The title of this a presentation is “Registering an Alerting Authority”.

This presentation is designed to be part of a series of training sessions that cover various aspects pertaining to CAP-enabled alerting systems.

The recommended pre-requisite for this session is “Introducing CAP”, CAP-101. In that session, you learned that alerting information in the CAP format is often available via “news feeds” on the Internet or other delivery services.

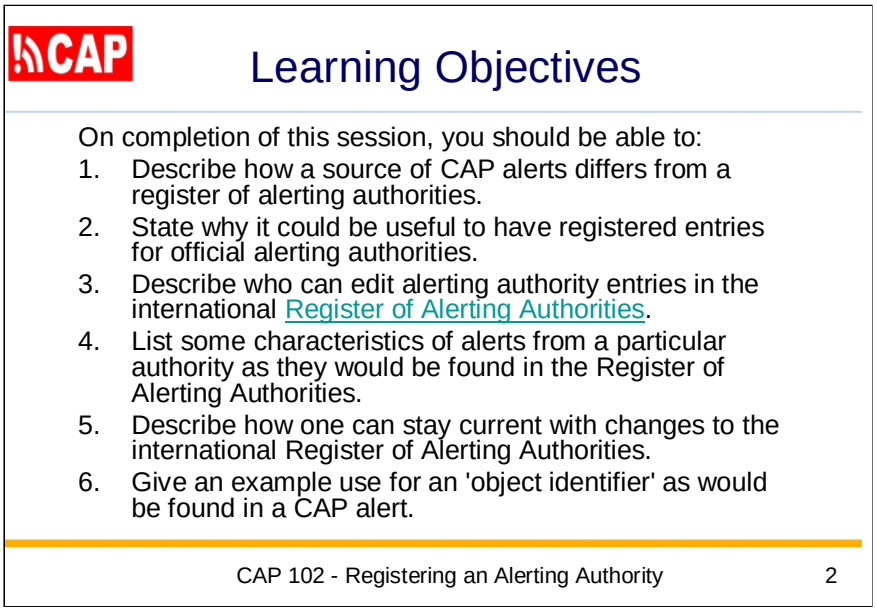
CAP alerts are of interest not only to emergency management offices but to many other individuals and organizations involved in evaluating hazard threats, reporting, alerting, dispatching, or otherwise dealing with the effects of emergency situations.

Yet, potential receivers of alerts need a mechanism to help them discover these news feeds as sources of alerting information.

In this session, we will address only alerting authorities that are endorsed by governments as “official” sources.

In keeping with ITU and WMO recommendations, alerting authorities that are endorsed by governments should have their alerting information sources and/or CAP news feeds registered at least in the international Register of Alerting Authorities.

Let’s look at what will be covered in this session specifically.



Here are the Learning Objectives for this session.

On completion of this session, you should be able to:

1. Describe how a source of CAP alerts differs from a register of alerting authorities.

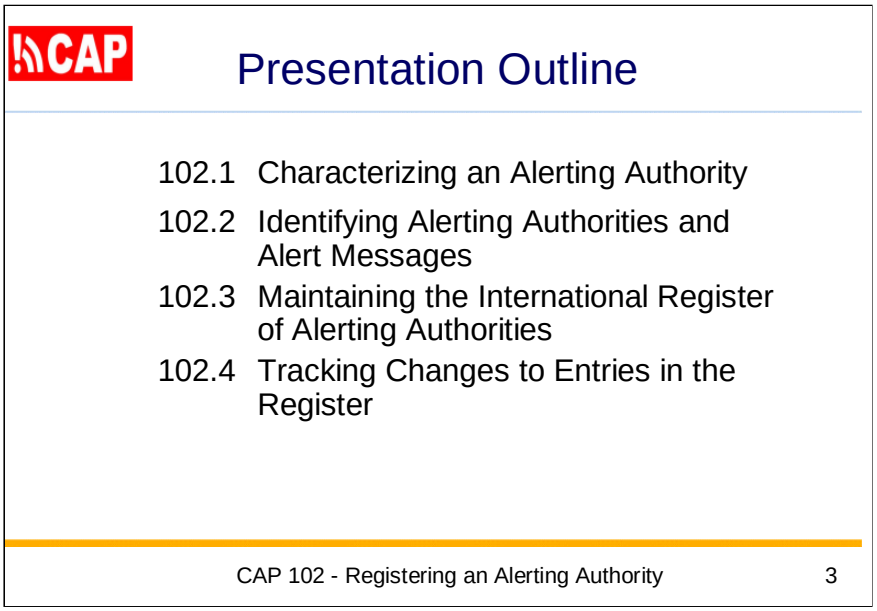
2. State why it could be useful to have registered entries for official alerting authorities.

3. Describe who can edit alerting authority entries in the international Register of Alerting Authorities.

4. List some characteristics of alerts from a particular authority as they would be found in the Register of Alerting Authorities.

5. Describe how one can stay current with changes to the international Register of Alerting Authorities.

6. Give an example use for an 'object identifier' as would be found in a CAP alert.



Here is an outline of the major topics in this presentation.

The first topic is titled: Characterizing an Alerting Authority.

The need for this register may be fairly obvious.

For instance, aggregators of alerts (such as Google), and other intermediaries (such as journalists), may lack the direct knowledge needed to distinguish an authoritative source of alert messages.

