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# RECENT TECHNICAL ACTIVITIES

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## Weather Information on CFHT's Network

Observational astronomy as conducted at CFHT, generally needs clear skies and cooperative weather conditions. The axiom that "everyone talks about the weather but nobody does anything about it," has applied to Mauna Kea. Now, however, on a regular and continuing basis, we have the capability to at least know about Hawaii's weather on a more consistent basis.

For about 6 months, we have been experimenting with acquiring daily sequences of weather information being broadcast over shortwave radio, using commercially available equipment and software, using an MS-DOS PC as the data acquisition, storage and viewing facility. With enough of the vagaries of the procedures now having been sorted out, we are able to offer this service to all our users. The different steps for obtaining images and maps of sufficient good fidelity will continue, and hopefully these should improve the quality of our database as the systems become more reliable.

Currently we can view images from the NASA's GOES-West satellite, which is in geostationary orbit, located at an altitude of 36,000 km above 110W on the equator. Hawaii, at 20N 155W, thus is far to one side of the available field. However, for a qualitative look at the large scale weather patterns it is very useful. In addition, the NOAA National Weather Service also transmits weather forecasting maps, the contents of which vary with purpose. For example, our daily collection usually consists of the following:

- Several GOES-W Satellite images of the Pacific.
- Tropical Analysis Map; @ 1200 Z.
- Surface Analysis Map; 1200 Z.
- 500 millibar Analysis Map; 1200 Z.
- Pacific Surface Analysis; 1200 Z.

The image quality is still dependent upon the shortwave radio reception at Waimea, the present home-base for the down-loading facilities. The frequent severe weather on the summit makes the construction of antennae impractical at our building, so for the present, the operation will remain here.

Users can view these weather data from the network, using a UNIX workstation, by simply typing "weather" after logon. A simple graphical tool called "XV" (for "XView") enables scanning the different images, which are stored in GIF-format. If in doubt, or you encounter problems, get help instructions by typing "man weather", where the latest procedures will be posted.

PC-NFS users can also access the information, when connected to the DOS directory, i.e. G:\hokua\home\hokua\dos. Once there, change directory by typing "CD\WEATHER", and start up the MS-DOS program called "WEFAX". This has a relatively straightforward menu-driven approach, including "Help", to guide you through the various steps. For good resolution, the PC should have at least VGA video.

We plan to provide, in the future, images in FITS format, especially if we can obtain consistent data from polar-orbiting

satellites, some of which can give excellent images, from an altitude of only 800 km. This will, however require different receivers and antennae, as well as experimenting with new transmitting schedules. Keep checking "weather" for the latest improvements to your observing (and other) conveniences.

*J. Sovka*

## Pegasus Information

Pegasus is now available at many international sites including the European Southern Observatory, Dominion Astrophysical Observatory, Observatoire de Haute Provence, Anglo Australian Observatory, Japanese National Astronomical Observatory, San Diego State University, Onsala Space Observatory, McDonald Observatory, University of Montreal, Steward Observatory, and Goddard Flight Center.

At least one institution has integrated Pegasus software into its daily operations. As a result of a collaboration between ESO and CFHT, Pegasus software is an integral part of ESO's primary and secondary site remote observing project for the NTT. A description of this project is the subject of the front-page article in the September issue of "The Messenger."

As a continuing effort to make Pegasus software more useful at CFHT, and for the user community, new Pegasus development includes:

- Creation of GXE, a user-friendly, WYSIWYG interface builder. It allows users to create and edit user interface forms via a drag-and-drop paradigm;
- An observation sequence editor and sequencer is being specified. The editor will allow easy creation of observing sequence "macros" for such tasks as mapping, calibrating, etc;
- Inter-application communication to allow Pegasus applications the ability to exchange information. Its main use will be to promote more visual interactions, e.g., graphically dragging a stellar object to a slit, selecting detector subarrays;
- Expansion of the help system to have context sensitivity and hypertext links;
- Creation of new Pegasus widgets, including work done at ESO;
- General cleanup for easier release to user communities.

At CFHT, we believe that our Pegasus software provides both a very user-friendly interface and a powerful applications development environment. Because of these attributes, we feel that Pegasus is one of the premier user interfaces in the astronomical community. If the growing list of institutions which have Pegasus is any indication, then it seems that we aren't the only ones who think that is so.

A Pegasus demonstration is available from CFHT via anonymous ftp. For more information, contact the CFHT software group.

*J. Kerr*