# Computing resources issue

Welcome to campus and another year of computing at the University of Oregon. To help familiarize you with the various facilities and services offered by the Computing Center, this issue of *Computing News* is devoted to describing the Center's major resources.

For those of you who are new to the University, *Computing News* will keep you up-to-date on campus computing developments and offer occasional tips for solving common computing dilemmas. Copies are mailed to all faculty, staff, and GTFs, and are available in wall racks at the Computing Center. If you're not on one of the mailing lists and wish to receive *Computing News*, contact the editor (e-mail JWINS@OREGON, phone 346-1724).

The Computing Center offers a wide selection of computing-related facilities and services to the University community. For those of you who are new to the UO, here's a brief summary of our most popular resources. Call Joanne Hugi, Director of Computing Services, at 346-1702 if you have further questions.

# The Microcomputer Support Center

Whatever your interest in microcomputers—whether you own one, use one, or are simply thinking of buying one—you'll find the Microcomputer Support Center a valuable resource. Located upstairs off the south lobby in the Computing Center, the Support Center offers a variety of complementary, integrated services related to owning and operating personal computers. It is the information and distribution center for the Microcomputer Purchase Plan, as well as a consulting services hub that assists with everything from general microcomputing dilemmas to specialized aid, such as file restoration or virus detection. Some of these services are described in more detail below.

## Microcomputer Purchase Plan (Room 202)

The Microcomputer Purchase Plan enables eligible University faculty, staff, students, and departments to purchase many microcomputer products at significant educational discounts. Featured products include NeXT and Apple machines, as well as software from Adobe, Aldus, Claris, Lotus, Microsoft, and WordPerfect. Dell and Hewlett-Packard products will also be available later this fall.
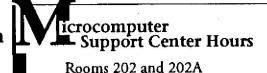
The Microcomputer Support Center staff offers product demonstration and assistance in selecting equipment, as well as lists, eligibility and ordering information, and product handouts. Visit Room 202 between 9 am and 5 pm, Monday through Friday, for prices and additional details. You may also check DuckScoop (see "Meet Gopher...Get the DuckScoop" in this issue) for an online display of prices, or call 346-4402 for information.

## Microcomputer Consulting and Services (Room 202A)

This office offers a variety of support services related to using personal computers. It is staffed with consultants who can provide guidance in resolving your microcomputer system or software questions. You can get help with file transfer, virus detection and eradication, and disk repair, among other services. Consulting and Services also provides access to public domain software libraries and laser printing.

## Microcomputer Support Center Hours

Rooms 202 and 202A

Monday - Friday   9am - 5pm

### Public Domain Library Service

This service provides campus users access to public domain software and shareware. There is no charge for public domain software, and shareware is offered at no cost on a trial basis (if you decide to keep shareware and use it, you'll need to pay a fee to the software's author).

Handouts describing how to use the public domain facilities are available at no charge in the Support Center. If you have further questions, stop by Room 202A or call 346-4412.

*Macintosh Public Domain Libraries:* This service utilizes a CD-ROM disk containing public domain software from the Boston Computer Society (BCS). A catalog describing each program available through BCS is on hand in Room 202A and the Documents Room (205).

## Microcomputer Support Center *(continued)*

Additional software may be accessed from the CC Public Domain and Macintosh System Software disks, which contain public domain software and shareware that is not available in the BCS public domain library.

You may access all the Macintosh and public domain libraries from any Mac that's connected to UOnet, the campus network. Those without other access to UOnet may reserve time on a networked Mac in the Support Center by calling 346-4412.

*DOS Public Domain Libraries:* The Center also provides public domain software and shareware on the PC-SIG CD-ROM disk, as well as selected anti-viral and network software (anti-viral programs, the Kermit and Telnet communications packages, the Trumpet USEnet news reader, the Gopher Internet resource-finding program, Ethernet and Novell packet drivers, and TNVIP). You may access this software from any PC connected through the campus-wide Novell network to the Zeus public domain server.

The Support Center reserves networked PCs for accessing public domain software and shareware and the other Center-supported programs. Call 346-4412 to reserve time for copying programs onto your own 3 1/2" or 5 1/4" disks.

