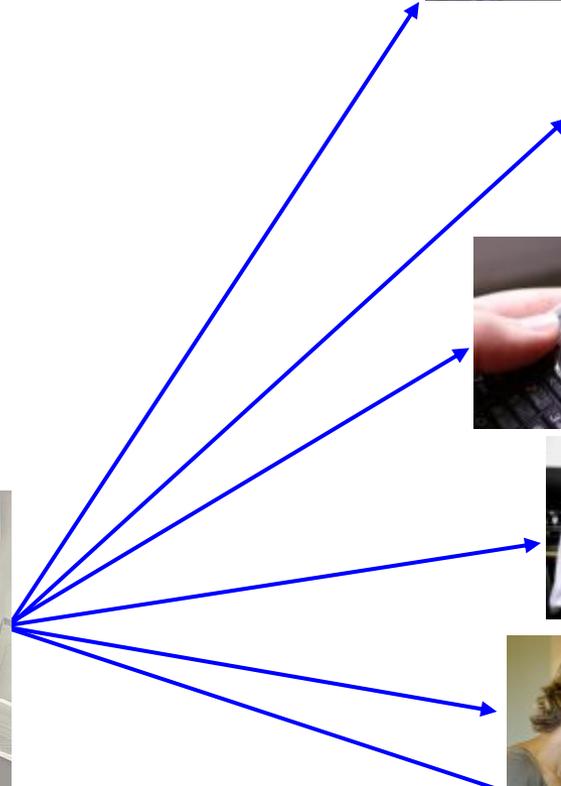
**Computer**



**Home Phone**

