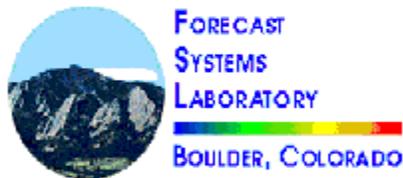


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# AWIPS FORECAST PREPARATION SYSTEM



## AFPS NEWS

Volume 1, No. 2

April 5, 1996

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Critical Times... We are at a critical time in the project. For the first time, NWS operational use is on our schedule (only 10 months away!). With the specifications complete, we have just begun the design phase of level 2b. There's still time to incorporate moderate changes to the specifications, but this time will run out soon. Once the system is installed in Denver, significant changes to AFPS will require more effort to implement, additional training for the forecasters, and significant effort to keep system and user documentation updated. Your comments can be realized in the Denver system, but only if we receive them within the next few weeks. So, please use AFPS and tell us what you would do differently. This issue describes some major changes to the look and use of AFPS. Read it and tell us what you think. Your comments are more important now more than ever.

### **As Promised...**

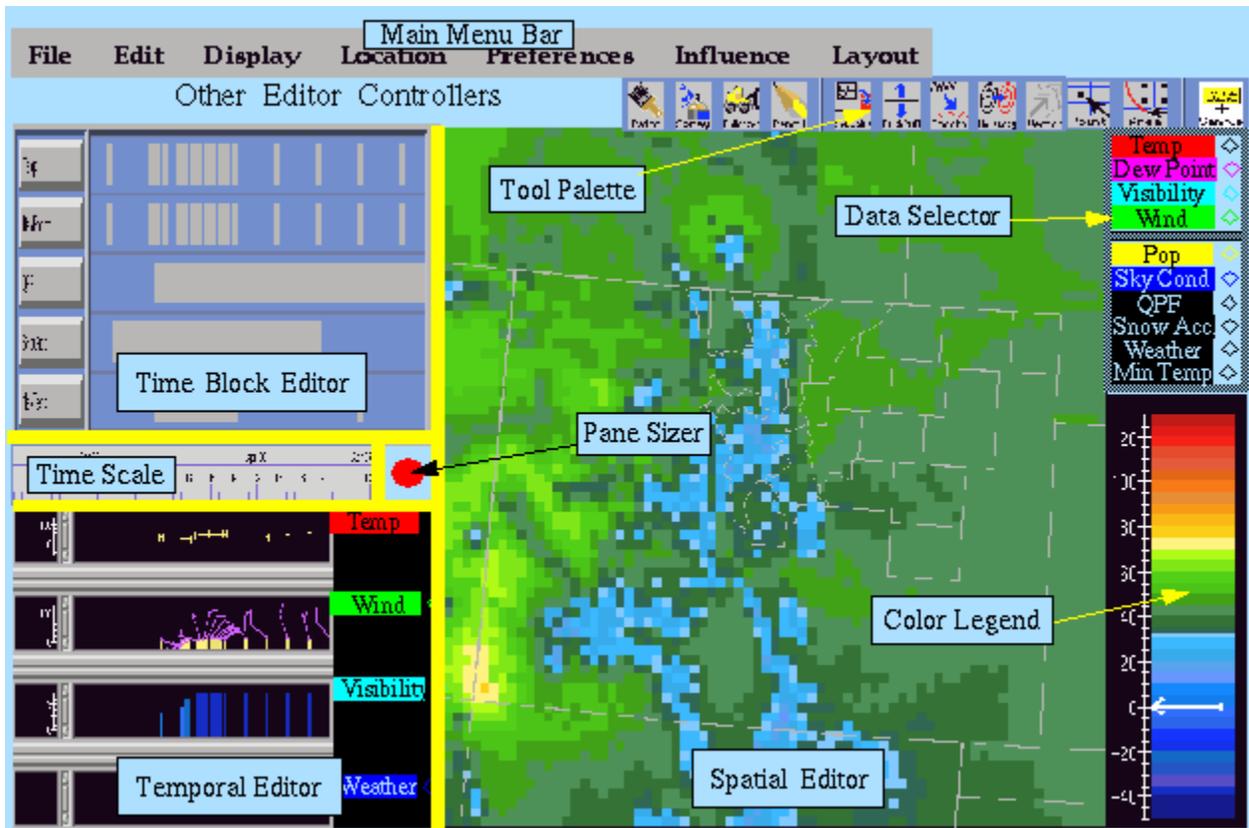
In our last issue, we promised to describe the new Graphical Forecast Editor (GFE). The editor's appearance has been dramatically changed. There are now lots of ways one editor affects the other editors. We've also added some new features suggested by the AFWG and forecasters who participated in the WFO-Advanced exercise. If you're interested in more details about the new GFE, see the on-line version of the [AFPS Level 2b Specifications document](#).

### **The New Layout**

As we said, we've changed the appearance of the GFE significantly. You might not recognize it. For starters we combined all of the editors, Spatial, Temporal, and Time Block (formerly called the Worksheet) into the same window. So, for the vast majority of the time, AFPS will consist of a single window. And since it will likely use the entire screen, you're only allowed one AFPS main window. Other windows will contain dialog boxes, and other interfaces that allow display or editor attribute changes, but we expect that these will be used infrequently.

