University of Oregon

COMPUTING NEWS

SPRING 1999

IN THIS ISSUE...

Greg Shepherd, Computing Center Network Engineer, works on the Cisco 12008 Gigabit Switch Router

Tips for Checking Y2K Readiness of Server Operating Systems

By Don Gathers
dgathers@network-services.uoregon.edu

The 1999 list of New Year's resolutions for most departmental computer support staff must surely include checking for Year 2000 compliance of the computing software and hardware being used or purchased before the year's end. To assist in this task, here's some information on the Y2K compliance of server operating systems.

Novell *Netware*: Departments running Novell's *Netware* need to be aware that version 3.11 and version 4.10 are *not* Y2K compliant. **This means *most* of the more than 60 Novell servers on campus will require an upgrade by year's end.**

Novell has blurred its upgrade path considerably by adding versions 3.2 and 4.2 to its product line, along with the latest addition of *Netware 5.0*.

While the 5.0 release is a very new and different product for Novell, Version 3.2 is little more than *Netware 3.12* with the complete set of available patches applied. If you are running a *Netware 3.12* server with patches, you will not need to upgrade to version 3.2.

Similarly, the 4.2 release is little more than version 4.11 with all available patches applied. *Netware 4.11* servers need only to be patched rather than upgraded to 4.2.

Netware 5.0 is, of course, year 2000 compliant. Departments may want to consider 5.0 for some of its other features, but as a Y2K fix alone it is the most expensive Netware alternative, both in terms of the operating system cost and hardware requirements. Network Services is currently testing the functionality of *Netware 5.0;* the results of these tests will be published in a future issue of *Computing News*.

Windows NT 4.0: Departments running or considering Microsoft's *Windows NT 4.0* server platform should be aware that it can be made year 2000 compliant with the addition of Service Pack 4 (SP4). This is contrary to Microsoft's earlier announcement that Service Pack 3, along with the latest hotfix patches, would be enough to assure that your NT 4.0 server was year 2000 compliant.

The good news here is that Service packs are free and downloadable from the Microsoft web site. The bad news is that Service Pack 4.0 has been known to cause some erratic behavior that is difficult to troubleshoot. Testing of SP4 on a non-production server is recommended if at all possible.

Departments are encouraged to share Y2K information on the Departmental Computing mailing list. As departments begin to upgrade to Y2K compliant network operating systems, this list should become a valuable forum for sharing tips. To subscribe, send email to *mailserv@oregon.edu* and type **subscribe deptcomp** in the body of the message.

Ready for Y2K? Web Info Can Help

By Susan Hilton
hilton@oregon.uoregon.edu

Most people probably don't know if their hardware and software is ready for the year 2000 ("Y2K"). If you're in doubt, you can verify the status of your equipment by checking the web. Most computer hardware and software manufacturers have Y2K-readiness statements on their web sites.

Hardware. Apple reports that Macintosh computers have been Y2K-ready since 1984. As for PCs, most 486 and better machines should be okay, but check with the vendor (or vendor's web site) to be sure.

Software. The Microsoft web site (**http://www.microsoft.com/technet/ year2k/product/product.htm**) lists Microsoft products and their degree of Y2K compliance. Other software manufacturers offer similar information on their sites. But be forewarned that Y2K readiness statements frequently change! Because testing is ongoing, a product that's reportedly compliant today may be listed as not being "fully" compliant tomorrow.

UO Year 2000 Web Site. You'll find a list of the most common hardware and software vendors on the UO Year 2000 Web site at **http://y2k.uoregon.edu/** This site also contains other information relevant to the year 2000, including issues affecting administrative and academic computing users. Check the site frequently, as new information continues to be added as it unfolds.

Welcome to WebMail

■ **New product lets you access your mail from almost any web browser**

By Joe St Sauver
joe@oregon.uoregon.edu

How'd you like to access your mail from almost any machine, anywhere, with no special setup beyond a web browser?

WebMail is one of several new electronic mail products that provides this service, and it's now being offered to University of Oregon users who have accounts on DARKWING and OREGON. (**Note:** Until Computing Center staff has more opportunity to evaluate the network traffic load, *WebMail* will not be available for GLADSTONE users.)

Although *WebMail* runs on a *Windows NT* system, it allows pass-through web access to IMAP mail servers on virtually any other type of machine. Because *WebMail* uses only HTML to communicate with the browser, it works with the widest possible variety of browsers (including the latest versions of *Internet Explorer* and *Netscape*) and is not susceptible to Java bugs and incompatibilities.

Using *WebMail*

To begin using *WebMail*, open your web browser and go to **http://webmail.uoregon.edu** (regular mode) or **https://webmail.uoregon.edu** (secure mode).

