The Laboratory For Oceans Computing Facility

by

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The first VAX computer in the Laboratory for Oceans Computing Facility (LOCF) was installed in April 1986 and the facility has been largely expanded since then. The growth is not only in hardware and software, but also in the number of users and in supporting R & D projects. The LOCF serves as a general purpose computing facility for Code 670 projects. These are: ocean color research projects, sea ice research projects, processing of the Nimbus-7 Coastal Zone Color Scanner data set, real-time ingest and analysis of TIROS-N satellite data, study of the Synthetic Aperture Radar data, study of LANDSAT data, and many others.

The physical space and the electrical power layout of the computing room were modified to accommodate all the equipment. The facility now has one VAX-11/750 computer, three MicroVAX II computers, and a variety of peripherals. All the computers are 'clustered' using Local Area VAXcluster technology of Digital Equipment Corporation for resource sharing such as sharing local disk drives and line printers. All the computers are also on the SPAN network so that information exchanges with outside communities are convenient. The system configuration diagrams are shown in Figures 1 and 2. Currently, we are in the process of connecting Code 670 investigators' IBM personal computers to the network. This provides a rapid means of accessing data on the

LOCF computers.

The LOCF has several image processing stations which include two International Imaging Systems (IIS) model 75 processors and one Adage processor. An IIS IVAS image processing workstation is on order. The facility now has disk farms of the capacity of 7.6 GBytes and more disks will be added to the system. Additionally, the LOCF has Sony optical disk drives for large data set storage and archival.

The facility has the capability of ingesting the TIROS-N HRPT satellite data on a real-time basis.

More than 30 software packages have been installed on the systems. System software packages, network software, FORTRAN and C compilers, database management software, image processing software, graphics, mathematics and statistics packages, TAE, Catalog Manager, GEMPAK, LAS and many other software developed on the LOCF computers such as SEAPAK have greatly advanced the capability of the LOCF.

The LOCF coordinates vendors to give either a presentation or a demonstration of their products should there are interest from the user groups. Examples are: Sony optical disks, RCA Domsat capability, INMARSAT communication, IIS image processors, SEICO color copiers, a VHS data tape unit. The facility also arranges courses when needed. A TAE class was held for the LOCF users.