### Bug Fixes, Maintenance Updates

Experiencing software problems? The Support Center may be able to help. Updates and bug fixes are currently available free of charge for a variety of Microsoft programs. Bring your master software disks to Room 202A for upgrading. Call 346-4412 for details.

### File Transfer, Virus Clinic, Disk Recovery

Microcomputer consultants are on hand to assist with file transfer and format translation, file and disk recovery, and virus detection and eradication. If you need help with any of these tasks, call 346-4412 or drop by Room 202A.

### Laser Printing

Any campus user may reserve the Apple LaserWriter IIg in Room 202A to print out Macintosh and DOS documents. The fee for printing is 20¢ per page, payable in "micro money," which must be purchased in advance at the downstairs reception desk (Room 108). Call 346-4412 to reserve printing time.

# ☞ Other Computing Center Resources

## Network Services

The Computing Center's Network Services group designs, installs, maintains, and troubleshoots network connections and network services for a variety of computers, including Macintosh, IBM PC (Novell), UNIX, and DEC VMS.

If you're interested in installing or extending a network, or have network-related questions, call the Network Services hotline, 346-4395, and press 1 in response to the recorded message. For a recorded message on current UOnet status, press 2 instead. You may also send questions via e-mail, addressed to NETHELP@NS (or just NETHELP, if you are logged in on OREGON or DONALD).

Questions regarding how to access UOnet or use local e-mail programs, as well as questions about transferring files to other computers, should be directed to VAX consultants at 346-1758, or to microcomputer consultants at 346-4412.

See the *Network Notes* section in this issue for details on the latest network developments.

## Electronics Shop Repair, Upgrades

If you need to install, repair, or upgrade microcomputer hardware, call the Electronics Shop at 346-4403. The shop is an authorized Apple Service Center for all Macintosh models and AppleCare service, and also offers service for DOS PCs and NeXT computers. Repair of dot-matrix and laser printers is also available.

Those seeking memory upgrades will be interested to learn that the shop's technical service staff sells and installs memory upgrades for Macintosh, PS/2, or PC-compatible computers. If you are ordering a new computer through the Microcomputer Purchase Plan, they'll install the extra memory before you pick it up. If you already own your computer and want to add memory, contact the Electronics Shop at the extension above for details.

## Apple/Computing Center Equipment Loans

A Macintosh with a sampling of software is available for loan to selected university faculty and staff for two- to three-week evaluation periods. For details, send e-mail to Kathy Heerema at HEEREMA@OREGON or call 346-1717.

## Public VAX Access

The Center's public terminal room (105) provides nine terminals for accessing any of the resources available on UOnet, including OREGON, DONALD, and DARKWING timesharing computers. These terminals are available on a first-come, first-served basis to all campus users.

## 346-3565 Now Connects to UOnet

If you're accustomed to dialing 346-3565 to access a timesharing computer via modem, you'll notice that the old "enter class" prompt no longer appears. The 3565 extension now connects to a UOnet terminal server, so you'll see a "UOnet>" prompt instead.

If you're not familiar with UOnet, pick up a copy of the free handout, "UOnet Terminal Services," from the Computing Center Documents Room in Room 205. The handout explains procedures for connecting to timesharing computers (OREGON, DONALD, and DARKWING) via UOnet terminal server.

If you have installed automated scripts that dial 346-3565 for you, you will have to change them.

*Note:* if you're establishing modem connections to a UO timesharing computer for the first time, dialing in with 3565 is not recommended. Dial either 346-5975 or 346-2150, depending on your modem type (see "What Modem Number Should I Use?" in this issue for details).

# Visit the Documents Room

Looking for information on computers? You'll find a wealth of it in the Documents Room, located on the second floor of the Computing Center in Room 205. The Documents Room is both a library and information center for the campus community and the public at large. Here's a sampling of what you'll find there:

### Reference Materials -
- Indexes to computing magazines, including the "Computer Select" CD-ROM periodicals database, which helps locate articles and reviews
- Software and hardware directories—listings of online databases, electronic conferences, newsgroups, and journals
- A notebook containing announcements of conferences, seminars, workshops, and other training opportunities

### Magazines -
- More than 100 computer-related magazines, many of which are not available elsewhere on campus. Check DuckScoop, the UO's campus-wide information system (available through the Gopher server on UOnet) for a publications list.

