



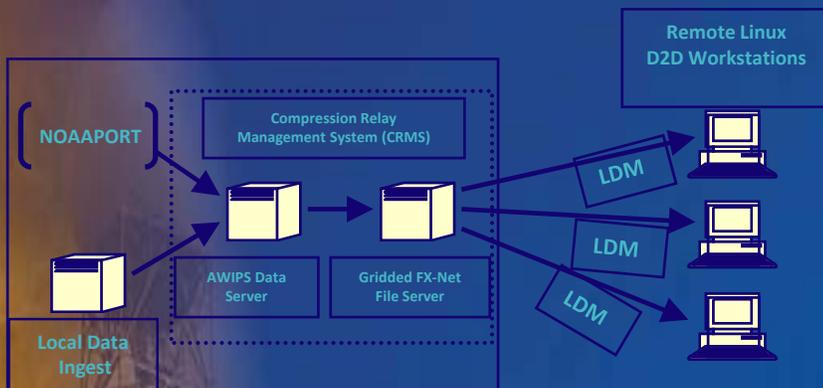
# Earth System Research Laboratory

## National Oceanic and Atmospheric Administration

# GRIDDED FX-NET

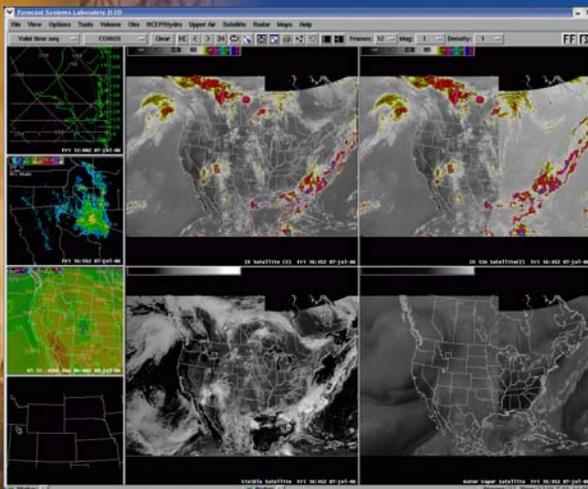
The Gridded FX-Net System combines state-of-the-art data delivery technology, while leveraging existing technology, to deliver high-resolution, gridded model data and bit-map imagery, while minimizing bandwidth consumption and maximizing data throughput.

The Gridded FX-Net system utilizes significant, enabling, technologies developed by ESRL/Global Systems Division. The Advanced Weather Interactive Processing System (AWIPS) forecaster workstation technology was developed for NWS operational forecasters and the Precision Controlled Wavelet Compression technology (Wang 2002). The system uses AWIPS NOAAport data, AWIPS servers, and the AWIPS D-2D interactive display. What sets Gridded FX-Net apart from the existing AWIPS system is its ability to distribute real-time data to multiple, remote, D-2D clients from a centralized set of servers. Unidata's Local Data Management system manages the data distribution pathways. The relatively independent data delivery system, the Compression Relay and Management System (CRMS), was developed to enable this data distribution using moderate bandwidth networks.



The figure to the left shows the hardware components of the Gridded FX-Net System. The software components include:

- 1) Modified AWIPS data and file servers.
- 2) Remote AWIPS D-2D Client, which provides data display and manipulation tools.
- 3) Compression Relay and Management System (CRMS).



The AWIPS D-2D interactive display (at left) provides real-time atmospheric data analysis, display manipulation and interactive product development tools.

The US Forest Service and the Bureau of Land Management use the system to develop and execute fire potential algorithms used to rate fire danger indexes.

