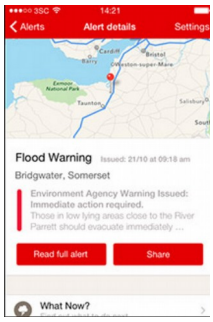
Getting Public Warnings to People Online

To help disseminate public warnings, alerting authorities have long relied on commercial media, such as newswire services, broadcast radio and television. Many television stations insert "crawl text" with the warning message, and radio stations insert a recording. This public-private collaborative effort requires huge investments in specialized technology, and decades to implement.

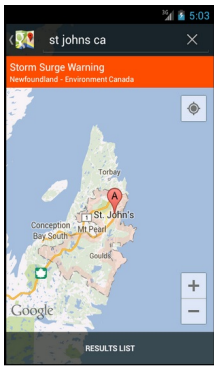
Now people are using cell phones and online media more and more. Do societies worldwide need a new round of huge investments in special technology to get warnings to all these people?

Actually, huge new investments are not necessary. Online media and alerting authorities already have developed effective ways to send warnings to cell phones and people online, and at minimal cost.

The Hazard App developed by the Red Cross Global Disaster Preparedness Center (GDPC) is an example. As part of the Universal App Program, GDPC partners with Red Cross / Red Crescent national societies to develop First Aid and Hazard alerting apps. Content for these apps is tailored to the country's language, culture and context. The Hazards App provides official, life-critical alerts to any smart phone, for free.



Google also displays alerts in the specific alerting area to online users of Google Search, Google Maps and Google Now. This Google Public Alerts product today shows warnings in the United States, Canada, and many other countries. But, Google and IFRC can provide the same service for warnings from any alerting authority, **world-wide**.



People online have yet another way to get CAP alerts displayed for free. Led by some of the world's largest online advertising companies, the Federation for Internet Alerts (FIA) interrupts commercial advertising to show tornado warnings. These services, and many others like them, send official alerts just to people in the alerting area, and in their own language. People can choose to get only the high-priority, life-critical warnings.

These amazing, free alerting services have only two requirements: alerts must be published as Internet news feeds, and the alert format must follow the Common Alerting Protocol standard.

The Common Alerting Protocol (CAP)

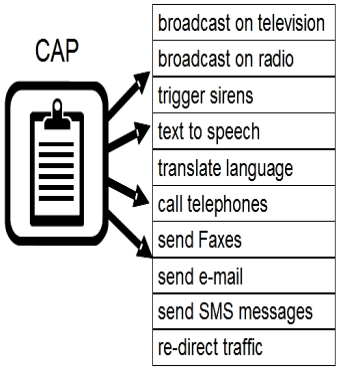
Historically, emergency alert messages have been mostly just text, composed like a news story. This kind of unstructured text message makes sense for in-person communication, but it is a barrier to automated communications processing.

The problem was that information in emergency messages varied widely across hazard types, and across countries and languages as well. Without an emergency messaging standard, all-hazards public alerting was just impossible to achieve.

The Common Alerting Protocol (CAP) standard is exactly the single standard format needed. It is simple yet flexible enough to convey essential alerting information about any kind of emergency.

Because CAP makes processing much easier, the U.S. National Weather Service responded when users asked for CAP to become their primary alert format for weather. Users of alerts across other natural and man-made hazard types have the same experience: it is much easier to use alerts in the CAP format.

One benefit of CAP is that it is simpler to send alerts. With a single trigger, a sender can activate multiple warning systems (sirens, pagers, e-mail, smart-phone apps, web sites, highway signs, etc). This can greatly reduce the cost and complexity of public alerting.

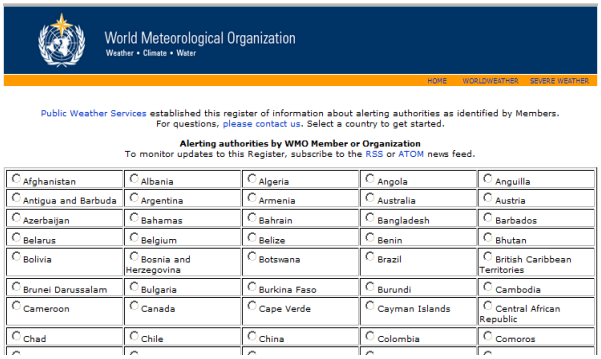


For emergency managers, CAP is also very useful for compiling alerts from many sources, enabling pattern detection and "situational awareness". On one map, emergency managers can monitor the whole situation: all types of local, regional, and national alerts, easily displayed together thanks to the CAP standard.