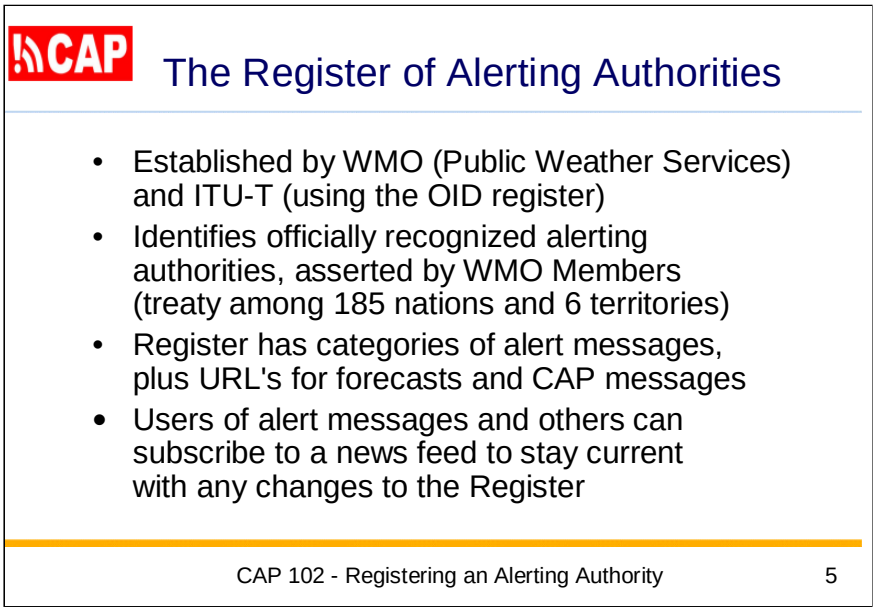
This lack is becoming even more critical as alerting makes more use of large public networks. Because of their sheer size, such networks encompass many more providers. It has now become impossible to know the sources personally, as one might have in a single city.

The international Register of Alerting Authorities is a reference that addresses that knowledge gap. It is similar in function to a referral service: you can have a certain degree of trust in the source because you trust the one who gave the referral.

Each Register entry asserts that a particular source of alert messages is regarded as an authoritative, and describes the particular categories of hazards and the usual alerting area.

Let me note here that each assertion stands on its own merit.
It is possible for different register entries to make conflicting assertions, and that situation is fairly common.

For instance, an earthquake in Japan was reported initially by the USGS as magnitude 8.9 and by the Japan Meteorological Agency as magnitude 8.8. Both agencies are valid authorities for the earthquake hazard type. And, in the case of earthquakes in Japan they both post alerts for the same area. (BTW, both later agreed on a revised magnitude 9.0.)



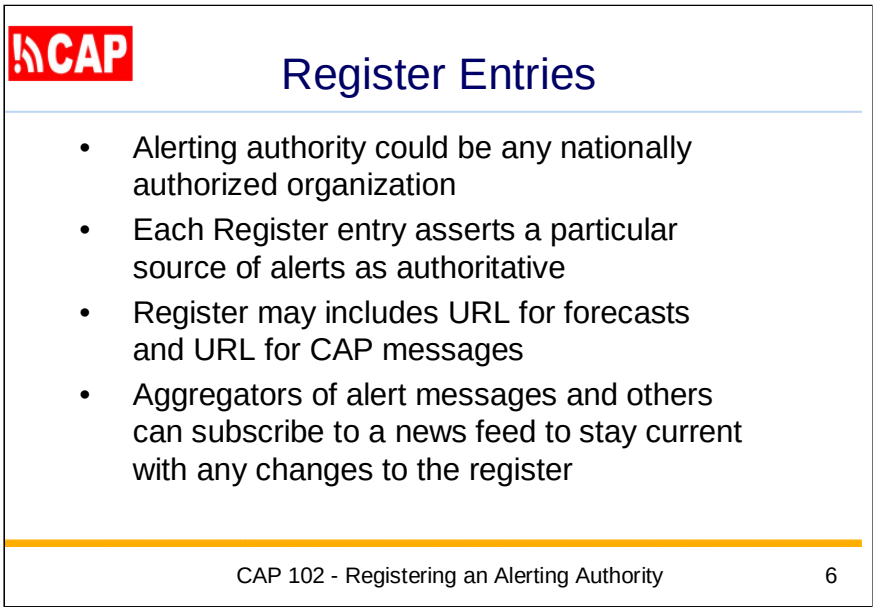
The Register of Alerting Authorities was developed by WMO in collaboration with The INternational Telecommunication Union (ITU).

WMO is a treaty-level international organization currently comprised of 191 Members (185 nations and 6 territories). WMO Members are represented by Permanent Representatives (PRs). Register entries can only be added or changed by an editor designated by the PR.

These PR's are from National Meteorological and Hydrological Services. Many of these services have operational responsibility as a national alerting authority for weather and related hazard threats. Also, given that the bulk of public alerting messages today concern weather-related threats, their public alerting infrastructures are often used for other kinds of hazard threats. So, alerting authorities designated by WMO PR's makes a good base for alerting authorities worldwide.

Each entry in the register indicates the category types of the alert messages and the typical alerting area. There is an optional text entry to describe the law or policy basis of the authority. The entry can also give URL's linking to forecasts as well as alert messages.

Aggregators of alert messages and others can subscribe to a news feed to stay current with any changes to the register.