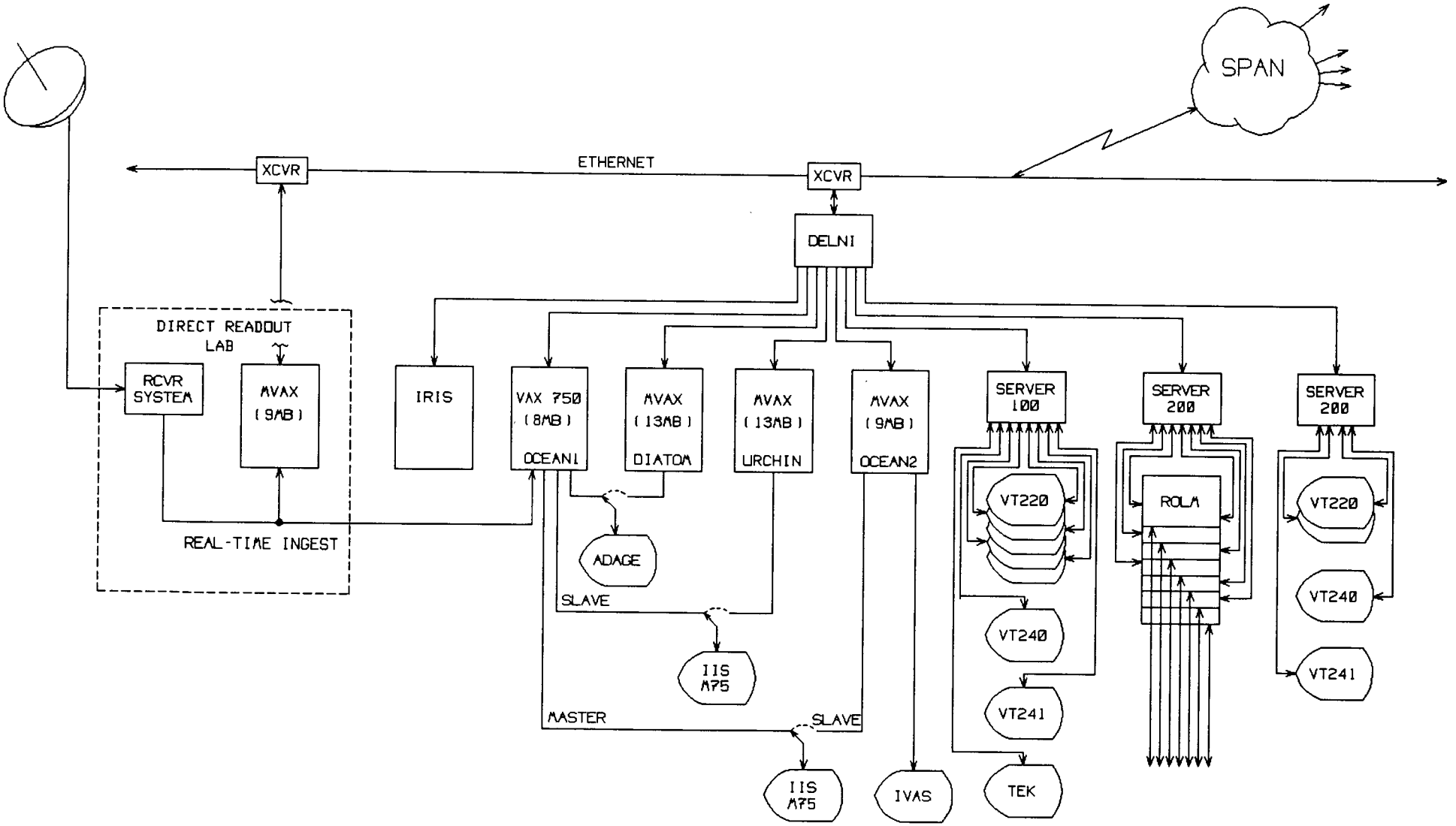

Figure 1. NETWORK CONFIGURATION

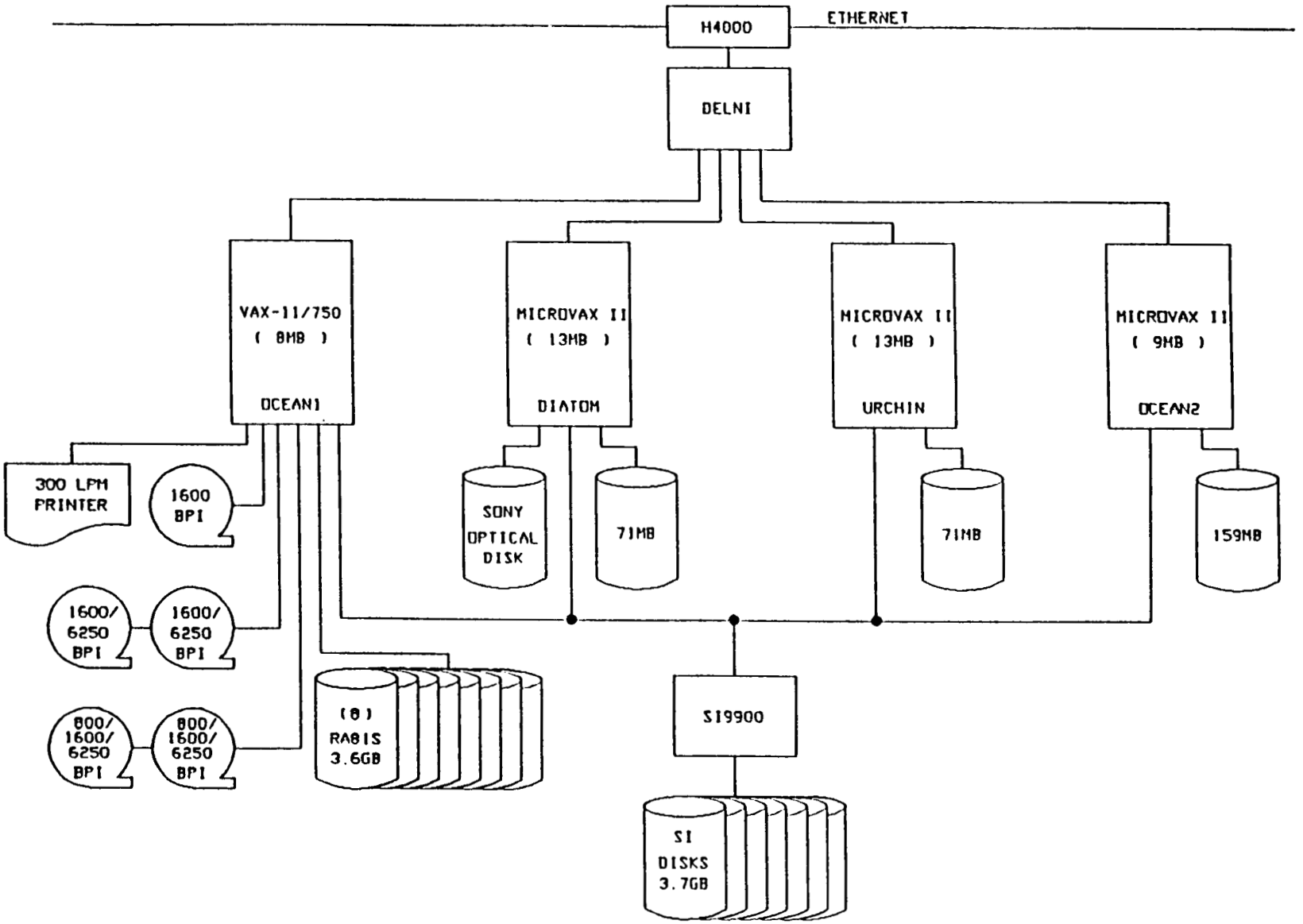

Figure 1. Local Area Vax Cluster