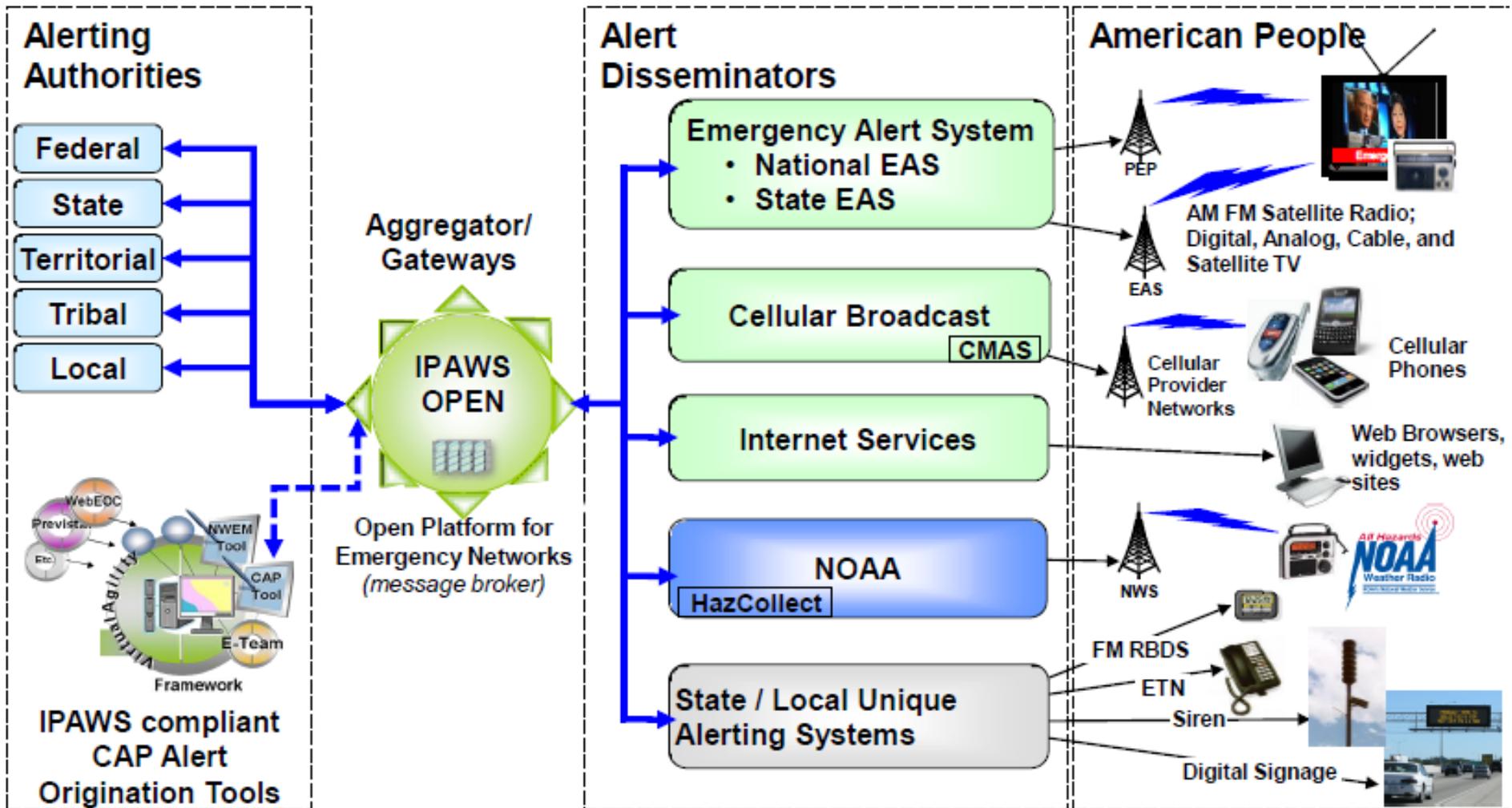


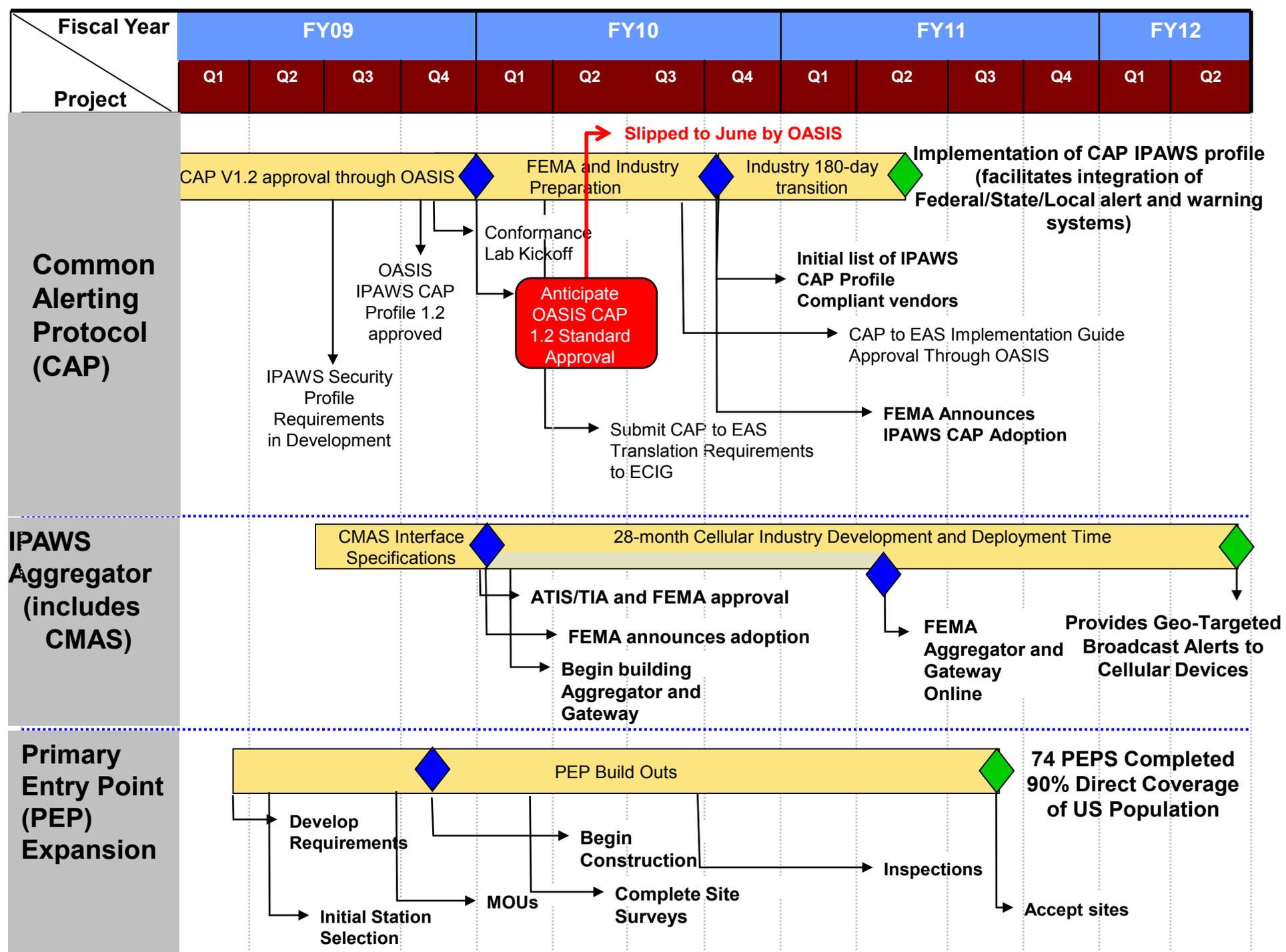
**Public