### Books -
- Several hundred books on a wide range of computing topics, with an emphasis on microcomputing. The collection includes many books on popular subjects such as Windows, Microsoft Word, and System 7. You'll also find several titles on the UNIX operating system.

### Computer System Documentation -
- Manuals, write-ups, and handouts written by Computing Center staff that offer detailed information related to computing at the UO. They cover everything from such basics as acquiring and accessing VAX accounts, to more advanced operations, like transferring files across networks and running statistics packages.

### Newsletters -
- Over 150 newsletters from other academic computing centers, local microcomputer user groups, and educational computing organizations throughout the U.S. and Canada. Back issues are kept for one year.

The Documents Room is open weekdays from 9:30 am to 5 pm during the academic year, and from noon to 4 pm between terms. Anyone with a current UO I.D. card or other identification, such as a driver's license, is welcome to borrow library materials.

For more information about Documents Room services, contact librarians Deborah Kaufman or Vickie Nelson (e-mail to DKAUF@OREGON, VMN@OREGON; phone 346-4406).

# FALL WORKSHOP SCHEDULE

Each term University Computing offers short introductory workshops on a variety of computing topics. These non-credit workshops are open free of charge to UO faculty, staff and students. *Pre-registration is required for all courses. To pre-register, call 346-1700.* This term's workshop schedule is outlined below. Pick up a flyer at either of the Center's reception counters for brief descriptions of the workshops. If you have further questions, call Audun Runde at 346-1714.

| Topic | Workshop | Day/Date | Time | Room |
|---|---|---|---|---|
| VAX | *Tapes on the VAX* | Wed Oct 7 | 3:30-5:00pm | 185 CC |
| | *Using E-mail on the VAX* | Th Oct 8 | 1:30-3:00pm | 165 CC |
| DARKWING | *Intro to SPSS on DARKWING* | Th Oct 1 | 3:30-5:00pm | 185 CC |
| | *Intro to UNIX and vi on DARKWING* | Tu Nov 3 | 1:30-3:30pm | 165 CC |
| | *Using C on DARKWING* | Wed Oct 14 | 11:30am-1:00pm | 185 CC |
| | *Using E-mail and News on DARKWING* | Tu Oct 27 | 2:30-4:00pm | 165 CC |
| | *Using IMSL & FORTRAN 77 on DARKWING* | Tu Oct 20 | 3:30-5:00pm | 185 CC |
| | *Using X Windows on DARKWING* | Tu Nov 10 | 3:30-5:00pm | 185 CC |
| NeXT | *Working with Your New NeXT* | Tu Nov 24 | 3:30-5:00pm | 185 CC |
| Macintosh | *Using E-Mail on Your Mac with Eudora* | Tu Oct 6 | 2:30-4:00pm | Chiles Lab |
| | (repeated) | Wed Oct 7 | 2:30-4:00pm | Chiles Lab |
| File Transfer | *Upload/Download Files / Sending Files Offsite* | Tu Nov 3 | 2:30-4:00pm | 185 CC |
| | (repeated) | Wed Nov 4 | 2:30-4:00pm | 185 CC |
| File Editing | *Using GNU EMACS to Edit Files* | Mon Nov 9 | 11:30am-1:00pm | 165 CC |
| Statistics | *New Features of SAS 6.07* | Tu Oct 13 | 3:30-5:00pm | 185 CC |
| Scanning | *Exam Scanning with QuickScore* | Th Oct 15 | 3:30-5:00pm | 185 CC |

# network notes

## A letter from the director...

This summer has seen substantial growth in UOnet, the UO campus network. The network now extends into several new buildings, including Millrace I, II, and III, Bean Hall, the Career Information System at 1177 Pearl Street, and much of the EMU. The number of computers connected to UOnet has passed the 3000 mark. In addition to our connections to BITNET and the Internet through NorthWestNet, we have a connection to OSSHEnet, and through it to both the other colleges in the Oregon State System of Higher Ed and to the Oregon State government network in Salem. We've also made substantial internal changes in UOnet to increase performance and improve reliability.