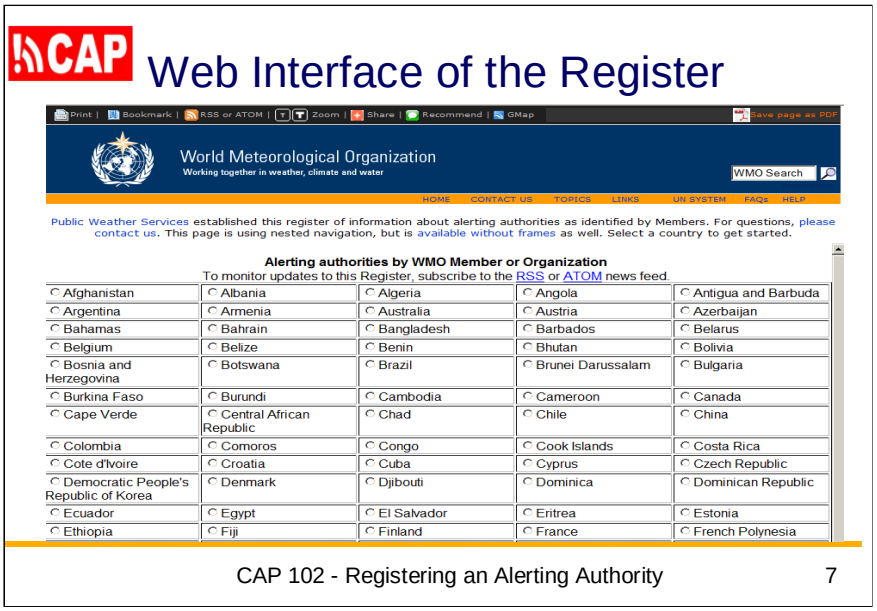
In the international Register of Alerting Authorities, nations and certain institutions are expected to enter the alerting authorities that are officially recognized.

The entries are made only by the official national representative to the World Meteorological Organization. Although representatives to WMO are heads of meteorological and hydrological services, each represents their entire nation.

Therefore, entries In the international Register of Alerting Authorities should include all alerting authorities in that nation, not just those who deal with weather and water alerts.

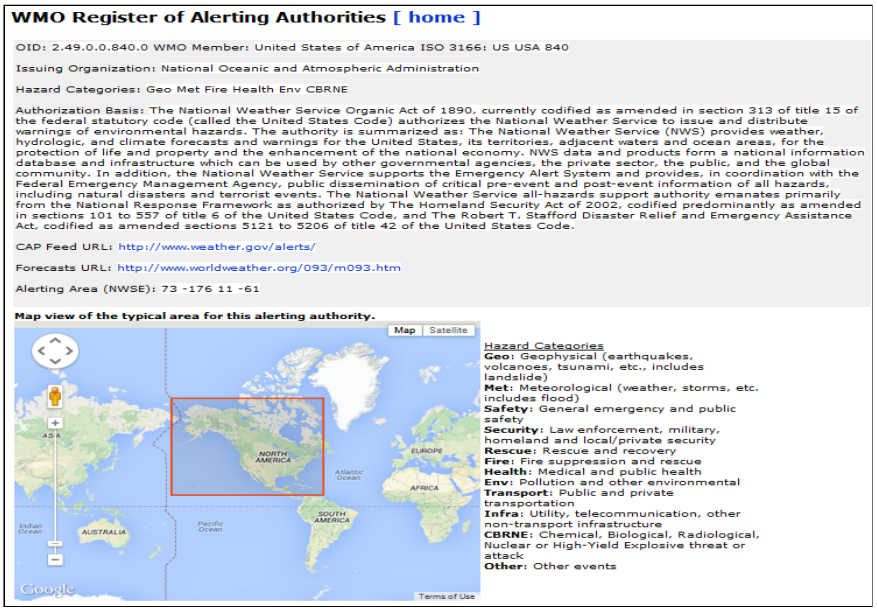
Each entry can also give a usual area of alerting and URL's for relevant forecasts and CAP messages.

Aggregators of alert messages and others can subscribe to a news feed to stay current with any changes to the international Register.



This is the OID tree at the node for alerting authorities of countries. I've shown the pull-down list of the 185 countries that are WMO Members.

Here we can see that alerting authority OIDs registered for the US will all start with 2.49.0.0.840 because the ISO 3166 code for the US is 840. Cuba has **192** for its country code.



This is a screen shot of a USA alerting authority, specifically NOAA's National Weather Service.

Here the elements of the register entry are shown as editable fields. This is only available to designated editors who have entered the Register with their personal password.

The first thing you may notice is the "OID" (object Identifier) in the upper left corner, which I'll describe in a little while.

