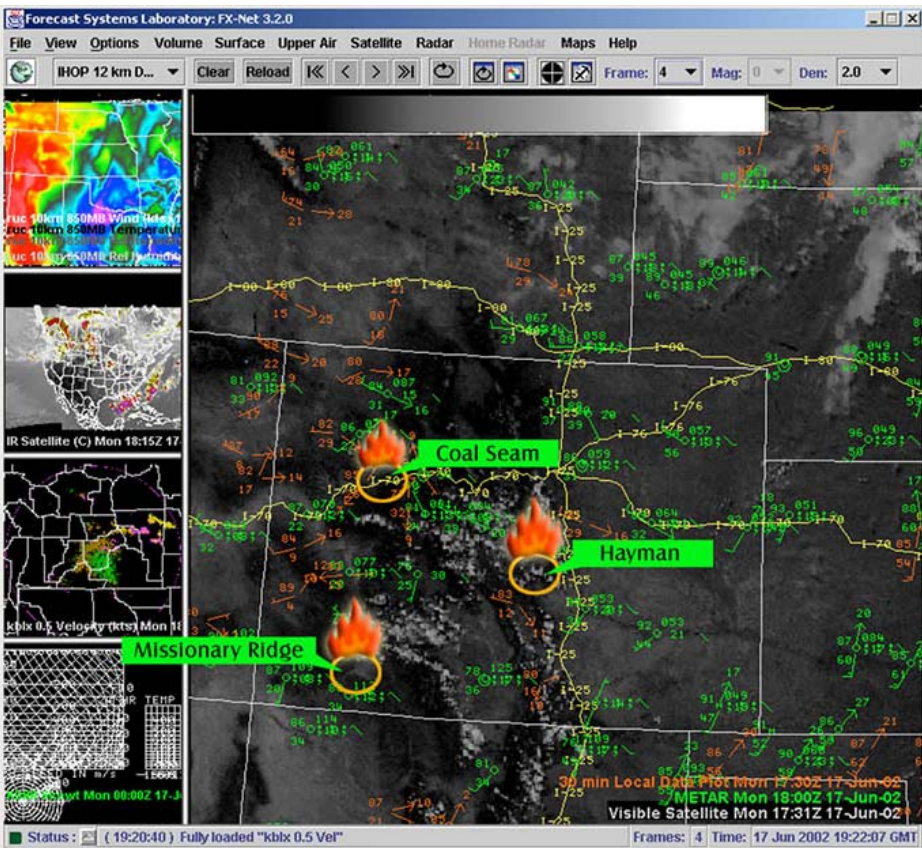




## Global Systems Division

FX-Net is a Java application that provides access to the basic display capability of an AWIPS weather forecasting workstation via the Internet. The AWIPS workstation user interface is emulated very closely. Bandwidth limitations are addressed by using new data compression techniques along with multithreaded client-side processing and communication.

FX-Net is a request-based, client – server system intended to be an extension of the AWIPS D2D capability over the Internet. The server is a modified AWIPS workstation and is primarily responsible for time matching of products and for creating and delivering product files. The client is run as a Java application on a PC. After retrieving product images and graphics via the Internet, it allows a user to locally interact with the information. Connections to the server are only maintained during request and retrieval of products.



*FX-Net Display of Colorado Wildfires*

Wavelet transform is being used to compress model and satellite imagery. The application of this specific compression technique is critical to the success of delivering very large-size imagery via the Internet in a reasonable amount of time.

As is the case with AWIPS, the client can load and overlay products of various types and interact with that information. Functionality includes animation, toggle of overlays, zooming, and swapping of display windows. The client is capable of importing Shape files and exporting gif, jpeg and KML files for use in external applications.

The Gridded FX-Net client receives NetCDF model grids and satellite and radar imagery via an LDM connection. The grids and images are stored local to the D2D remote client, identical to the one used in NWS WFO's.