Signage**



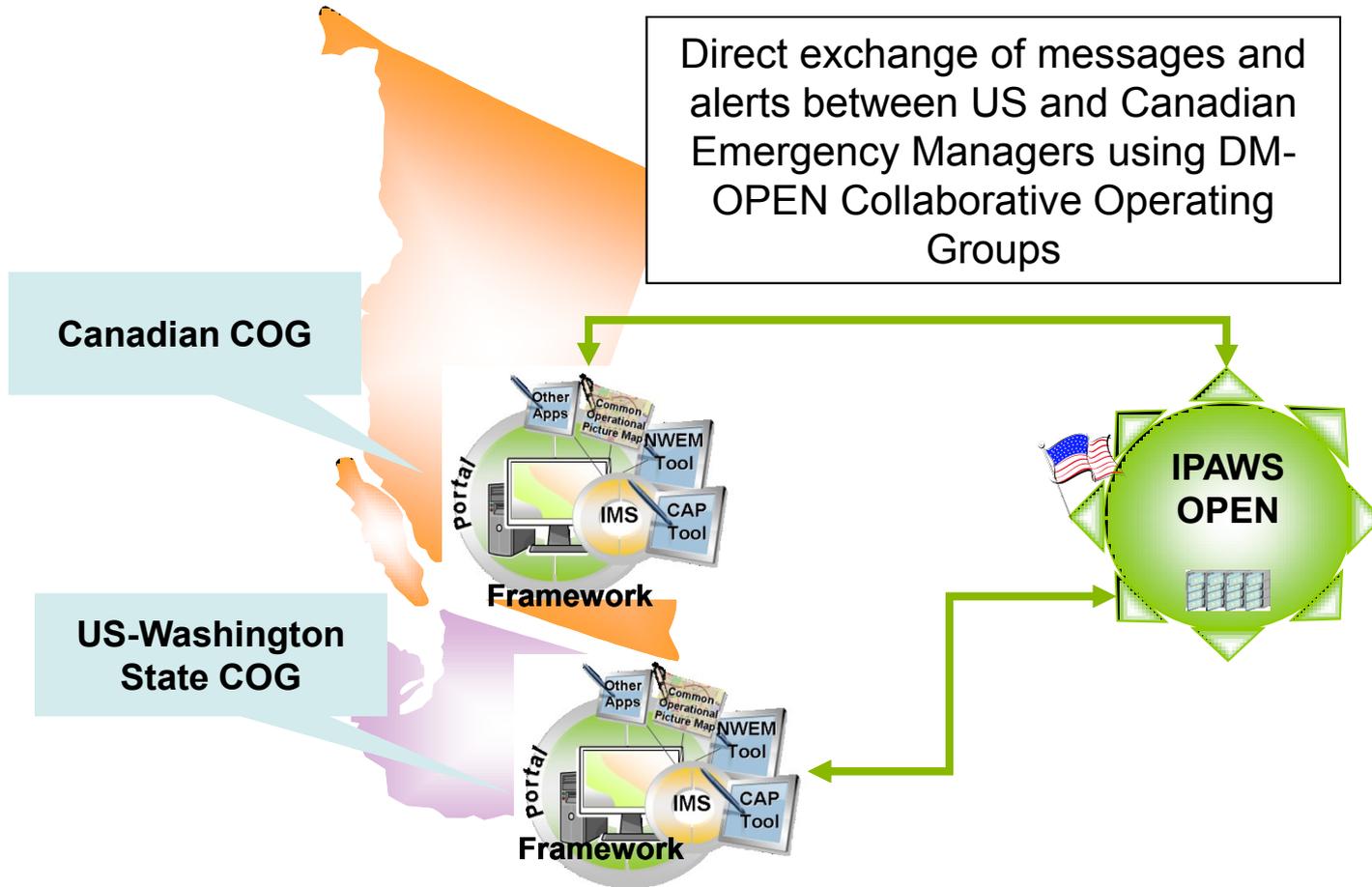
# IPAWS Architecture