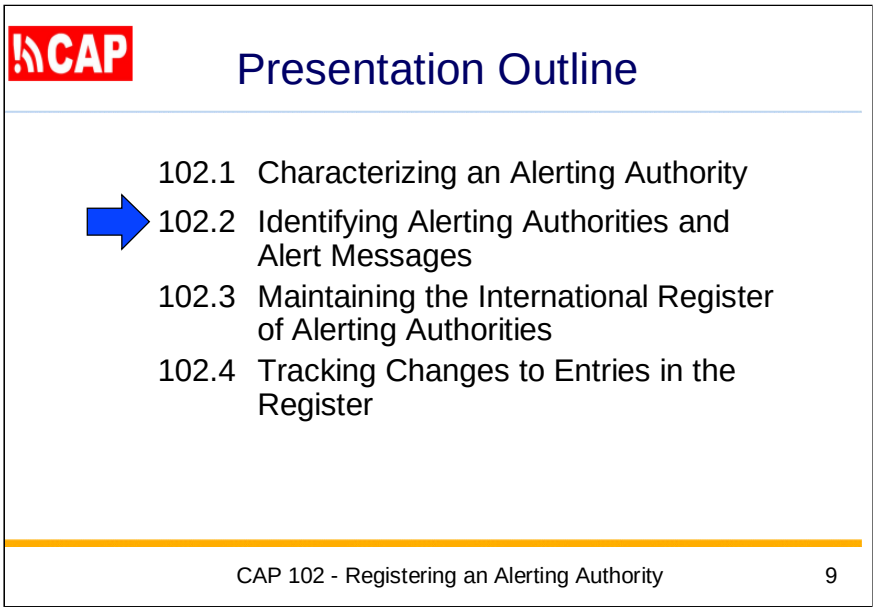
We see listed here each of the hazard categories for which NOAA issues alerts: Geophysical, Meteorological, Fire, Health, Environment, and CBRNE (Chemical, Biological, Radiological, Nuclear or high-yield explosive).

Next we see that NOAA provided a text description regarding the basis of their alerting authority. We'll get to that a little later also.

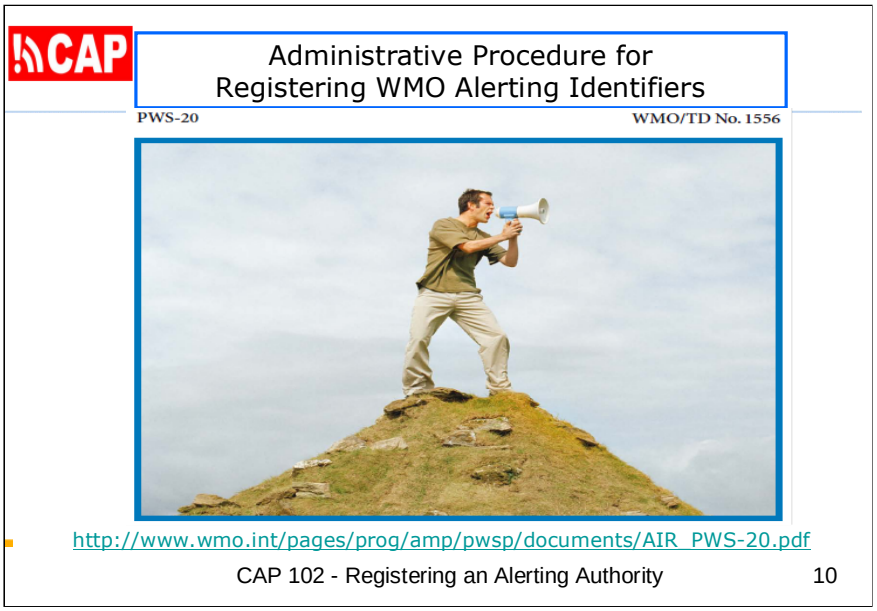
In the case of NOAA's National Weather Service, there is already a CAP feed so we see here the URL for that next.

We also see that forecasts are made available thorough the World Weather Information Service, at the URL shown on the next line.

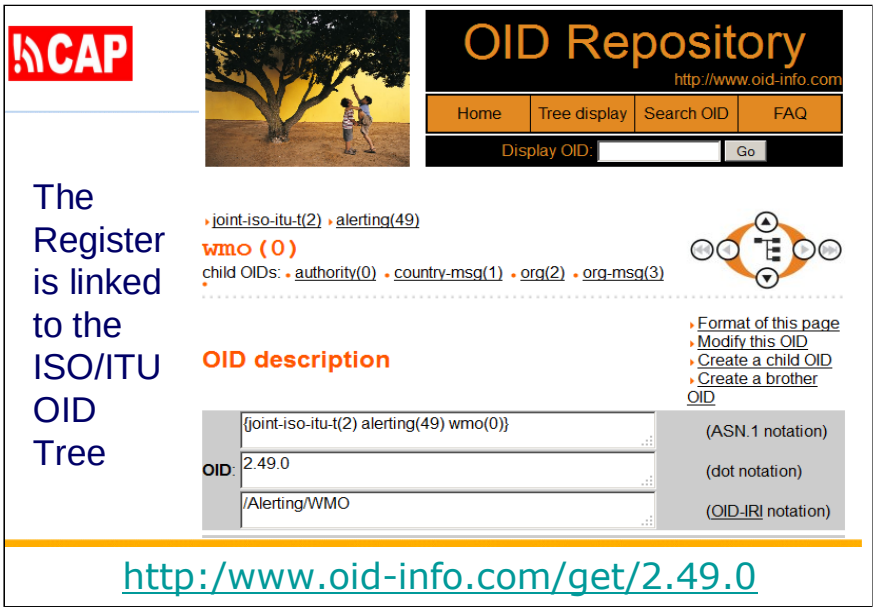
On the map we also see the typical alerting area for this alerting authority.



Again, here is the presentation outline and the next topic is titled: Identifying Alerting Authorities and Alert Messages



This is the cover of the WMO Technical Document describing the procedure for registering alerting identifiers.

