AWIPS Build 5.1.1 D2D software release notes

These are changes from Build 5.0.

*Note:*These are working notes on FSL's part of the Build 5.1.1 work. Some items may be modified or removed before Build 5.1.1 hits the field. *Official 5.1.1 release notes are no longer available from NWS.*

Infrastructure

- The announcer software (that handles the red banner and other messages) now accepts a sound file as an optional argument. Sounds may accompany some messages. (At present, the only "noisy" messages are those announcing loss of radar data.)
- Displaced time management for the case reviews is being improved. There are two visible effects in this release. First, if you set the clock on one display (using **Options > Set Time...**), it also changes the time on the other. Second, when you call up a case for review, the D2D on both displays is shut down.
- A new localization may now be created only by the fxa user.
- Isentropic data processing speed is significantly improved. This allows for more reliable monitoring of incoming data and a better assurance that all appropriate grids will be computed. (This was in 4.3.3 and 5.0 as a patch. In 5.1.1, it's just there - no patch required.)
- The forecast hours for which theta grids are computed can be specified to further reduce processing overhead.
- Modifications to logStream allows collective logging - for example, multiple runs of one program can log to a single file.

Graphics/image workstation

New features

- When using a procedure or the history list, at load time for a bundle you can set a different model or radar for a dataset. This is effected through the **Alter...** dialog, from which you can select an alternate radar or grid, or select different options for use of points and baselines.
- A new **Copy In** button is added to the procedure dialog. This will place the current contents of the display in the procedure. Keyboard accelerator ctrl-b is still available, as before.

- A new control is added to the Options menu replacing the old **Time Resolution** option. When selected, this **Time Options** button (keyboard accelerator ctrl-t) produces a dialog box through which you can control time matching functions.
    - If loading to an empty display, you select the time of the last frame, and the time resolution. For example, at 1420Z, you can select METAR plots every 3 hours ending at 12Z. The dialog box shows exactly which datasets will be loaded. This provides a means to deal with a situation of more than 32 frames of data available.
    - If loading to a display already containing data, you select an offset time and tolerance. For example, selecting a -2 hour offset will overlay data from two hours before each frame. In the above case, the last frame would be 10Z, the previous 07Z, etc. "Tolerance" refers to how strict the time matching is. "none" means an exact match is required, while "infinite" will put the closest match in each frame, regardless of how far off it is.
- Also added to the Options menu is a new **Data Scale** button, with keyboard accelerator ctrl-s. When enabled, this option displays data on its native scale. For example, if you enable data scaling and select a product from an alternate radar, it will display with that radar at the center of the screen. Other data will overlay on this "dynamic" scale until the screen is cleared or a non-plan-view product is selected.
- QPF, FFG, and QPE images from the various RFCs are now accessible from the Surface menu, in the Hydro area.
- Text and grids from the National Operational Hydrologic Remote Sensing Center (NOHRSC) are now available. The snow product grids (snow cover, snow cover by elevation, snow water equivalent, and SWE percent of normal) are displayed in image form only, and are found on the Surface menu, following the QPF, etc., items listed above.
- Radar items:
    - The radar mosaics now work a little differently. First, the radars that go into the mosaic are no longer always automatically the set of radars that are in radarsOnMenu.txt. For an RFC or national center, this will still be the case if no action is taken by the site. However, for WFOs, the number of radars in any mosaic will be limited to the closest nine. Most importantly, however, is that there is now an option to supply a table that will control in a very specific manner which radars are in the mosaic, and will even allow mosaics of more than one set of radars.
    - Any condition that causes a loss of radar data for more than five minutes will generate an audible alarm in addition to the red-banner announcement. The same is true if AWIPS' connection to the radar is unstable for four minutes. (This applies to dedicated radars only, not dial-in access; no alarms will be generated for the latter.)
    - An alert status message is now available on the text workstation, under ID WSRASMxxx.
    - The radar announcer now logs receipt of a Free Text Message.