Resources on UOnet have also expanded. We've introduced Gopher, a new system for accessing resources on the Internet (see story, this issue). A general purpose UNIX timesharing system, DARKWING, is now available on the network. Forty workgroups on campus now have Novell file servers, and most Novell users now have access to cc:Mail, a high quality commercial electronic mail system. The online campus directory now includes students as well as faculty and staff, and is accessible by means of a flexible new search program, "ph." New versions of popular Mac and PC network software are available on the Mac and PC public domain file servers; an updated list of recommended versions for Mac and PC network software will be published in the next issue of *Computing News.* A new program, TNVIP, is now available for PC users who need to use the OSSHE Bull mainframe in Corvallis. And we've published a new Computing Center manual, the *University of Oregon Network User's Guide,* that begins to offer more information to users.
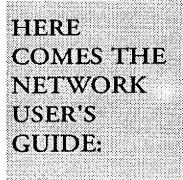
Perhaps most important, though, has been the growth of networking off campus. There are now more than one million computers attached to the Internet, with the number continuing to grow exponentially. NorthWestNet now has more than 45 member institutions. There's even a project under way to connect all of the school districts in Lane County to the Internet! Corresponding to the growth in the number of connections has been an explosion in the number of resources available on the Internet. Most major

commercial databases, such as DIALOG, Westlaw, LEXIS/NEXIS, and First Search, are now directly accessible using Telnet. Most e-mail systems, including Compuserve, Genie, FidoNet, and others, can now exchange electronic mail with users on the Internet. Hundreds of universities throughout the world now make available their electronic library card catalogs, online phone books, and Campus Wide Information Systems. Specialized databases available on the Internet range from GENBANK (DNA sequences), to the NSF Science and Technology Information System (STIS), to National Weather Service reports.

Closer to home, UO Network Services is working on several projects that are likely to be of interest to portions of the UO community. Of greatest note is the "Strategic Network Expansion Project" (SNEP), a project arising out of President Brand's strategic planning initiative of last year. This project will bring network access and services to all faculty offices on campus, and will fund improvements in network service in a variety of areas. As the plan becomes firmer, we will be providing more detail in a memo to deans and department heads later this month.

We will also be implementing improved external connectivity this fall. We expect to expand our dial-in modem pool substantially, and are currently testing specialized hardware for providing full TCP/IP (SLIP), AppleTalk, and Novell network access for UNIX, Mac, and PC users at home. In addition, we are investigating the possibility of increasing the speed of our UOnet connection to the Internet from 56,000 bps to 1.2 million bps. Watch future issues of this newsletter for announcements. On the services front, we are currently Beta-testing a new SMTP gateway that should bring much improved reliability to e-mail to and from cc:Mail users on campus.

This is a year of belt-tightening and of reexamination of priorities. Networking is an area where we can hope to improve the efficiency of the University through new priorities and new technology. We'll be working hard to apply that technology to university administration, research, and instruction.

*—JQ Johnson*
*Director, Network Services*

## HERE COMES THE NETWORK USER'S GUIDE:

The Computing Center is pleased to announce the release of the *University of Oregon Network User's Guide,* a new handbook for campus workstation users on UOnet. In it you'll find discussions of the network services and resources available through a direct or dial-in connection to UOnet, including

- what sorts of things you can do on UOnet and its affiliated wide-area networks, the Internet and BITNET
- how to use your personal computer as a network workstation
- network etiquette, addressing conventions
- how to obtain public domain network software
- where to find more information

The book includes individual color-coded sections devoted to networked Mac, DOS PC, and UNIX workstations, and a section on VMS network software available to those logged in on OREGON or DONALD.

Copies are available in the Documents Room for review or checkout, or you can purchase your own copy for $10.

# Meet Gopher... Get the DuckScoop

*gopher* n. 1. Any of various short tailed, burrowing mammals of the family Geomyidae, of North America. 2. (Amer. colloq.) Native or inhabitant of Minnesota: the Gopher State. 3. (Amer. colloq.) One who runs errands, does odd-jobs, fetches or delivers documents for office staff. *4. (computer tech.) Software following a simple protocol for tunneling through a TCP/IP internet.*

*DuckScoop* n. The University of Oregon campus-wide information system.

