

RECENT TECHNICAL ACTIVITIES

The Data Reduction Facility

A number of new developments have occurred at the D.R.F. since the last bulletin. Among the recent acquisitions are a new computer, the addition of cluster software, a complete Ethernet/DECnet network, an office terminal server network, a connection to the UUCP electronic mail network, the addition of TEX/LATEX software, and the addition of a laser plotter.

The New Microvax: The C.F.H.T. Data Reduction Facility has been recently expanded with the addition of a MicroVAX from Digital Equipment Corporation. The cpu capacity has grown by a factor of 2.5 with the addition of the MicroVAX. The VAX 750 has the equivalent cpu power of 0.6 VAX 780's, while the MicroVAX corresponds to 0.9 VAX 780's, for a total cpu power of 1.5 VAX 780's. The MicroVAX has twice the physical memory (16 Mbytes) of a Vax 750 (8 Mbytes).

The New Cluster: This new computer and the existing VAX 750 have been incorporated into a VAX Cluster using the SILINK technology from System Industries. Incorporating the two cpus into a cluster allows both computer systems to share such expensive peripherals as the discs, line printers and laser printers as well as "rare" peripherals such as modems. The cluster software allocates these resources and takes care of the housekeeping chores such as ensuring that two people do not write to the same file at the same time. The only large peripherals which can not be shared are the magnetic tape drives.

The SILINK software allows the two large Fujitsu Super Eagles to be shared amongst the DEC cpus. To the user this relieves most of the problems of multi-cpu installations; the prime problem is to remember which cpu and which disc you are currently logged into.

The New Terminal Server Network: The cluster is tied together by an Ethernet trunk throughout the entire building on which we are running DECnet. All the offices are being wired for terminal servers and, once this project is completed, users will be able to select which cpu they wish to log into from a menu at their terminal. We have also had success connecting non-DEC cpus and devices to the terminal servers so that now the Hewlett Packard 1000s, some of the Hewlett Packard Vectras, and some modems are accessible to any terminal on the terminal-server network.

The UUCP Network: We are now an official UUCP (Unix-to-Unix-Copy-Program) electronic mail site. We receive mail courtesy of UH Manoa on Oahu and will in the near future probably host some of the on-island future sites. Our e-mail address differs depending on the sophistication of your local e-mail routing scheme. For those sites without "domain routing" capabilities you need a means of getting mail to N.O.A.O. in Arizona. Our address is then

...!noao!uhmanoa!cfhtvax!username

where '...' is whatever route you must take to get to noao (ask your local UUCP expert) and 'username' is the name of the person at CFHT you would like to send mail to. If you do not know the local account name of the person just substitute 'system' for 'username' and we will forward your mail to the correct party. If your site can handle domain routing, or if your site is not on UUCP then our address would be

`username@cfhtvax.MKO.HAWAII.EDU.UUCP`

This address might have to be preceded by a string; again consult with your local e-mail expert.

We have found typical transfer times (to send and receive a reply) of 1-2 days for sites as far as Space Telescope Science Institute and 2-3 days for sites in France. The mail network supports both electronic mail and file transfer. For further information please send e-mail to 'system@cfhtvax' or by "snail" mail to our postal address.

The TEX/LATEX Software: In an effort to provide high quality, publishable documents and tables the D.R.F. has added the well-known TEX/LATEX package. This package has a terminal previewer so that documents may be previewed and corrected before the final draft is plotted on the laser printer. We have also acquired a version which runs on a Personal Computer.

The Laser Plotting Facility: Our existing plot capabilities have been augmented by the purchase of a Laser plotter (Lasergrafix 800) from Quality Micro Systems. This plotter has been integrated into our commercial plotting facility (the DIS-SPLA package from ISSCO) and the IRAF package. It is capable of plotting full page graphics at about 8 pages per minute and has a resolution of 300 dots per inch.

R. McGonegal

Base Extension

After six months of design and planning, and a further semester of noise, dust and anticipation, the staff was able in the last days of January to move into 470 new usable square meters added to the Waimea headquarters' main building. The permanent facility completed in 1982 had been somewhat scaled down from the original plan, and it was fully utilized from the first day. The need for an eventual "phase 2" was already evident then, and had been taken into account in the design.

The 50% area expansion, and minor modifications in the existing structure, were undertaken to cover the following needs:

- a new library (at 103 m² the largest room in the building) to house continuously expanding holdings and the Palomar Sky Survey;