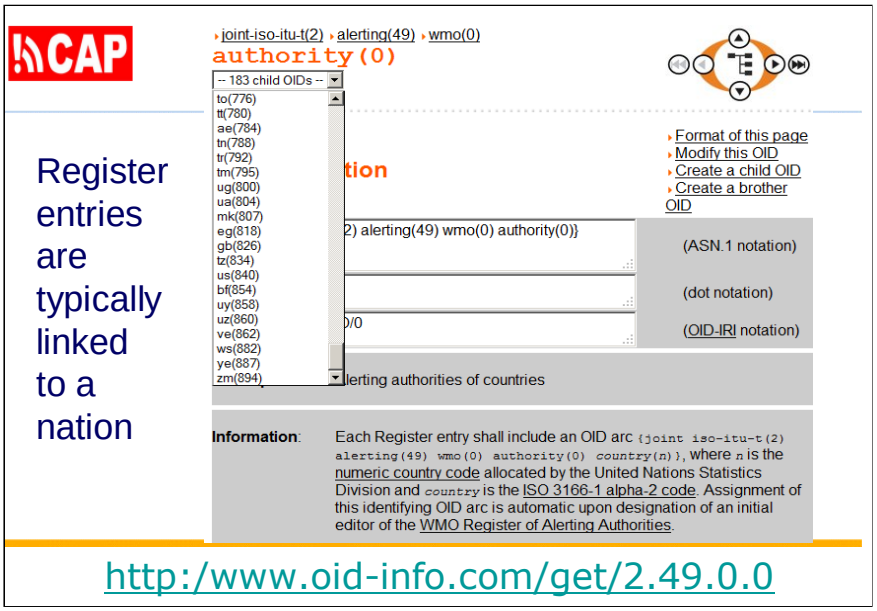


I'd like to elaborate now about that "OID" I pointed out in the record.

The Register of Alerting Authorities follows Recommendation ITU-T X.660, which concerns Registration Authorities and Object Identifiers. The tree of OIDs has been maintained by ITU and ISO for many years. It continues to be used extensively in all manner of standards and telecommunications work globally.

Here is a screen shot of the root of the alerting nodes in that tree. As I noted, each of our Register entries provides information about an official alerting authority. This authority would typically be subordinate to a national entry, but a PR can also designate in the Register other organizations that are not tied to a particular nation.

In addition to the OID for the information we were just looking at (information about an alerting authority), each entry also gets an OID that can be used for globally unique identifiers of alert messages. This means that anyone encountering an alert message with an OID, regardless of its language, can immediately determine which official alerting authority originated the alert.



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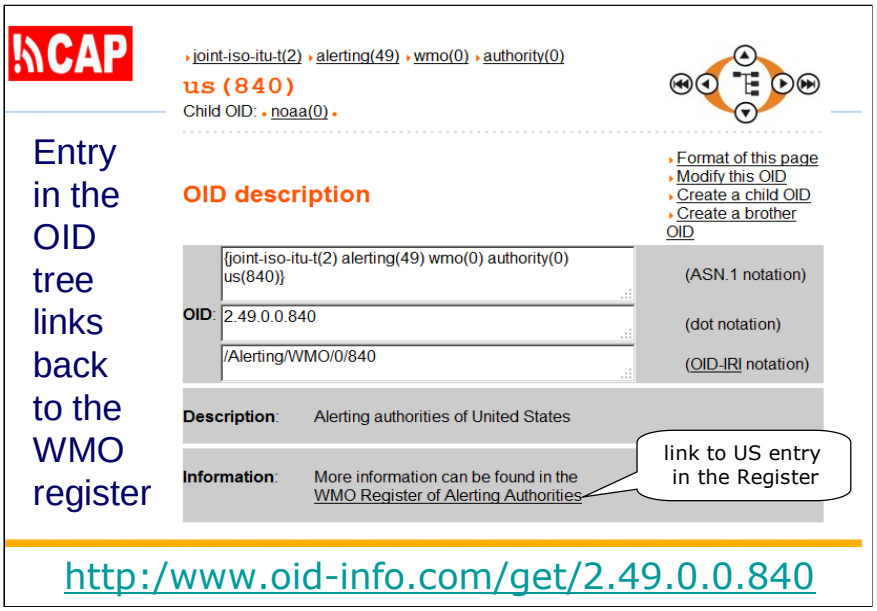
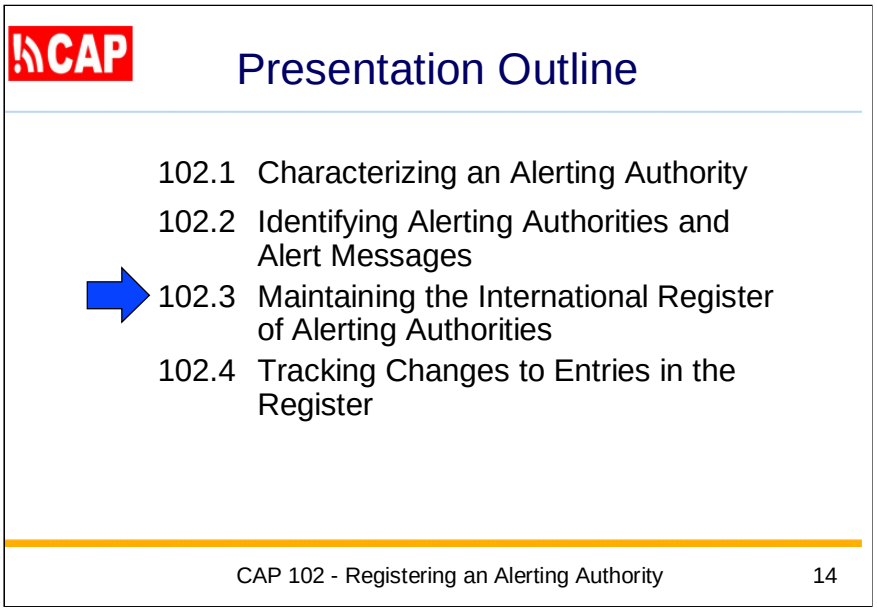
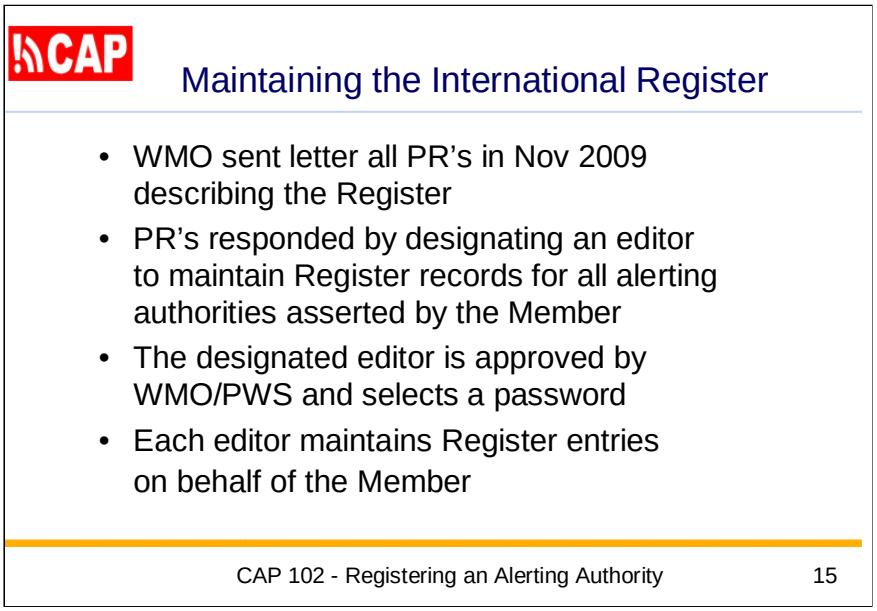