We've tried to simplify the system wherever possible. Time Block editing will be less complicated. There's no longer a concept of cut/copy/paste, just clear and copy (which means no clipboard). The copy operation behaves just like drag and drop, you just won't see a little icon while you're dragging.

To give you a better idea of what it will look like, we pasted together a figure from screenshots of our current GFE. The final version won't look exactly like this, but close enough so you can [comment](#).



## Parts is parts

Do you recognize it? It's really just the same old editors, but now they're combined in a single window. Keep in mind that this figure is about half the normal size in both directions. The editors behave the same way they do today, more or less. You get to control how much of the window's real estate is assigned to each editor by using the Pane Sizer. Just press and drag the big red button and you will allocate more space for some editors and less for others. The size of each editor and the Time Scale is determined by the final location of the Pane Sizer. So, if you're doing temporal stuff, you move the Pane Sizer to the right, shrinking the space used for the Spatial Editor. If you're doing spatially oriented editing, then move the Pane Sizer to the left. The space allocated to the Spatial Editor gets larger at the expense of the Temporal and Time Block Editor. With this design, the amount of window management required is kept to a minimum. This is our solution to the complaint, "Too many windows."

## Editor Interaction

With all three editors in the same window, we can now let them interact and control each other. For example, when the mouse cursor is in the Temporal Editor or the Time Block editor, the

particular grid that corresponds to the parameter/time under the cursor is displayed in the Spatial Editor. So, if there is any question about what a grid looks like, simply move the mouse cursor over that time block and view it in the Spatial Editor.

By the way, because of possible performance problems, you will be able to turn off this interactive mode so that no interaction takes place.

The Spatial Editor will contain a new temporal tool. With it, you click on a Spatial editor grid point and a new location is displayed in the Temporal Editor.

## New Features

We've added several new features to the GFE.

- **Multi-parameter edit tools** - The Paint, Set Value, Bulldoze, Smooth, Move/Copy, and Sample tools can operate on multiple parameters at the same time. Take a look at the Spatial Editor's Data Selector. Note that it is divided vertically into two sections. The top section displays the names of those parameters that are currently "active". If you perform any of the six multi-parameter edit operations, all of the parameters listed in the active (upper) section will be edited.
- **One-step Parameter Loading** - We plan to implement an interface that presents a matrix of parameters versus model. You will be able to select all parameters for an entire model (or the forecast grids) with a single click. You'll also be able to select a single parameter from all model with a single click. Once you're done identifying what you want loaded, click OK and the parameters will be loaded.
- **Combine Forecast and Model Grids** - Since there is only one Worksheet (renamed to Time Block editor in version 2b) you can load model grids and forecast grids together and display them together in the spatial and temporal editor. Obviously, you will not be able to edit model grids, just view them.
- **Indicators of Allowable Time Blocks** - The Time Blocks Editor will display subtle indications of the suggested time resolution for each forecast parameter. For example, 6 hour QFP can only be defined as a series of grids valid for exactly six hours. The Time Block Editor will make sure that you cannot change the period over which these grids are valid.
- **Time Block Editing** - As we mentioned earlier, the concept of cut/copy/paste is gone. In the new GFE, you will simply copy data from one grid to another. For example, to copy a temperature grid from RUC to Forecast, just press on the RUC temperature grid, drag the cursor to its destination, and release. The RUC grid is copied to the Forecast grid. To stretch a time block, just press and drag. The time period between the source and the destination will be assigned the same grid. The Time Block editor allows you to copy grids to any other forecast parameter, as long as the units of each grid are identical (e.g., degrees F).
- **Time Block Indicators** - Time blocks in the Time Block editor will indicate several types of state information. Possible states are: Initialized from a model, Interpolated, Edited-by-me, Edited-by-other. We will also archive information so you can investigate the history of a particular grid.

- **Animation** - The Spatial Editor will animate a series of depictions. The Temporal Editor will indicate the currently viewed time block.
- **Button 3 Pop-up Controls Moved** - Many of the button-3 pop-up menu controls such as tool size, edit attributes, and reference sets have been moved to the Other Editor Controller section of the GFE. This way, they will be visible most of the time, more accessible, and easier to use.
- **Items Removed** - You may have observed that a few things have disappeared. The Panner is gone. It will be replaced with a Zoom/Pan tool. The locator map has been replaced by the Temporal tool, a component of the Spatial Editor.
- **Based-On-Value Facility Enhanced** - We plan to implement a query language that will allow the definition of a set of grid points based on one or more parameter values. These queries can be save and used over and over.
- **Legend Part of Spatial Editor** - If you look closely, you may notice that the color legend will be a component of the Spatial Editor, not a separate window. The legend will display the relationship between color and value for the parameter currently displayed as an image in the Spatial Editor.
- **Select Points Tool** - The Point and Area Tools have been replaced by a single tool called Select Points. This new tool will work just like the Point tool currently does, except that when you draw a closed polygon, the area inside is selected as well.
- **Pencil Tool Enhancements** - The Pencil Tool will be enhanced to remove the noisy field created when the interpolation occurs. We will also add a mode that allows you to define a new grid from scratch, by drawing contours of different values and then interpolating to fill in the entire grid.

## In Our Next Issue...

At the last AFWG meeting, we promised a multi-paint tool. After our preliminary design discussions, we decided that this concept could be expanded to several other tools as well. Next time we'll talk about the multi-parameter edit tools and how the user controls them.