New Library Materials

The Computing Center's Documents Room (205) has recently added a number of new materials, including:

Books:
- *Academic Microcomputing: A Resource Guide*, Garson--1987
- *Inside the IBM PC*, Norton--1986
- *Lotus 1-2-3*, Adamis--1986
- *Variations in C*, Schustack--1985
- *Turbo Pascal Tutor: A Self-Study Guide to Turbo Pascal*, Borland International--1984

Reference Materials:
- *Computers and Computing Information Resources Directory*, Gale Research--1987
- *Glossary of LAN (Local Area Networks) Terms*, LAN Magazine--1986
- *Computer-Aided Design (CAD) Directory*--1986
- *Computing Resources on the University of Oregon Campus*--1987

Magazines:
- *Computer Graphics Review*
- *LAN: Local Area Network Magazine*
- *MacBriefs: Resource Digest for Macintosh Professionals*
- *MacNews: The Business Journal*

You'll also find new public-domain software for the Apple Macintosh and IBM PC. These programs, like all of the materials in the Documents Room, are available to anyone. Check the Documents Room for current holdings.

LAN/1: What Is It?

This is the second in a series of articles about the University's LAN/1 network and network terminology in general. Last month we described the physical broadband cable; this month we'll look at NIUs.

Every device (terminal, microcomputer, printer, plotter, mainframe computer, etc.) on the network must be connected via a **network interface unit** (NIU).   The type of NIUs in use determines the type of service and transmission available on the network. Separate NIUs and software are needed for each broadband channel at every point where a device is attached to the network.

Each NIU has its own processor (CPU) and **modem** to direct the flow of data through the network, the actual conversion of data, and error checking. The modem translates data to the appropriate frequency for transmission over one of the broadband channels. Communications from many devices on a single channel are controlled by a protocol, a strict language or set of rules governing whose turn it is to "talk" on the channel and how error checking takes place.

This technology represents a **distributed** approach to networking: each NIU serves just a few devices. When an NIU goes down, no more than a handful of connections are lost, rather than the entire network. And, each NIU connection is always available...the CPU is always waiting for the devices it serves to transmit data.

Our current network is usually referred to as the **LAN/1**, but that is really the type of NIU we have... Allen Bradley Vista LAN/1 NIUs. We are using one forward/reverse channel of the broadband cable for the LAN/1 service.   It provides simple **terminal** service allowing data to be transferred between two devices at speeds up to 2.5 million bits per second (2.5 Mbps). A **virtual circuit** that acts like a direct connection by wires is established between the two devices. Anything "typed" on either device appears on both. However, unlike direct wires, the LAN/1 allows you to change the circuit by "hanging-up" and "calling" a different device.

Approximately 250 NIUs (about 2000 devices) can be supported on our current LAN/1 service. Next month, we'll describe briefly how the LAN/1 can be used.

Network Mail and File Exchange

With the addition of the DEC 1091 to the international BITNET network, the exchange of electronic mail and files has become easier on both the DEC and IBM mainframes. Several new DEC commands make sending and receiving network mail and files similar on both systems:

- to send mail: **mail to** *receiver* **at** *node*
- to read mail: **mail** on CMS; **rdmail** on the DEC
- to send a file: **sendfile** *fileid* **to** *receiver* **at** *node*
- to list waiting network files: **q rdr all** on CMS; **ndirect** on the DEC
- to move waiting files into your area: **receive**
- to delete waiting files: **purge rdr** *spool#* on CMS; **purge** *fileid* on the DEC

These commands can be used to exchange mail and files both locally and worldwide. On CMS (node oregon1), you can communicate with people on BITNET. From the DEC (oregon2), you can reach others on BITNET and on UUCP, a worldwide Unix-based network.

Other networks, such as ARPAnet, can be reached via BITNET and UUCP "gateways." Gateways connect separate networks and provide greatly simplified addresses for reaching people at other institutions. Mail from CMS and mail and files from the DEC can be sent via the gateways

known to each system. Type **help gateways** on the DEC or **help mail networks** on CMS for addressing instructions and a list of gateway nodes.

For more information on network exchanges, see the newly revised write-up, "Network Mail and File Exchange," available in the Documents Room (205). For the DEC, see the new online help files for each of the DEC commands above, and the MAIL write-up. On CMS, there are help files for the CMS commands listed above. The BITNET write-up tells how to use it from either system.

Smile Online

The intent of computer communiques can be difficult to identify without the vocal inflections that accompany face-to-face and telephone exchanges. Jokes, sarcasm, and other conversational nuances are often taken too literally when read. The symbols listed below have evolved to help clarify computer messages. To read these expressions, which are really cartoon faces turned on their sides, turn the page 90 degrees to the right. Try using some of these to make the intent of your online communications clear:

:-O	Wow!	:-)	Smiling
:-,	Smirking	:-(	Frowning
:-l	Grim	:-v	Speaking
:-*	Oops	:-V	Shouting
'-)	Winking	:-c	Unhappy
;-)	Sardonic incredulity	:-C	Unbelievable
:-"	Pursing lips	:-ll	Angry
%-	Doubled over with laughter		
:-w	Speaking with forked tongue		

This list was culled from online use and articles in the computing newsletters from the University of New Mexico and the University of North Carolina, Greensboro.

MICRO SCOPE

Multi-user Network Applications

The Computing Center's General Applications Programming group (GAP) has recently converted several stand-alone microcomputer database applications to multi-user network systems. The applications are written in dBASE III Plus and run on an IBM PC local area network under Novell's Advanced Netware 86 product. Demonstrations of the network will be conducted this spring for interested faculty and staff.

GAP now offers multi-user dBASE III Plus programming, as well as programming for the Center's mainframes and IBM microcomputer systems. GAP staff members can consult on dBASE III Plus and IBM PC network applications. They can also help you select network software and hardware and install Novell Netware products.

If you are interested in a network demonstration, need programming services, or want assistance networking IBM microcomputers, contact Susan Hilton (x4394).

New Micro Purchase Plan Products

The new personal computer products recently announced by both Apple and IBM are available at a discount to U of O faculty, students, staff, and departments through the University's Microcomputer Purchase Plan.

On March 2, Apple introduced more than 25 new products, including two new Macintosh models:

- the **Macintosh SE**---an enhanced and redesigned Macintosh Plus with added internal storage capacity.
- the **Macintosh II**---a high-performance, open-architecture, top-of-the-line machine, with several display options (including color) and the ability to run other operating systems.

Additional Apple products available at a discount include storage devices, memory upgrade kits, keyboards, monitors, and MS-DOS compatibility options.

On April 2, IBM introduced the new Personal System/2 microcomputer line, including more than 100 new products and four new models:

- the 8530--an entry level model based on the 8086 processor
- the 8550 and 8560--intermediate level models using the 80286 processor
- the 8580--a top-of-the-line model based on the 80386 processor

All four models will use 3.5-inch disk drives and have increased memory, increased disk storage capacity, improved disk access time, and expanded graphics support. Functions such as display adapters have been built into the new system boards, leaving more flexibility for the open architecture slots.

Additional Personal System/2 products available include new monitors, storage systems, printers, network options, and Solution Pacs--bundled software and hardware packages designed for particular applications.

For details concerning these new products and the purchase plan, visit the Computing Center's Micro-computer Support Lab (Room 105) between 1:30 and 4:30 weekdays. Brochures and price lists are also available in the Computing Center's Documents Room (205) and at the Electronics Counter in the U of O Bookstore.