This screen is just showing that a US entry in the OID tree links back to the international Register of Alerting Authorities.



Back to the presentation outline, where the next topic is shown as:

Maintaining the International Register of Alerting Authorities



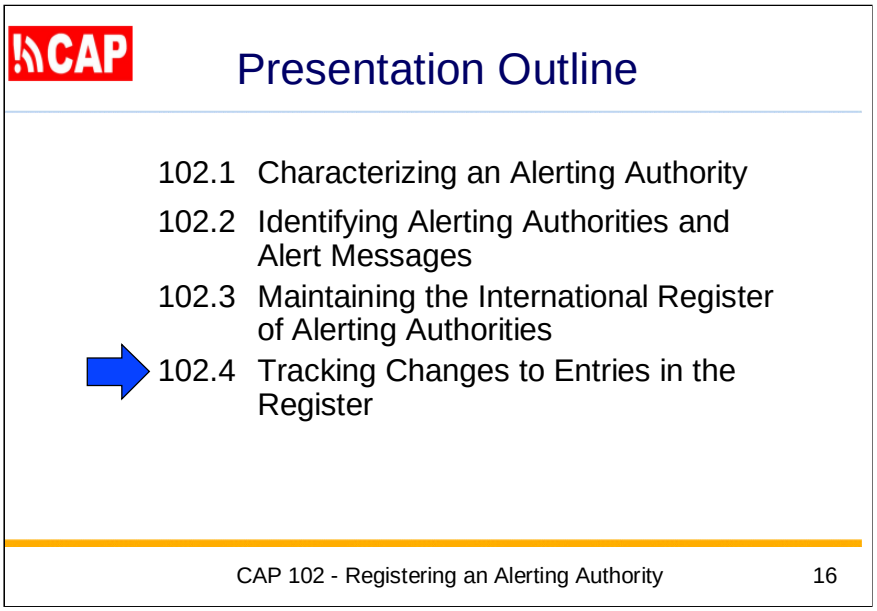
A Letter was sent to all PR's with WMO in November 2009 describing the Register of Alerting Authorities. PR's responded by designating an "editor" to maintain the Register records for all alerting authorities asserted by the Member.

The designated editor is then approved by WMO/PWS, and he or she selects a personal password. That editor then maintains the Register entries on behalf of the WMO Member.

As of December 2014, the Register of Alerting Authorities had records for 254 alerting authorities across 195 countries/territories and two organziations.