The Internet Gopher, developed originally at the University of Minnesota, is a new and powerful distributed information delivery system. Gopher provides both local information and access to other Gopher and information servers throughout the world. It's a menu-based system that allows you to browse the vast and growing array of information available on the Internet from your desktop.

The University's main Gopher server currently features

- DuckScoop (the UO's developing campus-wide information system)
- access to online library catalogs and campus information systems at other universities
- the UO faculty/staff/student phone book and phone books for many other institutions
- weather forecasts and news
- full-text databases, including dictionaries, thesaurus, and electronic books

and hundreds of other services.

Gopher provides a convenient and consistent user interface to other Internet tools, such as anonymous FTP accounts, "pb" and "whois" name servers, WAIS (wide area information servers), "archie" databases of anonymous FTP files, and just about any other Internet resource.

For users, Gopher is a program (or a choice of programs) that runs on a networked Mac, PC, NeXT, VAX, or UNIX workstation or terminal. Network Services distributes Gopher client programs for each of these types of desktop devices.

For Macs, Network Services currently recommends the Internet Gopher HyperCard stack, available in the AppleShare CC Public Domain library.

For DOS PC users, Network Services recommends PC Gopher II, available on the Zeus Novell file server (log in as user PD).

For UNIX workstations, Network Services makes available a Gopher client for anonymous ftp from FTP.HOST.UOREGON.EDU.

On OREGON and DONALD, a gopher client is available as part of the VMS unsupported software collection.

UOnet users with no other Gopher access can also use Telnet to connect to host "gopher," and log in as "gopher" to see a restricted subset of the Gopher universe.

In addition to providing Gopher software, the Computing Center has begun building a campus-wide information system called "DuckScoop." DuckScoop currently contains a selection of documents from a variety of departments on campus, such as University news bulletins, Microcomputer Purchase Plan prices, and the UO course catalog and time schedules. We expect rapid expansion in our collection as more University departments make things available electronically.

For assistance in acquiring or installing a Gopher client, contact Network Services at 346-4395 (e-mail NETHELP@NS). If you have questions about Gopher, call VAX Consulting at 346-1758.

For further information about DuckScoop, either explore it using Gopher, or contact the Documents Room (e-mail DUCKSCOOP@GOPHER, phone 346-4406).

# E-mail news:

The summer brought a number of new developments in the world of e-mail at the UO, as outlined below:

**Phone Directory Listings:** Last year, the UO telephone directory included an e-mail "yellow page" section for the first time. This year's directory should include a similar section, with e-mail addresses for nearly half of the 4500 people listed in the white pages. Directory worksheets were sent out to departments early in September. If you have an e-mail address, you should check with your departmental telephone representative and examine the worksheet to see that your name is included, and that the information in your entry is correct and complete.

There are no current plans to include student e-mail addresses in the 1992-93 printed edition of the Student Directory. However, student e-mail information has been added to the online directory service described below.

**Online Directory Service:** The University's online directory service has been enhanced with a new Internet-accessible server, PH.UOREGON.EDU, whose database now includes faculty, staff, and recently added student e-mail information. The new service responds to searches based on information like department and major, as well as the person's name. The ph database is accessible from a Macintosh, via the Eudora mail client's ph command, and from the VAXcluster and DARKWING.

**Getting an E-Mail "Mailbox:"** Many campus departments and other groups operate their own e-mail systems. If you're interested in setting up an e-mail mailbox (i.e., a place to send and receive electronic mail), check your department to see if you're eligible. If not, drop by Room 107 Computing Center (8am-noon, 1-5pm, M-F) and apply for a mailbox on one of the timesharing computers. Undergraduates are eligible for e-mail accounts on OREGON, the academic VAX, while graduate students, faculty, and staff can open e-mail accounts on either OREGON or DARKWING, the academic UNIX computer.