By emulating the D2D interface, FX-Net is easily learned by those who have AWIPS experience. It takes little effort to adjust the system to display customized scales, to add additional observational data, and to display special customer oriented forecast models in combination with the existing palette of AWIPS products. It is this flexibility of FX-Net that has made it a popular meteorological workstation in research, teaching, and operational forecast scenarios.

### ***FX-Net for Fire Weather Forecasters***

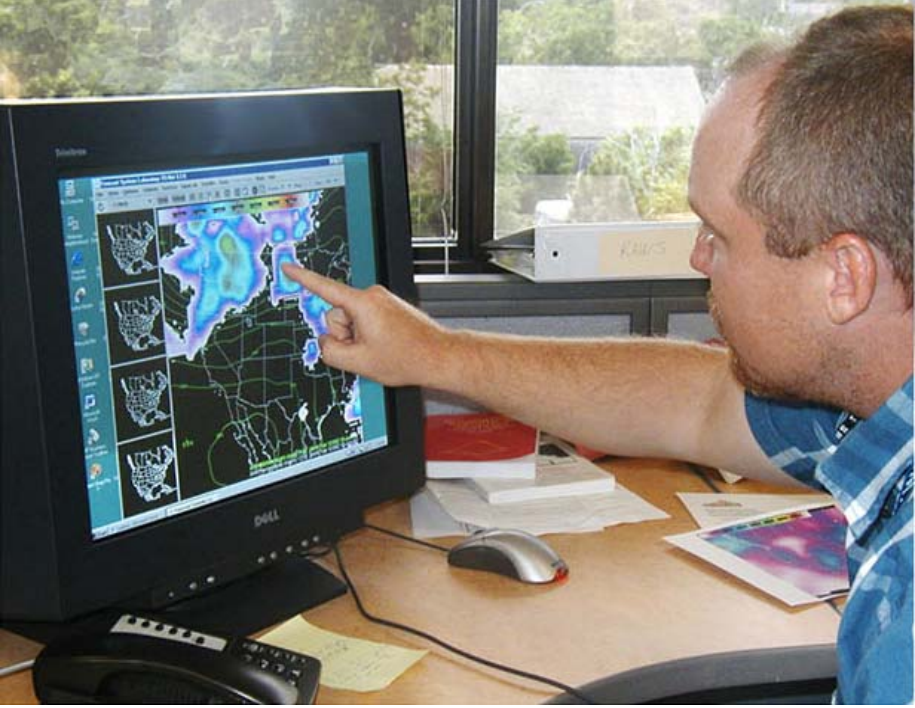
National Weather Service Incident Meteorologists (IMETs) and U.S. Forest Service fire prediction Forecasters utilize the FX-Net application to supply fire danger and fire weather information to fire fighting and fire management decision support systems and users.

The FX-Net and Gridded FX-Net systems allow field-deployed NWS IMETs to access real-time atmospheric Data from NOAA, the US Forest Service, and other real-time fire information providers.

Gridded FX-Net allows the USFS National Interagency Fire Center (NIFC) Predictive Services forecasters (see photo at right) to retrieve model grids which are applied to specialized fire prediction and fire danger models. Products from these models provide the USFS and other land management agencies with long-range resource planning and fire management decision support information.

The FX-Net system is based on AWIPS I at this time. Both the NWS IMETs and the USFS Predictive Services forecaster will be transitioned to the AWIPS II Remote client in the near future.

When in the field and without access to FX-Net or Gridded FX-Net, GSD provides a Grid Extraction Tool, Web Interfaced (GETWI) to forecasters needing access to model information.



*Fire Weather Forecaster Using FX-Net (GACC Office – Lakewood, Colorado)*



*IMET Briefing Fire Behavior Analyst on a California Fire*

### ***Specifications***

**FX-Net Client: PC, 500 MHz or faster, 2 GB RAM, Windows 7/Linux**

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