The Anguilla Warning System

Investigating the CAP experience

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What is it?

- A Common Alerting Protocol (CAP) Based All Hazard Warning System. CAP is an XML based protocol and is the common element of the individual warning components which allows all components to be triggered by a single action.

- You can think of CAP as an interpreter which allows distinct warning mechanisms to understand and react to a single alert message.

- The system has been operational in Anguilla since 2007.

Where we are coming from…

"In the beginning we created the AWS and we saw that it was good.."

In the beginning the Anguilla Warning System was robust enough to include several means of alerting the Anguilla public to hazardous situations.

These included the BAMBOX which is an internet based alert client.

The Early Warning Alert Receivers

FM Broadcast Interruption on the Government radio station.

Public Alert Dissemination. How?

- Clearly the most important part of Public Warning is the delivery of the warnings in a timely manner.

- CAP provides the means of generating alerts readily for distribution but the final link in the chain is how the messages reach the community.

- Every community is different. What works in one town or parish may not be effective for the next one 10 miles over. CAP allows you to the freedom of choice of who to warn, where to alert and what methods you use to effect warnings.

Alert Dissemination Methods

- There are many ways to deliver warnings to affected populations. These include but are not limited to:

- Computer "popups" e.g. BAMBOX

- Smartphone Applications

- Broadcast interrupt devices (radio and television)

- Specialised Warning Receivers (e.g. RDS receivers , Marine Receivers)

- Mass Email

- Warning Sirens

- Mass SMS

- Cell Broadcast

Alert Dissemination Methods

- Each method listed above has its own distinct advantages and disadvantages.

- It is for this reason that a functional warning system MUST employ several of these methods in order to ensure message delivery.

- The choice of methods to be employed would take into account many factors which may be unique to the particular circumstance. These include cost, availability, intrusiveness etc.

BAMBOX

Computer client

- Internet based "pop up" message client that can deliver warning messages along with text and sound.

- Freely downloadable to any member of the public (on Windows machines).

RDS Early Warning Receiver

RDS Receiver

- Despite its low cost , RDS early warning receivers feature sophisticated alerting technologies which allow them to sound loud sirens, display messages and tune into radio stations broadcasting alert messages automatically. These units are able to be activated even if powered off and put away!

Smartphone Application

Smartphone Application

- Selectable alerting mechanisms : Vibrate , alarm and flashing LED supported.

- Selectable Polling interval : Change the frequency at which the app checks for alerts to potentially reduce bandwidth and or save battery life.

- Persistent notification : While alerts are active the app will continue to notify you of this fact until the alerts are acknowledged.

- The app supports Over the Air (OTA) updates and notifies you of an available update.

- App supports Text to Speech on compatible phone.

- Application is free of cost and readily available.

AWS through the years

2007	2009	2010-2013	2014 - Beyond
• Initial Protocol and Policy development • CAP Server • Single Radio Interrupt Unit • RDS receivers and transmitter • Initial BamBox for Staff Notification	•Improved BamBox (repurposed for Public Notification) •Development of Public Email notification , (website and server) •Development of Public Outreach materials for Anguilla Warning System.	•Tsunami "hot button" software and hardware designed in house •Blackberry App developed for Anguilla Warning System •Expansion of FM broadcast capability. (6 DASDEC units) •Marine Alert and Weather Alert Technology added to system. •Multi lingual alert dissemination capability •Multi lingual "Stay Safe" public Education Campaign.	•Tsunami sirens to be installed in all communities •New CAP 1.2 server to be installed •Upgrade of RDS system and corresponding receivers •Blackberry App expanded to include other more popular mobile OSes (Android Iphone)

CAP : The future of warning?

"Asking questions is a good way to find out"

- CAP is the future of public warning.

- The CAP standard is simple to implement and effective and when properly implemented is superior to most other methodologies of activating public dissemination.

- The fact that CAP is an open standard (read : free) and is simply a formatted XML document means that it is simple enough for anyone with a Computer Science degree or knowledge of Computer Programming or XML to understand and even design their own CAP compliant software and devices.

- The fact that several Caribbean islands have followed Anguilla's example and implemented CAP based warning systems (through the R3I) means that experience , technical expertise and knowledge is a mere phone call or short flight away.

Where are we now?

- UNDP has collaborated with Disaster Management Offices in the region to install Early Warning Systems in several communities across the Caribbean including : Dominica, St. Vincent and the Grenadines and Grenada, Saint Lucia, Barbados

- These Warning Systems are based on the revised CAP 1.2 standard and were designed specifically to meet the needs of the communities in the region.

- UNDP continues to invest in these warning systems in order to expand their reach and effectiveness as well as implement them in additional communities in the region.

Thank you for listening

Questions? Comments?