# WHAT'S NEW IN THE PUBLIC DOMAIN?

The Computing Center's public domain libraries include some new items for Mac and DOS-PC users. As noted earlier, you may access the libraries from any networked microcomputer (i.e., Macs connected to UOnet, PCs connected to the Novell network). Free handouts describing how to do this are available in Room 202A. Those without a network connection may reserve time on a networked microcomputer in the Microcomputer Support Center by calling 346-4412.

## Macintosh System Software Disk...

The following packages are stored in a hierarchical series of folders and subfolders on the *Macintosh System Software Disk*. Folder names are italicized and listed in order of precedence, separated by colons:

- **System 7 Tune-Up v.1.1.1** *(System Software: System 7: System 7 Tune-Up)*. A set of bug fixes and new printer drivers from Apple that make System 7 run more efficiently and print better. To run the tune-up over the network, click on the Installer. Or, you can copy the System 7 Tune-Up folder to a disk and run it on any Mac that has System 7 currently installed.

- **Printer Drivers.** Includes latest version of StyleWriter printer drivers, along with Personal LW LS 1.1, and System 7 printer drivers. The System 7 Tune-Up does not install the latest StyleWriter or Personal LW printer drivers.

- **MODE32** *(System Additions: Hardware Utilities & Drivers: MODE32)*. Enables Macintosh II, IIx, IIcx, and SE/30 computers to use 32-bit addressing under System 7.

- **8•24G v.7.0.1** *(System Additions: Hardware Utilities & Drivers: 8•24GC)*. An updated driver for Apple's 24-bit color card that provides improved System 7 compatibility.

- **Compatibility Checker** *(System Software: System 7: Before You Install)*. A HyperCard stack for v.1.2 or above that searches your hard drive and checks the compatibility of applications with System 7. Recommends upgrades, if necessary.

- **QuickTime** *(System Additions: QuickTime)*. Apple's multimedia system extension that enables you to work with digital video sequences, animation, and sound files within applications that support QuickTime.

## CC Public Domain Disk...

You'll find several more enhancements on the *CC Public Domain Disk*, accessible on the AppleShare CC Public Domain file server (UOnet AppleTalk zone), including a co-processor emulation package and virus updates:

- **FPU Emulator** *(Utilities: Floating Point Simulation)*. A useful shareware system extension for Macs that don't have a math co-processor. Enables you to run programs on Mac IIsi, LC and LCII, Powerbook 140 and 145, and Classic II machines without the co-processor installed. Emulation is slow.

- **System Beeps** *(Extras & Goodies: SysBeeps)*. Assorted system beeps for Macs running System 7. If you're running

System 7, you can try them out before copying by double clicking your choices. To copy, drag them over to your System Folder and the computer places them automatically.

- **Disinfectant 2.9** *(Virus Software folder)*. The latest version of Disinfectant. Detects all known Macintosh viruses and disinfects contaminated hard drives and diskettes. Compatible with Systems 7, 7.01, 6.07, and 6.03. Includes a self-loading Install Protect Init/extension that constantly checks for virus activity from the moment you start up.

- **Gatekeeper 1.2.6** *(Virus Software folder)*. Designed for users who encounter a large number of viruses. It is stored in the system memory and checks for any suspicious, virus-like activity. Consequently, Gatekeeper users may experience a lot of false alarms. We recommend trying Disinfectant first.

## PC-SIG CD-ROM Disk...

You'll find a complete listing of PC-SIG programs and program information in the "Encyclopedia of Shareware" catalog in Room 202A. Or, you may look up programs by category when logged into the Novell network's Zeus public domain server. Some notable updates include:

- **Communications Software:** The latest versions of Center-supported Kermit, NCSA Telnet, Trumpet news reader, Ethernet packet drivers, IPX and NETX (for Novell network access), PC Gopher II, and TNVIP software.

- **Anti-Viral Software:** The latest version of McAfee Associates anti-viral software. Individuals can copy this package without assistance, but departments should contact Hervey Allen (e-mail HERVEY@OREGON; phone 346-0940) for guidance.

- **Shareware:** Various compression and decompression packages for Zip, uudecode, Zoo, and ARC files.

