

# AWIPS Build 5.2.2 D2D software release notes

These are changes from Build 5.2.1.

*Note:* These are working notes on FSL's part of the Build 5.2.2 work. Some items may be modified or removed before Build 5.2.2 hits the field. Official Release Notes will be posted at the NWS AWIPS site once the field release is ready.

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## Infrastructure

- Time formatting is now available to be used by plot design files.
- The system includes software for on-the-fly compression and decompression of grids. This is currently being used for the ensemble grids.
- Extensions (points, baselines, etc.) now can be manipulated in any panel of a 4-panel display. Previously, only the upper-left panel was active.
- Sites can now modify the location, size, and resolution of their MSAS domain, plus choose the background model, pressure reduction level (sea level or 1500m), and pressure change delta time (e.g., 1h or 3h change). Domain/resolution changes are restricted to avoid undesirable computational and storage impacts. For example, you can run a 15km regional-scale domain or a 60km CONUS domain. MSAS is also now available at Alaska sites and San Juan, but not yet for Pacific Region sites. At these OCONUS sites, a 30km grid is set as the default.

## Graphics/image workstation

### New features

- Pilot reports (pireps and aireps) are being decoded and are available for display. Products include icing, turbulence, and a general plot, all in three layers, 0-18kft, 18k-26kft, and 26k-50kft.
- GOES soundings are available. At WFOs, those processed include all soundings that fall within the Regional scale; at RFCs, those on the RFC scale; and at National Centers, all soundings. (The Time Options toggle introduced in 5.1.1 gives you flexible access to subsets of the data, when more than 32 time projections are available.) A selector on the Satellite menu, "GOES Sounding Availability," displays a map of the currently available sounding locations. A map showing all possible (localized) sounding locations is on the Maps menu (added in 5.2.1, but not active until 5.2.2). Sounding display (skew-T) is via the Volume Browser.

- Two new plots show wave period and height and primary and secondary swell period, height, and direction for fixed and moving marine platforms. A third plot displays ceiling and visibility.
- Local storm reports entered by the new GUI can be plotted.
- New displays of synoptic observations are added to the Surface menu. By default, these appear at OCONUS sites only; other sites can turn on the Synoptic decoder and add the items to the menu, if desired.
- On-the-fly contouring is now possible. A dataset such as LDAD mesonets can be analyzed and contoured on request. (There is as yet no interactive GUI for this; the fields must be set up in the menus.) A write-up, [ldadContouring](#), describes the technique and provides advice on local configuration.
- New tools provide a units conversion calculator and sunrise/sunset computation.
- Radar items:
- Volume Browser:
  - A facility to display ensembles is available. A related new field is standard deviation of various items.
  - A new Var vs Height mode is available, which allows you to look at the sounding of a particular variable.
  - Var vs Height and Time Height plots can now be zoomed independently along either axis.
- Non-FSL work that affects the UI:
  - The Surface menu has been split into Obs and NCEP/Hydro menus, to accommodate several new products.
  - A new GUI is available to enter local storm reports. This generates a new-format LSR text product, and maintains a database of such reports. The GUI also provides a method to maintain the local spotters list. A plot of local reports is also added to the Surface menu.
  - Additions to the Hydro section of the NCEP/Hydro menu include automated and manual satellite precipitation estimates from NESDIS.

## Improvements

- The VR-shear function behaves differently in 4-panel mode. When you load it, you will notice that it is a different color in each panel. There are actually four copies of the program running, and each behaves independently. This means that you can get accurate readings in any of the four panels (click button 2 on the legend to activate VR-shear in the desired panel), and you can position the query line independently in each panel.
- Declutter capability is available in the vertical dimension. This applies to skew-T winds and profiler time-height plots.
- The inset map on sounding, time-height, and var-vs-height displays is now zoomable.
- Volume Browser:
  - Data from the western North Atlantic wave model (grid 238) can now be processed by the VB.
  - When sampling soundings, you now see theta and theta-e values in the sample text.

- New fields from LAPS include 850mb-based LI, KI, Total Totals, and fire weather index.
- Some common customizations are now standard in the VB. Among the new fields are Total Totals and K indices, adiabatic omega, interpolated height AGL winds, multi-day mean heights, wind shear, T and Theta-eq gradients, and several accumulated-precip choices.
- Radar items:
  - Inventories for products whose parameters are user-defined now let you select a loop of like versions. The details are indicated when you do an inventory load.
- Radar archive:
- WarnGen items:
  - Marine warnings support is improved. New templates include heavy surf advisory; marine weather statement; and lakeshore flood statement, watch, and warning.
- Product Maker items:
  - Product Maker now works on Linux workstations.

## Bug fixes

## 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 **Clearing** 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.

## **New bugs**

- If you set SKEWT\_MIN to a temperature higher than -30, some of the saturation adiabats at the right side of the diagram exhibit errors. In general, though, the diagram is still usable.

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# **Text workstation**

## **New features**

- It is now possible to create marine forecasts via WarnGen.
- Non-FSL work that affects the UI:
  - A new Text Message Intercept feature allows your site administrator to disable transmission of text products to the AWIPS WAN, or to give you the option of setting one or more text windows in that way. This will allow, for example, testing of WarnGen without fear of accidentally sending out a warning.

## **Improvements**

- The line option in WarnGen is improved.

## **Bug fixes**

## **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.
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## **LDAD**

### **New features**

- Support for local profilers and rawinsondes is now available. Data will be stored in profiler and rawinsonde netCDF files under \$FXA\_DATA/LDAD.