WebMail's Log-in Screen

Type in your username and password and choose a server. You should then see a screen displaying your *Inbox*. VMS (OREGON) users may proceed at this point, setting the "Options" as they please, but to avoid problems with their host folders, UNIX (DARKWING) users need to follow the steps outlined below.

Special instructions for DARKWING users. If you use DARKWING, the first time you run *WebMail* you must choose *Options* and set the IMAP4 Folder Prefix to **mail/** in order to see your host folders properly. You may want to fiddle with the other options as well. Then log out, and log back in again to activate the folder prefix.

Minor Caveats

Another minor annoyance for DARKWING users is that on UNIX hosts, *Outbox* is immediately created at first log-in and is then recreated under **mail/** after you set the folder prefix, resulting in two "Outboxes" being listed in the mailboxlist file. However, this glitch doesn't prevent the program from functioning properly, and you can delete the first bogus empty *Outbox* if it bothers you.

Questions?

For more information on using *WebMail*, check out its online help resource, or see **http://www-vms.uoregon.edu/www/webmail.html**

Watch system notices for additional information that may become available on *WebMail* as time goes on.

We Need Your Feedback

We're interested in hearing about your *WebMail* experience, either positive or negative. Direct your questions, problems, and comments to our consulting staff (**346-1758**, *consult@oregon.uoregon.edu*).

Call for Papers: International Conference on Artificial Intelligence Nears

Papers for the Thirteenth International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IEA / AIE-2000) are currently being solicited.

The deadline for submissions is November 17, 1999.

The conference, which is sponsored by the International Society of Applied Intelligence in cooperation with over a half-dozen international organiza-tions, will be held in New Orleans on June 19-22, 2000.

For more information regarding submissions, see **http://www.cacs.usl.edu/** or contact Dr. Rasaiah Loganantharaj (email: *ieaaie2000@cacs.usl.edu*)

Internet2 Update

- **A quick overview of recent developments in high-speed academic networking**

By Joe St Sauver
joe@oregon.uoregon.edu

Internet2 and Abilene, the high-speed academic and research networks we reported on in the Winter '99 issue of *Computing News*, have come a long way since January.

Among other recent developments, the number of institutions directly connected to Internet2 has grown significantly, network traffic—particularly at the UO— is up dramatically, and route views and traffic maps are published on the web in several locations.

Directly Connected Abilene Institutions

There are now about two dozen institutions connected to Abilene (either connecting directly as an institution or via a regional Gigapop), including the University of Oregon.

Besides the UO, other institutions connected to Abilene at this time include California-Berkeley, California-Davis, California-San Francisco, California-Santa Cruz, Kansas, Kansas State, Michigan, Michigan State, Nebraska, NASA Ames Research, NOAA, North Dakota State, Ohio State, Oklahoma, Oklahoma State, Oregon State, Purdue, South Dakota School of Mines and Technology, Stanford, Texas A&M, USGS EROS Data Center, and Washington.

Abilene Peering Networks and Routes

Abilene now also has direct or indirect peering up with the vBNS, ESNet, ATT Government Markets (aka NREN/DREN) and Canarie. For a complete list of network prefixes accessible via Oregon's Abilene connection, see
http://www.ogig.net/routes.html

Route Views at the UO's Advanced Network Technology Center, a service for network engineers, also now includes high performance route information at **http://www.antc.uoregon.edu/route-views/**

Finally, the vBNS (Federal Very High Speed Backbone Network Service) has published a snapshot of the routes it is seeing at **http://www.vbns.net/route/**

Cables enter the UO switchroom

Abilene Traffic

You can see current traffic on Oregon's Sacramento Abilene links at **http://goop.uoregon.edu/mrtg/ogig/198.32.163.9.html**

While it has only been up a few weeks, the University of Oregon connection is already generating more Internet2 traffic than most other I2 sites (contrast our Abilene traffic with the vBNS traffic reports available at **http://www.vbns.net/nettraf/default.htm**)

To see traffic between nodes on the Abilene backbone (remember, we connect via Sacramento), you may want to take a look at **http://hydra.uits.iu.edu/~abilene/traffic/abilene.html**

NLANR National Web Cache Hierarchy

The UO's web cache server, **proxy.uoregon.edu**, has begun sending selected traffic to the National Web Cache Hierarchy at NLANR in San Diego via Internet2. As Internet2 routing to San Diego improves later this

Spring, we will shift additional web cache traffic over to that link.

Abilene Multicast Support

Abilene has begun deployment of IOS 12.0(3.3)S.0228 (Cisco's multicast-capable version of IOS for GSR's) on Abilene's Cisco core routers, software whose multicast support was implemented by Dave Meyer of the UO Advanced Network Technology Center/IETF Multicast Directorate. As deployment continues, Abilene customers will begin to be able to source and receive high bitrate multicast audio and video streams not otherwise supportable by commodity MBONE connections.