# Help! Mac Users... Don't Tie Up the Public Domain

Many users may not realize that they are inadvertently preventing others from accessing and using the AppleShare CC Public Domain library. When someone selects the "open at system start-up time" option from the Chooser's file server menu, the CC Public Domain disk is automatically activated every time they boot their machine. If large numbers of people leave the public domain disk sitting unused on their desktop, access to the library is denied to others.

Help reduce network traffic jams. Log off the public domain server as soon as you've copied the files you need, and uncheck the "open at system start-up time" option in the file server menu box.

# academic users— learn how to fly with DARKWING

DARKWING is a Sun SPARCServer 630/MP with four processors, targeted for academic timeshared computing. It augments, rather than replaces, OREGON, it's VAX counterpart—especially in the arena of computing-intensive applications.

Before using DARKWING, you'll need to stop by Room 107 Computing Center to open a computing account with Connie French. There is currently no charge for using DARKWING, although disk space is subject to usual quotas, and usage of consumable resources is being monitored.

**Software:** DARKWING offers a full complement of software, including the following programs and packages:

- *SunOS.* DARKWING runs SunOS 4.1.3, a version of UNIX derived from BSD UNIX, with many System V extensions.

To ease the transition from VMS to UNIX, the Center staff has installed a commercial EVE and EDT emulator called nu/TPU. This ensures that VMS users proficient in either EVE or EDT won't need to learn a new editor to edit files on DARKWING. To invoke an editor, type

   % **edt** *filename*  or  % **eve** *filename*

at the UNIX prompt. (For those who prefer them, traditional UNIX editors *vi, emacs, teco,* and X Window's *xedit* are also available.)

There are a few notable differences between the DARKWING and VMS versions of EDT and EVE, however. Most importantly, DARKWING does *not* allow "edt" to be abbreviated to "ed" because there is a UNIX editor by that name. Likewise, users must fully spell out "exit" when saving a file and leaving EDT. And, EDT line mode commands are not available, although most line mode functions can be performed with analogous TPU commands. (For more details, see the nu/TPU manuals available in the Documents Room.)

- *SAS.* Nearly the entire suite of SAS products is available on DARKWING, including Base SAS, SAS/Stat, SAS/Connect, SAS/AF, SAS/ETS, SAS/FSP, SAS/Graph, SAS/IML, SAS/Insight, map datasets, usage notes, and examples. Two SAS products are being offered for the first time: SAS/QC (Quality Control), including design of experiments; and SAS/OR (Operations Research), with l.p. and PERT/CPM routines.

There are several ways to run SAS on DARKWING:

1. For traditional non-interactive mode, type

   % **sas** *filename.sas*

The log file goes to *filename*.log; output, to *filename*.lst.

2. To run SAS in full-screen mode from a VT100, enter
   % **sas**
   Type "endsas" at the command prompt to exit.

3. Under X Windows (*only* if running under X!), type
   % **sas -fsdevice x11.motif**

For more information about using SAS under UNIX, see the *SAS Companion for the UNIX Environment and Derivatives,* available in the Documents Room

- *SPSS.* DARKWING runs SPSS 4.0, which is comparable to the SPSS 4.1 that currently runs on OREGON. There are three ways to run 4.0 on DARKWING: traditional non-interactive mode, SPSS manager mode, and SPSS "question mark mode." We recommend only the traditional non-interactive mode. To invoke SAS from this mode, type

   % **spss** *filename.sps* > *filename.lst*

See the *SPSS for UNIX: Operations Guide* in the Documents Room for details.

- *Compilers.* For the applications programmer, DARKWING supports the Fortran 77, Pascal, and C compilers (both Sun and Gnu C). To display online manual pages for one of these compilers, type
   % **man** *compiler*
   identifying the compiler (**f77, pc, cc, gcc**)

- *IMSL.* DARKWING offers the same IMSL math, statistics, and special function libraries currently available on OREGON. To link a Fortran 77 program with these libraries and run the resulting executable file, type the sequence
   % **f77 -limsl -o** *filename filename.f*
   % **filename**

- *Interleaf.* The University has acquired a site license for UNIX Interleaf V, a desktop publishing package similar to Framemaker, PageMaker, or Ventura Publisher. Interleaf runs exclusively on X Window terminals or workstations.