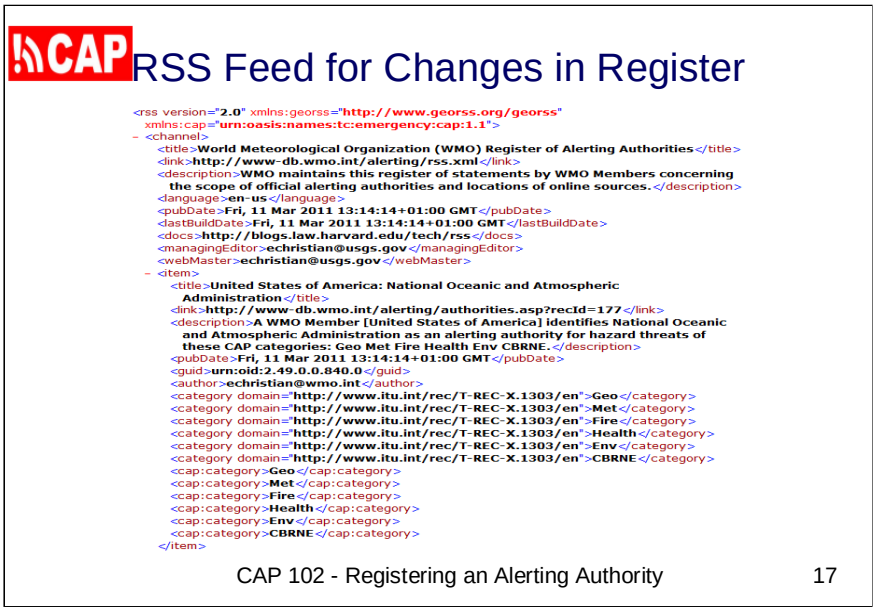
There is at least one editor officially designated by each of 124 WMO Members for their alerting authority records.

There are now 131 officially designated and approved Register editors.



The final topic of this presentation is titled:

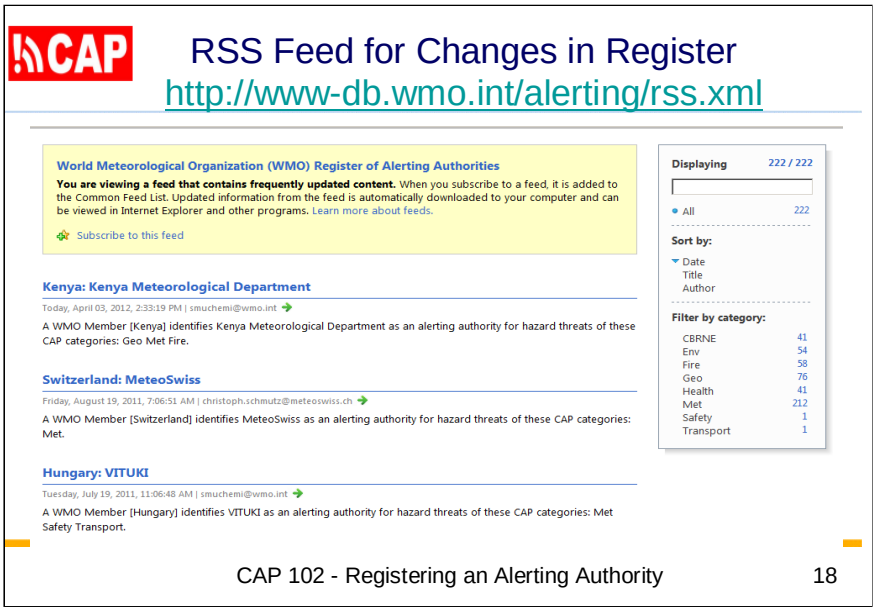
Tracking Changes to Entries in the Register



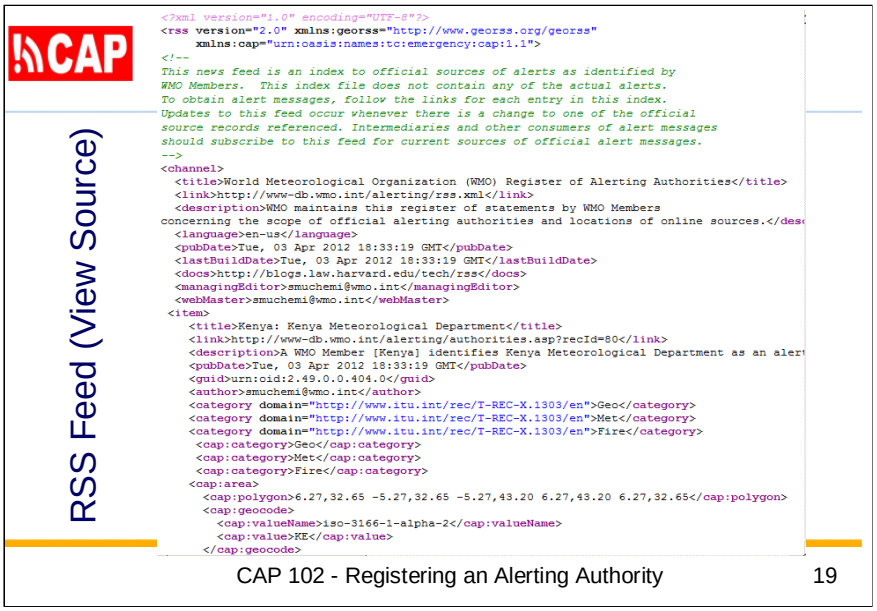
Aggregators of alert messages and others can subscribe to a news feed to stay current with any changes to the register.

When any register record changes, the news feed is re-generated in both RSS and Atom formats.