NLANR/Internet2 Joint Techs Workshop

NLANR and Internet2 held a joint technical workshop at Las Cruces, New Mexico, March 7th-10th. You may review workshop presentations at **http://www.ncne.nlanr.net/news/workshop/990307/agenda03_99.html**

New York State Schools Coming Online Soon

A number of institutions in New York State should shortly be connecting to Internet2 via Gemini 2000, Applied Theory/IXC Communication's high performance network. Connection of those schools is currently pending completion of NSF review and certification of Gemini 2000 as a high performance R&E network (`a la the vBNS and Abilene). For more information. see **http://www.ixc-comm.net/**

Israeli High-Performance Network Coming Online

In the Middle East, the Israeli Internet2 high performance network will shortly be connecting to both Europe and to the StarTap in Chicago. For more information, see

http://www.machba.ac.il/stindex.html

Writing Applications for Internet2?

As we talk with users about writing applications for Internet2, it's clear that it may be helpful to explicitly think about the minimum set of requirements any prospective I2 application author needs to keep in mind.

1. One end of the application needs to be homed at the UO. It may sound self-evident, and we may very well be stating the obvious, but one end of the application needs to be at the UO. Put another way, the system on one end or the other of the network connection needs to be here at the UO, in **128.223.*.*** address space.

If you work with a community network partner (such as one of our Eugene/Springfield K12 Lane Education Network community networking partners) this may be an issue for you, since in those cases being "closely affiliated" with the UO isn't "close enough" when it comes to I2—you need to actually be connected from the UO's network.

2. The other end of the application needs to be at an site with live high performance connectivity. Another seeming self-evident requirement which we nonetheless must mention: the other end of the application must be at a site that has high performance connectivity with I2/Abilene (i.e., sites connected via Abilene itself, the vBNS, Canarie, ESNet, NREN, DREN, etc.).

Why is this an issue? Well, you may run into sites that are I2 members but are still working on getting physical high performance network connectivity deployed; obviously they won't work, at least not yet. You will also run into other sites on foreign high-performance networks, but they may not yet peer with I2/Abilene. Again, those sites won't work, at least not yet.

The relevant set of institutions which you can work with today are those listed at **http://www.ogig.net/routes.html** (note that this is a small set of institutions relative to the size of the Internet as a whole).

It can be frustrating to have data from a telescope in Hawaii, for example, that you'd like to retrieve via Internet2, only to find that the Hawaiian instrument doesn't have I2 connectivity—

but please remember that I2 is evolving and developing, and institutional eligibility for connection to I2 or other high performance networks isn't something we control.

3. Your application should (ideally) have characteristics which take advantage of Internet2's special capabilities. An application engineered for I2 should (ideally) have characteristics which take advantage of that network's special capabilities, i.e., your application should require high bandwidth, low latency, low jitter, or be otherwise particularly well suited to I2's big pipes. Put another way, a good I2 application is usually an application that doesn't work well over the commodity/commercial Internet.

4. Your application needs to be able to differentiate between high performance Internet connections and commodity Internet connections. Implicitly or explicitly, you and your application need to be able to differentiate between high performance network-connected partners and commodity Internet network-connected partners.

Consider, for example, a web server that can deliver high bit rate video on demand. Our I2/Abilene connection is designed for, and has capacity available to service, those high bit rate streams. But what if a person comes in via a commodity Internet connection and requests those high bit rate streams? Our commodity network capacity can't satisfy that demand, nor will a user trying to view that video at the other end of a commodity Internet connection get the high bit rate multimedia experience you probably want them to have.

Thus, your application needs to be aware of where its peers are coming from, either because it explicitly selects the remote peers it works with itself (e.g., a web crawling spider that crawls only I2 attached web sites), or because it controls which sites can access it via a semiautomatic mechanism (such as a generated **.htaccess** file which "knows" what network prefixes are via I2), or via a manual mechanism (such as a person-to-person agreement to exchange data, reached by you with a remote collaborator at an I2 site).

5. Applications should be ongoing (or time critical). Applications particularly well suited to high performance networking connections should be ongoing (rather than being one-time events), or they should be time critical (i.e., you need access to the data ASAP). Put another way, if you have a one-time, non-time critical need to move data between two sites, it's hard to beat the throughput and cost efficiency of a box full of DLT tapes sent overnight via Federal Express. On the other hand, if you're moving data every day, or the data needs to be available virtually immediately, then think "let's try delivering this data via I2."