Interleaf handles documents ranging in complexity from simple memos to entire text books, and includes a full library of fonts, symbols, and clip art, as well as extensive online help and tutorials. To invoke Interleaf, type
   % **ileaf**

For more information on running Interleaf, contact Joe St Sauver (JOE@OREGON).

- *Electronic Mail.* For the e-mail user, DARKWING offers *elm, pine,* and *xmh* (X Windows), and the standard UNIX *mail* program. Of these, *pine* is probably the easiest for new e-mail users to learn.

To display online manual pages for these programs, type
   % **man** *program*
   identifying the program (**elm, pine, xmf,** or **mail**)

*DARKWING*

**Peripherals:** DARKWING users may queue line printer jobs to OREGON by typing

   % lpr *filename*

The UNIX line printer job management commands, **lpq** and **lprm**, may be used to query and remove jobs.

*Tapes.* DARKWING has one 8mm tape drive available. Procedures for accessing it are still being finalized. Contact Joe St Sauver (JOE@OREGON) for updates on tape drive access.

*X Terminals.* Because so many UNIX software products require, or operate best in, an X Windows environment, the Network Services group is investigating X Window emulators for Macintoshes and PCs. By the end of Fall Term, we should be able to recommend X products for use on these machines.

The Computing Center is also investigating the feasibility of offering public access to X Window terminals for use with DARKWING. Note that all DARKWING packages mentioned above (*except* Interleaf, SAS/Insight, and X-specific applications) can be run from a normal VT100-type terminal or terminal emulator.

**Information Resources:** You'll find some good UNIX references in the Center Documents Room (205), including Mark Sobell's *A Practical Guide to the UNIX System* and Paul W. Abrahams' *UNIX for the Impatient.* More experienced UNIX users will enjoy *UNIX in a Nutshell* by O'Reilly and Associates.

In addition, the Computing Center staff is offering a number of DARKWING-related workshops this term. See the Fall Term Schedule in this issue for details.

# Scanner Service Upgraded

The Computing Center recently upgraded its exam scanning service with the purchase of a Scantron 8400 optical mark reader and an exam-scoring package called QuickScore. Faculty who use the service should experience significantly faster turnaround with this upgrade, especially those who teach large lecture sessions.

Those who have used the exam-scanning service in the past will notice some changes:

- the scanner forms are different
- you can penalize for guessing
- you can print a brief summary report for each student
- you can print selected reports as needed
- raw scores are not printed on the exam form
- there is no option to weight questions

Another major change is that QuickScore reads 5-choice scanner forms only (10-choice forms can be scanned to tape or disk for analysis, but not as part of the exam scanning service).

Exam-scanning service costs will remain about the same, ranging from a basic service fee (scan and roster only) of 10¢ per student, to a full-service fee (scan, roster, analysis, and student report) of 13¢ per student. These fees include the forms' cost of 5¢ per answer sheet.

For detailed information on the new service, including multiple answer keys, advanced report options, and instructions for interpreting test analysis output, pick up a copy of the QuickScore handout, available at the downstairs reception desk in Room 108.

# *What Modem Number Should I Use?*

If you're new to campus and plan to access one of the UO's VAX or UNIX timesharing computers via modem, you may need some guidelines. The number you dial depends on what type of modem you're using:

| Modem Type | Phone Number |
|---|---|
| v.32bis, v.42 bis (300-14,400 bps) | 346-5975 |
| all other modems (v.32, MNP5, 1200-9600 bps) | 346-2150 |

For more details on configuring your modem and your communication program, as well as precise information on what UO modems support, stop by the Documents Room (205) and pick up a copy of the free handout, "Selecting Modem Numbers at U of O Computing Center." Further questions on modem-related topics may be directed as follows:

- Questions about buying modems    346-4402
  (Micro Purchase Plan)
- Technical problems (line noise, etc.) and    346-4395
  availability of dial-in Novell, AppleTalk,
  and Slip connections (Network Consulting)
- All other modem questions    346-1758
  (VAX Consulting)