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

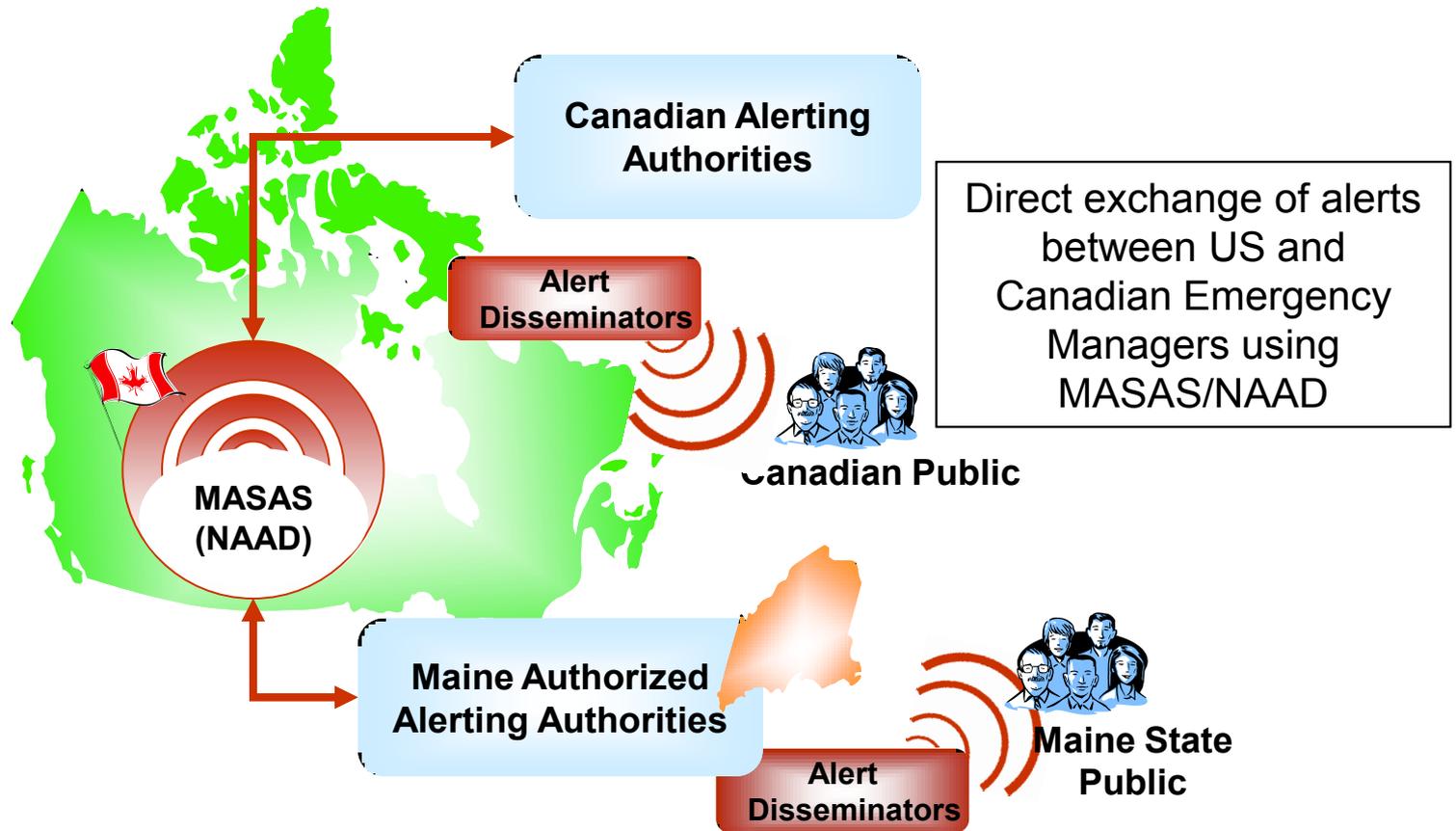