6. Applications can't be for commercial purposes, nor can they involve classified data. The UO Acceptable Use Policy prohibits commercial use of university resources, so the fact that your application will be running to or from the UO means that commercial projects are unacceptable. Similarly, I2 isn't certified for use for classified research purposes, so don't plan to use it to move classified data, even though I2 has routes to places well known for doing classified research (such as Lawrence Livermore Lab, Los Alamos, Sandia, Kirtland Air Force Base, etc.).

7. What Sorts of Applications *Will* Work Well via I2? Here are some examples:

- "pull" network applications where you can narrowly focus the networks from which information is being retrieved

- "push" network applications where you can narrowly focus the networks to which information is being sent

- prearranged server-talking-to-server applications such as NNTP (USENET News), or World Wide Web cache hierarchies

- applications using multicast, once multicast support comes up on I2 (and it should be up by the time you read this)

- applications used by a relatively small number of technically competent trusted users working with large datasets

- applications which open many parallel network streams to diverse locations

- applications where there is a large discrepancy between bandwidth available via commodity network connectivity and bandwidth available via high performance networks (e.g., overseas sites in many regions, provided that the overseas site has access to high-performance network connectivity)

Who's Who at the

◼ Meet Our Staff

By Vickie Nelson
vmn@oregon.uoregon.edu

Our spring issue introduces you to some veteran Computing Center staff members, as well as one who is relatively new.

Mary Bradley, Bob Jones, and Mohammed Maleki have each been part of the Computing Center for close to a decade, while James Joule celebrated his first anniversary as a staff member last January.

Mary Bradley
Micro Lab Coordinator
Computing Facilities

Mary Bradley's career in the Computing Center began way back in the good old days of punched cards.

After attending Northwest Christian College, she began working in the Computing Center as a job expediter in production control, setting up computer jobs and checking output.

Today Mary manages the Klamath, Millrace, and EMU computer labs and is working with the Grayson Hall Design Development committee on a new lab that will open next year. She manages the labs' software budgets, schedules instructional labs, and keeps the computers up-to-date.

Outside of work Mary leads the busy life of a single mom. She has two children, Alex, 14, and Shauna, 13, and spends most of her after-work time on homework patrol. She's also an active member of a fitness center.

Although she was born in Eastern Oregon and has lived in various Northwest locales, the beach is Mary's favorite place. She recently vacationed in Hawaii, where despite rain, she managed to find some sun every day, and enjoyed swimming, snorkeling, and walking on the beach.

Bob Jones
Senior Systems Manager
Computing Facilities
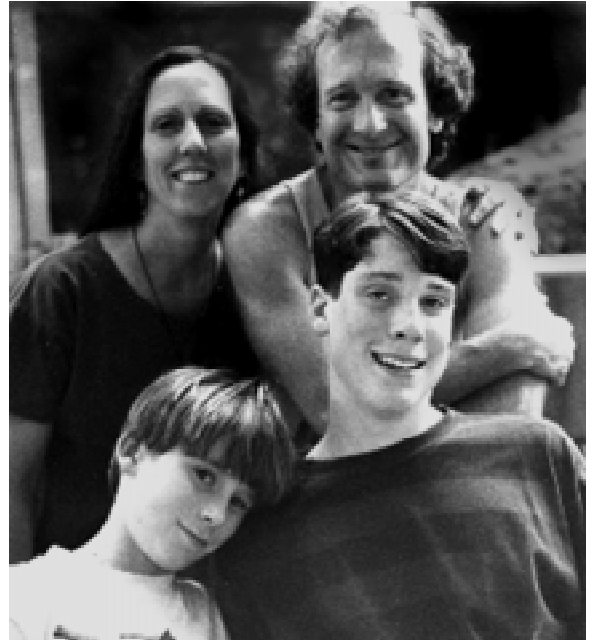
Clockwise from top left: Teri, Bob, Dylan and Denali Jones

Bob Jones grew up in Audubon, Pennsylvania, in the suburbs of Philadelphia. He went to college at the University of Delaware, where he majored in Computer Science and Statistics and met his wife, Teri.

After graduating, Bob worked for Sperry Univac (now known as Unisys) and then for Cray Research at the San Diego Supercomputer Center on the UCSD campus.

Visits to the Northwest had impressed Bob and Teri. Looking for a place to settle down, they began subscribing to the Sunday *Register Guard* for the classified ads. One thing led to another, and in 1988 Bob joined the Computing Center staff. As senior systems manager, Bob is responsible for UNIX and VMS system administration and security.

Bob and Teri have two boys, Dylan, 15, and Denali, 12. At home Bob lives a low-tech life (the family does have a computer, but it's basically for the boys' homework). The couple enjoy gardening, hiking, backpacking, skiing, and sports ranging from basketball to Frisbee. They're planning a backpacking trip to Southern Utah in April.