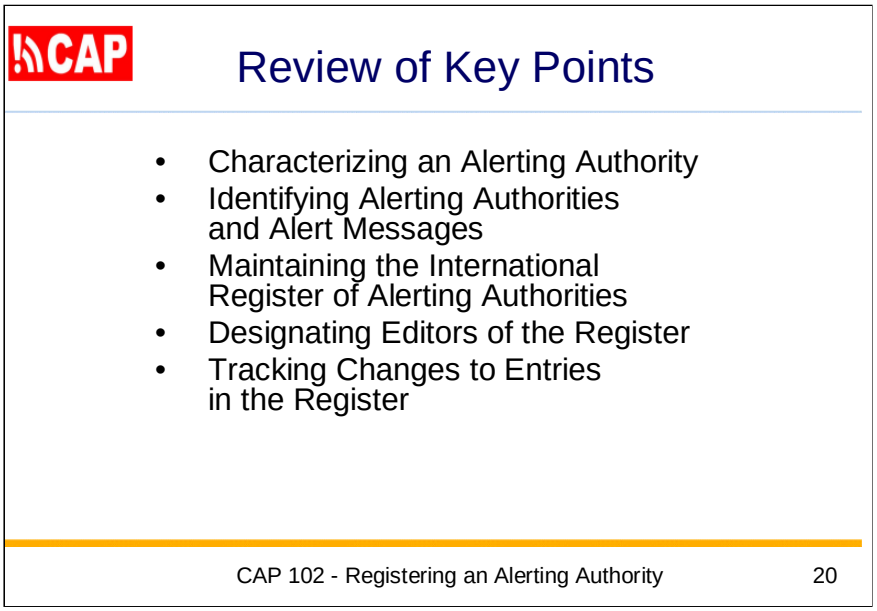
The news feed shows the most recent change first.



Here is a typical browser view of the news feed for the Register.

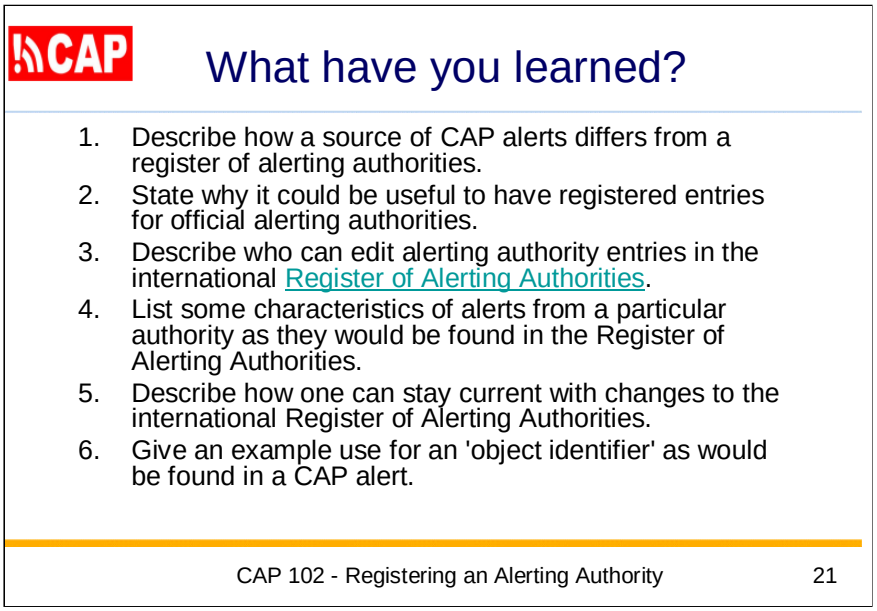


This is the “View Source” of the XML for the same RSS feed I just showed



Let's review the key points of this session:

- Characterizing an Alerting Authority
- Identifying Alerting Authorities and Alert Messages
- Maintaining the International Register of Alerting Authorities
- Designating Editors of the Register
- Tracking Changes to Entries in the Register



What have you learned?

1. Describe how a source of CAP alerts differs from a register of alerting authorities.

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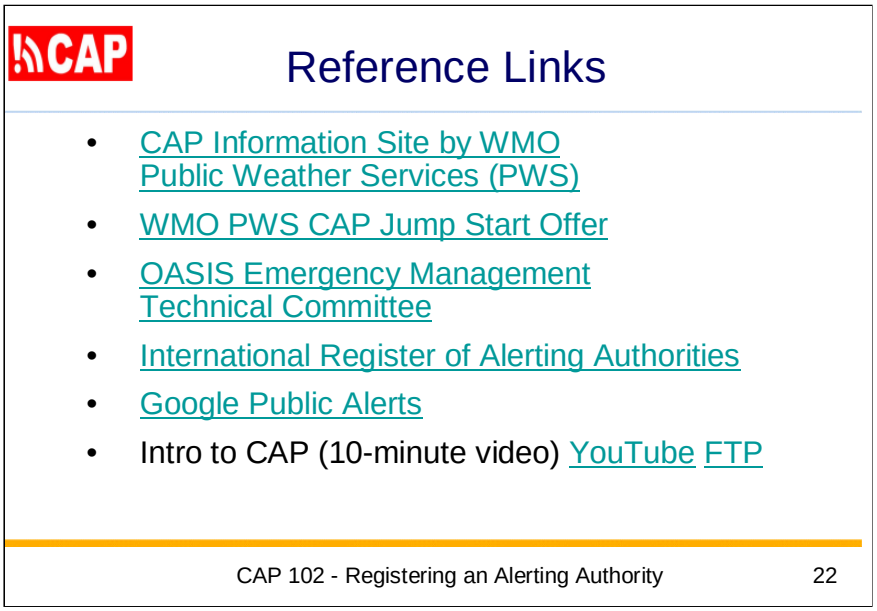

Here are some key reference links concerning CAP.

This concludes my presentation.

Thank you for your attention.