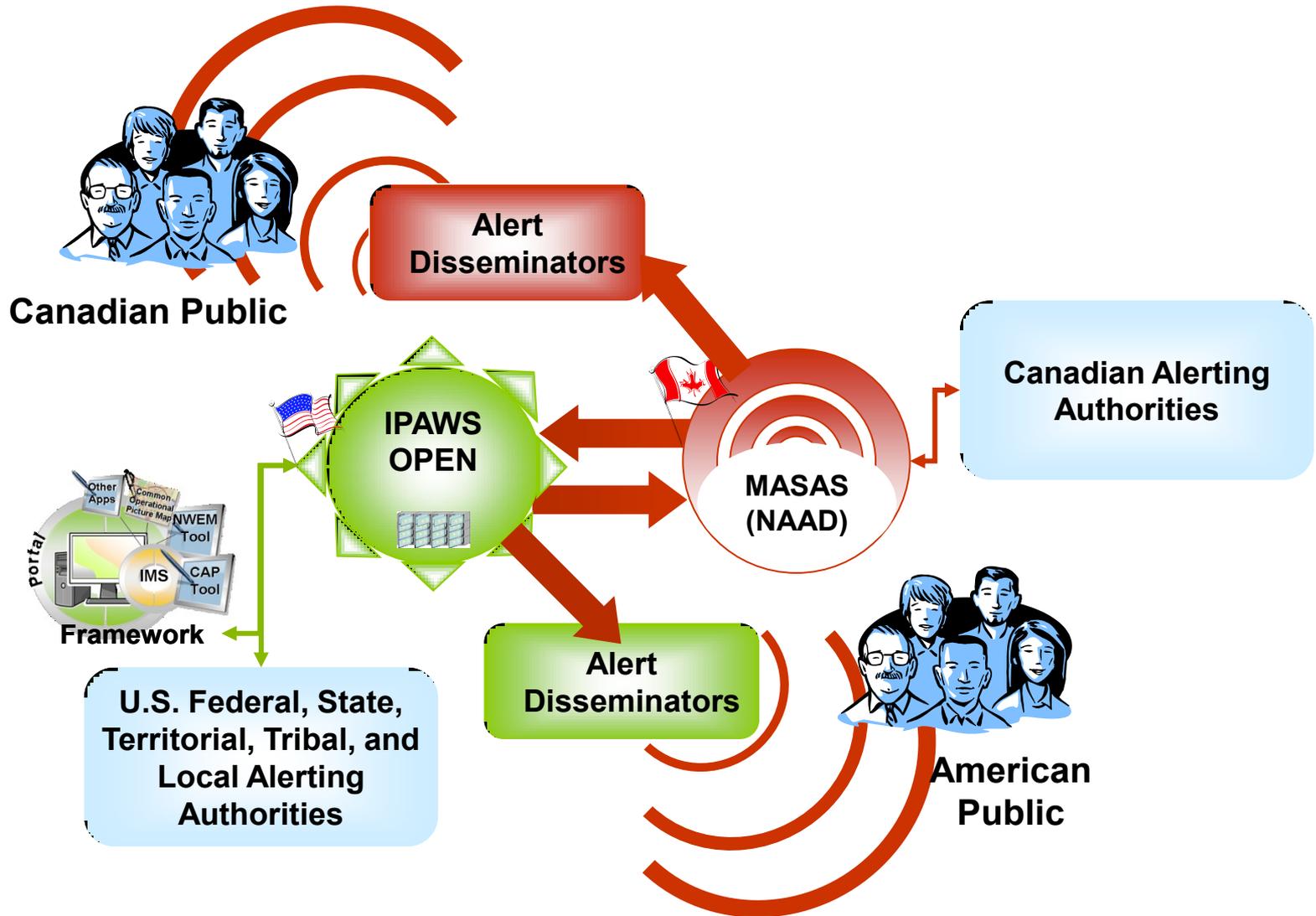
# Canadian Alerting Authority with a COG ID