Computing Center

Mohammad Maleki
Network Engineer
Network Services
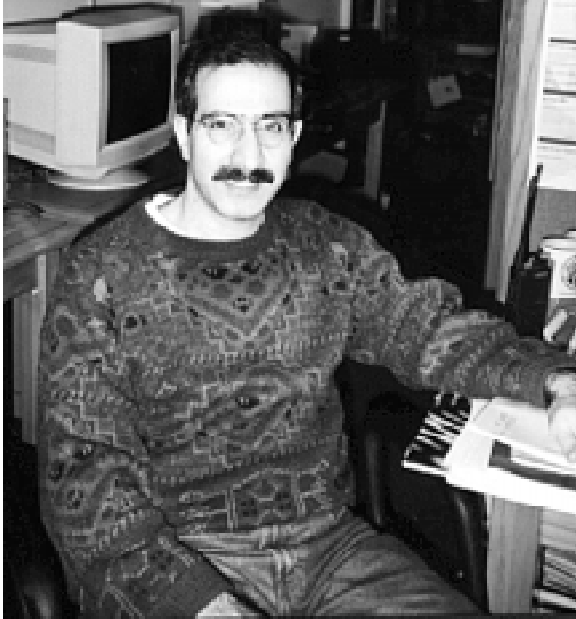
When Mohammad was a young high school graduate in Tehran, a family friend in Corvallis encouraged him to come to OSU. Once there, Mohammad studied English as a second language, then went on to study math at the UO and electrical engineering at Cal Poly, where he met his wife, Nahla Bassil.

Back at OSU in 1989 for graduate work in electrical engineering, Mohammad worked as a student assistant in networking at OSU's computing center.

Mohammad began working at the UO as a network engineer in Network Services in 1992. His broad assignment is to keep the UO network up and running, and he's responsible for the upkeep of switches, hubs, terminal servers, hdsl, rdsl modems, and fiber optics circuits. He also troubleshoots and installs wireless networks.

Mohammad swims whenever he can and enjoys playing with his five-year-old son Basseem (whose name means "Smiley" in Arabic) and his three-year old daughter Monya (whose name means "Best Wishes").

After an absence of over 20 years, Mohammad is planning a trip to the Middle East this year. He'll visit family in Iran and Lebanon, where he will meet college-age nieces and nephews for the first time.

James Joule
Systems Analyst
Auxiliary Services

Although James Joule was born in Texas, he thinks of Westminster, Colorado, as home. Thanks to boyhood summers spent visiting relatives near Seaside, he's also quite at home in Oregon.

After earning his undergraduate degree in Computer Science from Colorado State at Fort Collins, James worked as an information systems manager for Applied Computer Technology, where he met his fiancée, Jennifer.

In January 1998, James arrived at the Computing Center's Auxiliary Services. During the past year he has assisted Kit Larsen with programming projects for the Human Resource Information System (HRIS) as the UO moved from an outdated payroll system to the new BANNER-based system.

James enjoys campus life, especially taking graduate level computer science classes (he's also interested in the new software engineering curriculum) and playing basketball in the gym.

Outside pursuits such as hiking and camping are favorite recreations, as is playing with his chocolate lab, Lucy. James and Jennifer also bowl on EWEB's team.

James' plans for this summer include a 4th of July wedding in Colorado.

UO's New Media Center Adds New

By Joyce Winslow
jwins@oregon.uoregon.edu

In the three short years of its existence, the University of Oregon's New Media Center (NMC) has already garnered numerous awards for its creativity and innovation. Dedicated to breaking new ground in multimedia applications, the NMC regularly attracts faculty and others from both public institutions and private industry who are interested in developing multimedia courseware or research tools.

> *"If we're not breaking ground on every new project, we're doing something wrong."*
>
> *Harold Hersey*
> *NMC Technology Manager*

Most recently, the NMC attracted UO psychology department head Dr. Robert Mauro, who hoped to design an interactive decision-making test for pilots that simulated real-life flight situations. Mauro first approached the NMC in August 1998 and asked the staff if they could devise a system that would work on the Internet, using any browser. Could such an interactive test guarantee the confidentiality of the subjects' responses? Could it measure the time it took each subject to make a decision? Could it record the multiple stages of decision making? The answer to all these questions was yes, and the Internet-based Decision Research System (IDRS) was born.

The technical challenges of Mauro's project appealed to NMC staff members, who are fond of stressing the "New" in "New Media." In the words of technology manager Harold Hersey, "If we're not breaking ground on every new project, we're doing something wrong."

