WEATHER WARNING TOOL

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Outline

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Motivation

• To automate the process:
  • Increase the speed at which the weather warning can be generated and disseminated.
  • Keep it consistent no matter who is doing it.

• To provide a graphical output to be used as a Decision Support System for the customers.
• We developed a GUI with JAVA (Java Web Start downloadable) using the MVC pattern for the conception and dissemination of the warning. The model is loaded from a XML configuration file.
  • Cross-Platform. Run unchanged on multiple operating systems.
  • Runs independently of any browser.

• A script called from crontab takes care of update the warning images and text on the server every 15’.

• Used Java Server Pages for the posted warning output on the websites.
  • Using JSP technologies allows dynamic and interactive contents.
Weather Warning Tool provides a GUI interface for the creation and dissemination of textual and graphical weather warnings. The user can select the location, time frame, the intensity, and the type(s) of weather involved. The warning is automatically generated and it can be previewed and edited at any moment and before being disseminated.

The user after creation can disseminate the warning by mail and posting it on the web server(s). For future releases the capability to send the warning by fax and phone will be added.

The JSP pages installed on the server(s) take care of tracking the warning on time removing elements when they expired.
Weather Warning Creation and Dissemination Process

Weather Warning Creation:
- Select time, location, types of weather

Output Preview:
- Text, map, timeline

Dissemination Options:
- Web site and e-mail

Create Warning

Output Preview

Dissemination Options

WEATHER WARNING PRODUCT (text, map, timeline)

Sent by e-mail

Posted to the web JSP web pages
GUI Description: The Frame(2)

Criteria & Configuration Panel: Model Elements

List of available criteria.

List of available issuers. Editable & Configurable

List of available locations. Editable & Configurable

List of available dissemination options. Editable & Configurable
<?xml version="1.0" encoding="UTF-8"?>
<WWT xmlns="http://www.4dwx.org/WWT" className="edu.ucar.rap.wwt.WWT_Model">

  <map className="edu.ucar.rap.wwt.WWT_Map" image="Images/atc.gif" latup="39.61F" latdown="39.23F" lonleft="76.47" lonright="75.92F" />

  <timeline className="edu.ucar.rap.wwt.WWT_Timeline" displayeddays="4" startPosX="260" />

  <mail className="edu.ucar.rap.wwt.WWT_Mail" from="ATC_METEOROLOGY_BRANCH@4dwx-ingest-atc" />

  <date className="edu.ucar.rap.wwt.WWT_Date" pattern="HHmm z dd MMM yy" />

  <issuer className="edu.ucar.rap.wwt.Issuer" name="Gerry Luft">
    <parameter className="edu.ucar.rap.wwt.TextAreaParameter" name="E-mail" default="gluft@atc.army.mil" />
    <parameter className="edu.ucar.rap.wwt.TextAreaParameter" name="Initials" default="GL" />
  </issuer>
</WWT>
GUI Description: The Frame (3)

Display Panel: Warning preview & Locations

Map: Graphical representation of the warning

Text: Textual representation of the warning

Timeline: Representation on time of warnings

Locations: Graphical representation of locations
The warnings are built over this panel. Selected criteria are added at the warning tree. Many opened warnings are allowed on this panel and stored on different tab panes.
Every time a tree element on the tool is selected his parameters are displayed on this panel. There are several kind of parameters depending of the element. Most of them are editable.
Select the warning from the warning panel to be disseminate then Select Disseminate Warning from the Warning menu or click over Dissemination button.

A pop up dialog is displayed asking if we really want to disseminate the selected warning and the actions that will be take.
A report is displayed on the parameters panel showing the results of the dissemination. The default browser will be launched displaying the current warning webpage.
**Getting started...** **:** **Reloading and saving configurations**

- Select **Reload Configuration from XML file** to load your own configuration file from the local disk.

- Modify the configuration elements and then select **Save Configuration to XML file** to save your own configuration to the local disk.
The Warning on the server

Next...: JSP takes care of tracking the current warning

A bunch of JSP and servlets take care of tracking the current warning, removing expired criteria and updating the current warning on the web page.