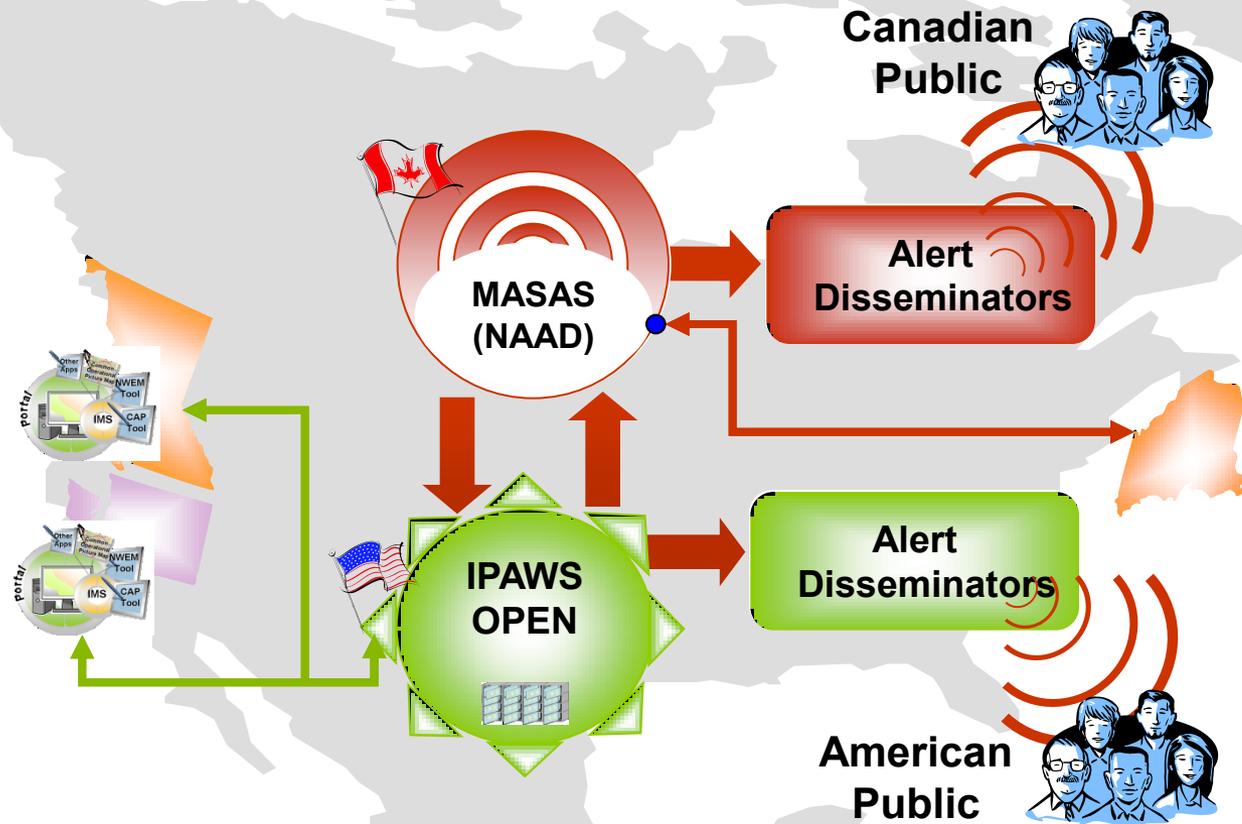
# US Alerting Authority with Canadian MASAS Account