IDRS is definitely breaking new ground, and it has already attracted the attention of the National Aeronautics and Space Administration (NASA). The initial leg of the study, funded by a modest grant from the National Science Foundation, is a demonstration project studying the decision-making processes of airplane pilots during a simulated flight from Eugene to Seattle under changing weather conditions. With NASA's funding, the study will expand to include simulations of other types of real-life situations in which pilots must make decisions. NASA is particularly interested in the data's possible application in improving flight

Recording pilot decisions during simulated flight seemed an ideal departure from traditional methods of studying the decision-making process. For decades, psychologists and other cognitive scientists have conducted decision-making studies in laboratories using college student volunteers. However, researchers have come to realize that people in the real world frequently do not make decisions the way their subjects did in the laboratory. Such questions as "How do people solve problems?" and "How do we encourage good decision-making and discourage bad?" remained largely unanswered because studies
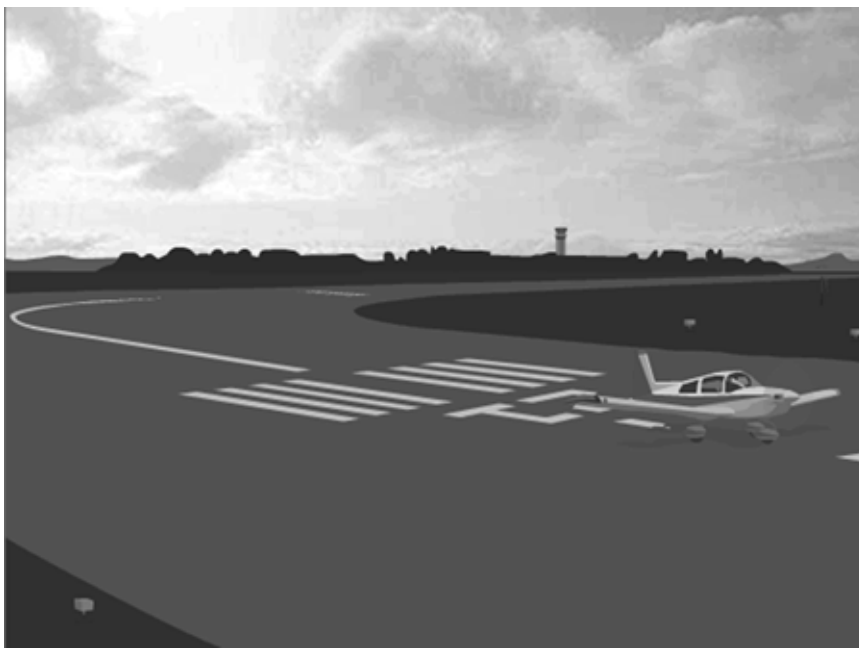
Takeoff: In this scenario, the pilot takes off on a runway at the Eugene airport

safety and minimizing pilot error, and plans to use the information to develop new training methods for pilots.

The idea behind IDRS began with Dr. Mauro's quest for a better system for for studying real-life decision making. Choosing flight scenarios was a natural for Mauro, who holds a commercial pilot's certificate and is conducting other aviation safety research with NASA and the University Consortium for Atmospheric Research (UCAR).

relying upon college student volunteers working on artificial problems did not reflect how decisions are made in important real-world situations.

So Mauro and the NMC's technical and graphic design staff set to work designing a whole new environment —one that functionally simulated, as realistically as possible, the environments both on the ground and in the air in which pilots make decisions.

8

# Dimension to Aviation Safety Research

The technical staff (comprising technology manager Harold Hersey, one full-time and one part-time programmer, and two student programmers) was charged with ironing out problems arising from using the World Wide Web as the testing medium. Because pilots would be taking the test using their own desktop computer setups, NMC programmers had to design with a variety of possible computer platforms and browsers in mind. They also had the task of writing a program that could measure, and store online, data on what decisions the subjects made and what information they examined, in what order, and for how long.

> ## "The biggest motivation for an expert to participate in research is to better the profession."
>
> *Dr. Robert Mauro*
> *UO Dept. of Psychology Head and*
> *IDRS Project Director*

Meanwhile, the graphic design staff—design manager Scott Mongrain and four graphic design students—began the painstaking work of constructing a virtual world. Working from photographs of the Eugene airport, detailed flight maps, and actual cockpit instrument panels, the staff labored to create realistic flight scenarios using animation and vector graphics. Vector graphics were favored because, apart from their smaller file sizes and quicker loading time, they also have the advantage of allowing users to "zoom in" for an enlarged view of graphic detail without distorting it, a feature that's particularly useful for viewing the maps that are an important part of these aviation scenarios.

