AWIPS-2 Reference Sheet

CAVE's Plot Model Files Updated for AWIPS Build OB13.5

Introduction

Another important configurable component of a CAVE display is a Plot Model. To see how plot models work, let's first look at the display bundle that is associated with a normal station plot. This file is StationPlot.xml which is editable in the Localization Perspective (CAVE ► Bundles ► StationPlot.xml). The base version of the file is in the bundles folder of CAVE's /etc directory.

The second resource in the StationPlot.xml bundle (Figure 1) does the actual station plot. Note that there's a plotSource tag that specifies the text that shows up in the legend ("METAR Plot" in this case). The bundle also has a plotModelFile tag that references stdObsDesign.svg.

Baseline versions of plot model files are stored in a plotModels subdirectory in CAVE's /etc directory and shouldn't be changed. However, the



Figure 1. Second resource in StationPlot.xml bundle that provides the specifications for a station model plot.

Localization Perspective can create site and user-level overrides and stored them in the tility tree. In the Localization Perspective, plot models can be found under D2D ► Plot Models.

Plot Models are .svg files, which means they are Scalable Vector Graphic files. This is an opensource and industry standard specification to represent vector-based graphics using an XMLbased text format.

Example: StdObsDesign.svg

The StdObsDesign.svg plot model is shown in Figure 2. The bottom part of the file does most of the work. Each of the text fields in this file has a plotParam tag. This pulls in the data to be plotted. plotParam can refer to a subset of fields from the metadata database (obs table), such as latitude, longitude, and elevation. It can refer to decoded data stored in the HDF files, like rawMETAR and visibility. It can also refer to a subset of derived parameters, (T and DpT in this example). If the plotParam for the tempText entry said temperature rather than T, it would pull data directly from the HDF file. In reality, additional processing is done on T (as compared to temperature) since T is a derived parameter.



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Figure 2. Bottom portion of StdObsDesign.svg plot model.

The x and y tags specify the position of the data to be plotted relative to the station location. x increases to the right and y increases down. For example, in tempText, x is -10 pixels and y is -10 pixels so that vield is plotted to the upper left of the station location. The dewpoint x and y values are -10 and +10, respectively, which places it to lower left. The pressure has x and y being 10 and -10 respectively which places it upper right. The presentWeather with an x value

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of -10 is just to the left of the station location.

The plotMode can have several values which affect the plot. Note the windVaneText entry has the plotMode of barb and pulls in three parameters (windSpeed, windDir, and windGust). When plotMode is table, CAVE references a specified lookup table which relates the data value to a special symbol (for weather symbols, pressure change symbols, and such).