Improvements

- The process of loading bundles from procedures is slightly modified. Now, when you first open a procedure, no bundle is highlighted. A new button, **First**, will highlight and load the first bundle. That button then changes to **Next**, and it will move to the next bundle and load it. The old **Load** button still exists, and will load the highlighted bundle, but not move to the next. The point of this is to have the highlighted bundle represent what is currently in the display.
- Image attributes of four-panel displays can be controlled together or by each individual panel. The panel to be controlled is selected by a pop-up menu.
- It is now possible to edit and blink 24 bit combo images.
- The map backgrounds menu now includes a netCDF-based spotters map. It is set up by - station localization, based on information in spotters.dat. A sample spotters.dat is found in /data/fxa/nationalData, illustrating the format.
- You now have a choice when loading bundles that use points or baselines. You can display the data either at the current location of the tool (the default), or where it was located at the time the bundle was stored.
- Volume Browser:
    - Difference fields can now be stored in procedures.
- Radar items:
    - The VR shear annotation now includes mean distance from the RDA.
    - The user is now notified when a one-time or alert request product arrives from the RPG.
    - Menu item User Def Total Precip now reads User Selectable Precip (USP).
- Radar archive:
    - A new interface allows the user to delete a store session.
- WarnGen items:
    - The initial number of vertices for a line of storms is now configurable. The value is specified in wwa.config (created from nationalData/wwaConfig.template or a locally-customized version) using warngenDefaultLineVertex.count.

Bug fixes

- The Cloud Top Pressure satellite image that was labeled in Celsius has been replaced by a Cloud Top Height image labeled in hundreds of feet MSL.

Remaining bugs

This is the carry-over list for now...

- The default load mode (Valid Time Sequence or Latest Model Run) is restored after a swap, instead of whatever mode you had set when that information was in the large pane.
- Once you're in 4-panel mode, you stay there until explicitly **Clear**ing the screen. If you select products on a different scale, you'll get the same thing loaded in each panel.
- Samples on skewT charts include a degree sign in front of K.
- If you turn lat/lon readout on, then bring up a skewT and sample it, you'll get lat/lon info for the previously displayed map (in addition to the chart information that you want). The pop-up correctly does not include the lat/lon toggle button, so you can't turn it off.

- Sounding plots are computing bad wet-bulb zero heights near the surface when there should be no wet-bulb zero crossing.
- The Product Maker provides access to satellite images only on the Northern Hemisphere, CONUS, and Regional scales.
- If you select MSLP as the field in the Product Maker, you must select a(ny) pressure level, in order to display it.
- When as1 fails over to as2, you see a red banner that tells you so, and says that you may need to restart in order to continue to get auto update and product time updates on the menus. In fact, this is not necessarily the case. To minimize the disruption for restarts, you should monitor radar or other frequently-updated products to see if you are getting notification of new products (display or menu update). Only if not should you restart the workstation.
- A torn-away Product Maker Source menu does not respond to scale changes. This can lead to one selecting a model source that is invalid for the scale.
- This is not really a bug, but the way the alert area request application works may be a little confusing.

  The alert area request can display/edit only two areas at a time, one Area 1 and one Area 2. They can be for the same radar or, for those sites that have more than one dedicated connection, for different radars. For example, you can use Area 1 for radar A and Area 2 for radar B. However, if you start with Area 1 for radar A and then try to display/edit Area 1 for radar B it won't work; you must first clear the display and select another radar if you want to display/edit another Area 1.

Text workstation

New features

- The radar alert status message is now available under WSRASMxxx.

New or remaining bugs

Again, the old list...

- The WarnGen window occasionally doesn't pop up automatically. Workaround: Request WRKWGx from any window. (The warning expiration reminder won't work in this case.)
- The text subsystem still uses 3-character station IDs. As a result, the Help function in the browser and the button-2 popup station ID info on METAR messages can't distinguish between Kxxx and Pxxx. Usually, both are shown, leaving it to the user to figure out which one applies.
- Like many other products, pilot reports come in a collective and are stored under the site ID instead of your local CCC. Thus, a pilot report referenced to DHN would be stored as BHMPIRDHN. Some erroneously get stored by 2-letter state ID under your local CCC, e.g., PIRAK. Most of the latter are duplicated in the site-ID style.

- The "ss.NNN" construct does not work.

LDAD

New features

- The EMDS function now will load and animate GFE (IFPS) forecast grids.

Improvements

- New 5-minute local data plots are added - met and precip.