# US IPAWS Interconnection with Canada MASAS/NAAD



# Combined Solution for Robust Alerts and Warnings



## Developing the IPAWS Standards of Practice (easy)

- ▶ Training will be provided (and required) for alerting officials on best practices for crafting messages
- ▶ At a minimum, emergency managers will need a computer and internet connectivity to use IPAWS
- ▶ Use of IPAWS will be available at no charge to emergency managers
- ▶ Alert origination can be accomplished using any CAP-based system
- ▶ IPAWS can be used to trigger existing CAP-capable state/local alerting systems

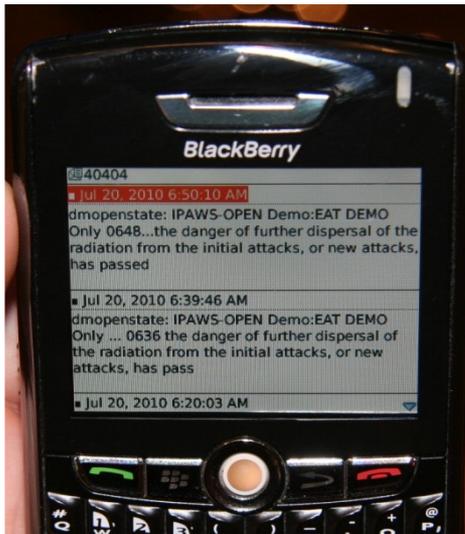
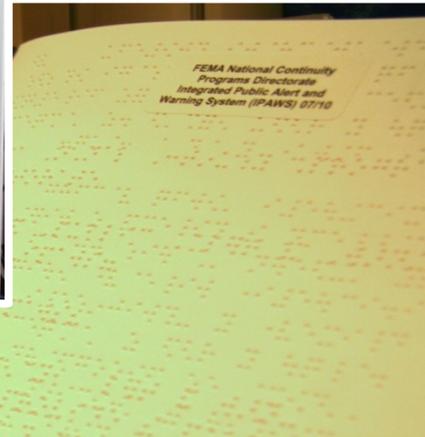


## Developing the IPAWS Standards of Practice (not so easy)

- ▶ Will I be able to select the alerting method (i.e. I want to send an alert over CMAS, but not over EAS) or should this selection be made automatically?
- ▶ What are the consequences of sending out a bogus message?
- ▶ What if a hazard threatens people beyond jurisdictions? Can I alert people in another jurisdiction? Do I allow my people to receive alerts from other jurisdictions?
- ▶ What if a hazard threatens people beyond the border? Can I alert people across the border? Do I allow my people to receive alerts from foreign emergency managers?
- ▶ What certification, re-certification is necessary, and how often?



# National Council on Independent Living Conference Jul 19 – 20



# Comments and Questions

▶ **IPAWS Website** - <http://www.fema.gov/emergency/ipaws>

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