In an effort to make the "test flight" as experiential as possible, audio ef-
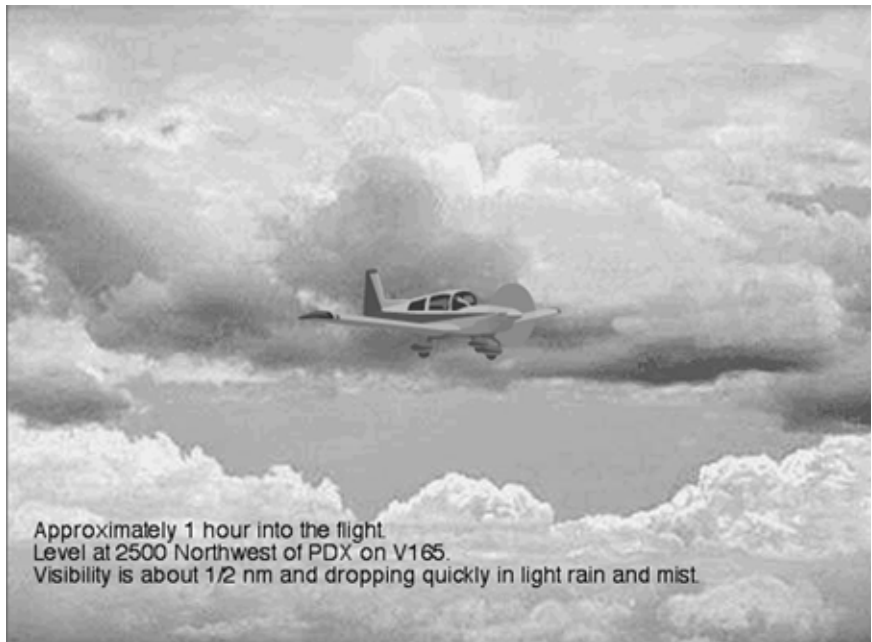
Cockpit Decision #2: One hour into the flight, in the air north of Portland

fects (such as engine hum) and time lapse indicators (such as moving and changing clouds) were also added.

As we go to press, the project has just completed its first phase of testing and is entering the second. During phase one, experts in both aviation and decision-making reviewed the project and submitted their comments, which were then used as a basis for adjusting and refining the test scenarios.

In phase two, a group of flight technology students will be recruited to go through the scenarios while "thinking aloud." The students' comments are recorded, and they are interviewed individually after their "test flight" to determine whether the scenarios distorted their decision-making processes in any way.

The third phase of the project is slated to begin this summer, when, if all goes as planned, the test will be launched on the web. Mauro plans to advertise the project on bulletin boards and aviation organization web pages. He hopes the flight scenarios will be interesting enough for the pilots who see it on the web to participate without further incentives, taking the view that "the biggest motivation for an expert to participate in research is to better the profession."

While the efforts of Mauro and the NMC hold great promise for the future of aviation safety, their work also stands to benefit other areas of research. Interactive online testing has potential uses in a variety of other disciplines, including education, linguistics, and marketing. The sky, one might say, is the limit.

SPRING WORKSHOPS

What is The IT Curriculum? "IT" stands for Information Technology, and the Library and Computing Center are committed to making sure you have opportunities to build your technology skills. Want to learn how to publish a web page? How about find what you need on the 'net? Or just how to use that darned computer? We provide a full range of computer and Internet training, from novice to advanced skill levels.

These workshops are free and open to currently enrolled students, as well as staff and faculty. No advance registration is necessary; just show up a few minutes before the scheduled start. All seating is available on a first-come, first-served basis. We do ask, however, that you meet the workshop prerequisites as stated in the description; otherwise, you may be asked to relinquish your place. If fewer than five people are present ten minutes after the scheduled start, the workshop may be canceled or rescheduled at the discretion of the instructor.

This publication will be made available in accessible formats upon request to the Office of Library Instruction, **346-1817**. Requests for accommodations related to disability should be made to Jon Cawthorne (**346-1897**) at least one week in advance of the workshop.

For more information, contact the Office of Library Instruction, **346-1817** (email: *cbell@darkwing.uoregon.edu*).

Workshop	Day/Date	Time	Location	Presenter

This schedule is subject to change. See *http://libweb.uoregon.edu/it/* for course outlines/materials and the most current information.

Computer Software Applications

Endnote/Procite: What Are These, and Why Should I Use Them?