CAP is not a complex standard to implement. You can think of CAP as a "standard form"--a page with various fill-in boxes and check boxes giving specific details of the alert. The power of CAP is simply in standardizing those form boxes.

Alerting authorities typically implement CAP as an add-on feature to their current alerting processes. They publish a copy of the alert, in CAP format, on their own Internet news feed. Alert publishers like Google and IFRC then monitor that news feed so they can automatically disseminate critical warnings to online users in the alerting area.

Although CAP alerts are published as an "Internet news feed", not all news feeds are official. The World Meteorological Organization (WMO) is launching a WMO Alert Hub so receivers can select only CAP alerts from official sources, as designated in the Register of Alerting Authorities maintained by WMO and the International Telecommunication Union (screen shot below).


World Meteorological Organization
Weather • Climate • Water

HOME WORLDWEATHER SEVERE WEATHER

Public Weather Services established this register of information about alerting authorities as identified by Members.
For questions, please contact us. Select a country to get started.

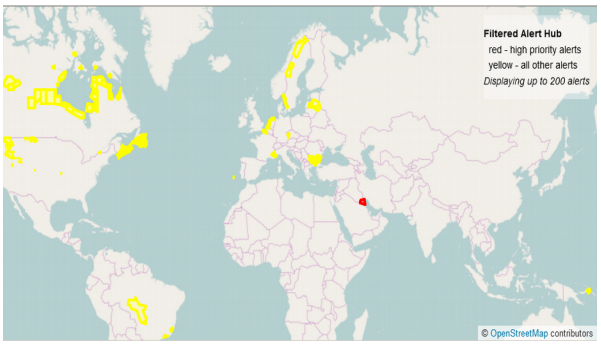
Alerting authorities by WMO Member or Organization
To monitor updates to this Register, subscribe to the RSS or ATOM news feed.

Afghanistan	Albania	Algeria	Angola	Anguilla
Antigua and Barbuda	Argentina	Armenia	Australia	Austria
Azerbaijan	Bahamas	Bahrain	Bangladesh	Barbados
Belarus	Belgium	Belize	Benin	Bhutan
Bolivia	Bosnia and Herzegovina	Botswana	Brazil	British Caribbean Territories
Brunei Darussalam	Bulgaria	Burkina Faso	Burundi	Cambodia
Cameroon	Canada	Cape Verde	Cayman Islands	Central African Republic
Chad	Chile	China	Colombia	Comoros

The WMO Alert Hub

The WMO Alert Hub intends to aggregate CAP alerts across all official CAP news feeds. This will make it much easier for any system that needs to compile alerts from more than just a few sources.

An Internet search engine helps people find relevant online resources such as merchandise for sale, Web sites and news stories. In a similar way, the WMO Alert Hub helps people get just the CAP alerts they want to receive. For instance, a civic authority may want to get all alerts while a typical citizen may want to get only the high-priority alerts.



WMO Alert Hub prototype at http://alert-hub.org

Implemented on an Internet cloud infrastructure, the WMO Alert Hub will be highly reliable, highly available, and fast enough that an alert can reach online users within a second or two. This speed is crucial for sudden-onset threats such as earthquakes, flash floods, tsunami, and tornadoes where seconds can mean the difference between warnings that are life-saving and warnings that arrive too late.

The WMO Alert Hub will assure that alerts are from authenticated sources, will be secure against cyber attack, and will allow receivers to verify that alerts received are the same as what was sent. The WMO Alert Hub will also support analytic capabilities to help alert publishers optimize the dissemination of alerts as the emergency unfolds.

The Opportunity and the Challenge

The accelerating spread of CAP-based alerting is bringing dramatic improvements in public warning to more and more societies worldwide. More than 60 countries publish national-level CAP news feeds, and some of these aggregate many in-country CAP news feeds in turn. Dozens of other countries are implementing CAP right now as well.

Building on the global Internet infrastructure and innovations such as the IFRC Hazards App, Google Public Alerts, and the WMO Alert Hub, public-private collaboration is providing a very powerful public service in many parts of the world.

The challenge now is for the rest of the world's alerting authorities and media to adopt CAP, and so help save lives and property, wherever and whenever warnings are needed.

For more information about CAP, see http://preparecenter.org/resources/cap