	Wed Apr 28	3:30 - 4:50pm	RSR	Brownmiller, Lenn
	Thurs Apr 29	3:30 - 4:50pm	RSR	Brownmiller, Lenn

Introduction to PowerPoint (*http://micro.uoregon.edu/workshops/powpt.htm*)

	Fri May 21	10 - 11:50am	ITC	Heerema

Using the Internet

1: Introduction to the World Wide Web	Tue Apr 13	11am - 12:20pm	EC	Esau
2: Beyond Just Surfing - ✔ Prerequisites	Thu Apr 8	1 - 2:20pm	EC	Ward
	Mon Apr 19	10 - 11:20am	EC	Jenkins
	Fri May 14	11am - 12:20pm	EC	Darling
3: Power Web Searching - ✔ Prerequisites	Mon Apr 26	10 - 11:20am	EC	Paynter

Electronic Communication

Managing a Majordomo List (*http://darkwing.uoregon.edu/~llynch/majordomo*)

	Tue Apr 27	3 - 3:50pm	EC	Lynch

Using MHonArc to Create a Web Archive for a Majordomo List   (*http://darkwing.uoregon.edu/~consult/deptcomp/*)

	Tue May 11	3 - 3:50pm	EC	Lynch

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* WORKSHOP LOCATION CODES *

EC: Electronic Classroom (*Windows*)	144 Knight Library
ITC: Macintosh Classroom	267B Knight Library
RSR: Reed Seminar Room (*Windows*)	235 Knight Library

☆ **Requires an active account on** DARKWING **or** GLADSTONE

SPRING WORKSHOPS

Workshop	Day/Date	Time	Location	Presenter

Electronic Research Resources

Net a Job: Use the Web (Call the Career Center at **346-3235** to register for this workshop) ✔ **Prerequisites**

	Wed Apr 28	noon - 1:20pm	EC	Songer
	Thu May 27	3:30 - 4:50pm	EC	Songer
PsycINFO	Mon Apr 12	7 - 7:50pm	EC	Benedicto
	Tue May 11	7 - 7:50pm	EC	Benedicto
	Thu May 27	7 - 7:50pm	EC	Benedicto
Statistics on the Web	Fri Apr 2	2 - 3:20pm	EC	Stave
	Tue May 4	1:30 - 2:50pm	EC	Stave

Publishing on the Web

Introduction to Web Publishing (*http://libweb.uoregon.edu/govdocs/webpub/*) - ✔ **Prerequisites** ☆

	Tue Apr 27	10 -11:50am	ITC	Bell
	Mon May 10	1 - 2:50pm	EC	Frantz, Sotak
	Fri May 28	10 - 11:50am	EC	Cawthorne, TD Smith

Intermediate Workshops in Web Publishing

1: More HTML (http://darkwing.uoregon.edu/~jqj/inter-pub/morehtml/)

	Tue Apr 13	1 - 2:50pm	RSR	Johnson

2: Images on Web Pages (*http://darkwing.uoregon.edu/~jqj/inter-pub/images/*)

	Tue Apr 20	1 - 2:50pm	RSR	Holman

3: Imagemaps, Access Counters & Animated GIFs (*http://darkwing.uoregon.edu/~jqj/inter-pub/maps/*)

	Tue Apr 27	1 - 2:50pm	RSR	Holman

4: Designing for the Web (*http://darkwing.uoregon.edu/~cbell/design/*)

	Tue May 4	1 - 2:50pm	RSR	Bell

5: HTML Tools and Tricks (*http://darkwing.uoregon.edu/~jqj/inter-pub/debugging/*)

	Tue May 11	1 - 2:50pm	RSR	Johnson

6: Organizing Your Web Site (*http://libweb.uoregon.edu/govdocs/webpub/orgindex.html*)

	Tue May 18	1 - 2:50pm	RSR	TD Smith

Miscellaneous Workshops in Web Publishing

Cascading Style Sheets (*http://darkwing.uoregon.edu/~jqj/inter-pub/css/*)

	Wed May 5	2 - 3:20pm	RSR	Johnson

Forms & CGI Scripts (*http://darkwing.uoregon.edu/~jqj/inter-pub/forms/*) ✔ **Prerequisites**

	Wed May 19	2 - 3:20pm	RSR	Johnson

JavaScript (*http://darkwing.uoregon.edu/~jqj/inter-pub/js/*) ✔ **Prerequisites**

|	Wed May 26	2 - 3:20pm	RSR	Johnson

Workshops Available on Video

Looking for an alternative to the workshop format? The Computing Center Documents Room and Media Services in Knight Library have a growing collection of videos on using computers and computer software. You can use your UO picture ID to check out these videos, or schedule a viewing room in Media Services. For a list of available titles and descriptions, visit ***http://micro.uoregon.edu/workshops/***   Call **346-4406** or **346-3091** for more information.

* WORKSHOP LOCATION CODES *

EC: Electronic Classroom (*Windows*)   144 Knight Library
ITC: Macintosh Classroom   267B Knight Library
RSR: Reed Seminar Room (*Windows*)   235 Knight Library
☆ **Requires an active account on** DARKWING **or** GLADSTONE
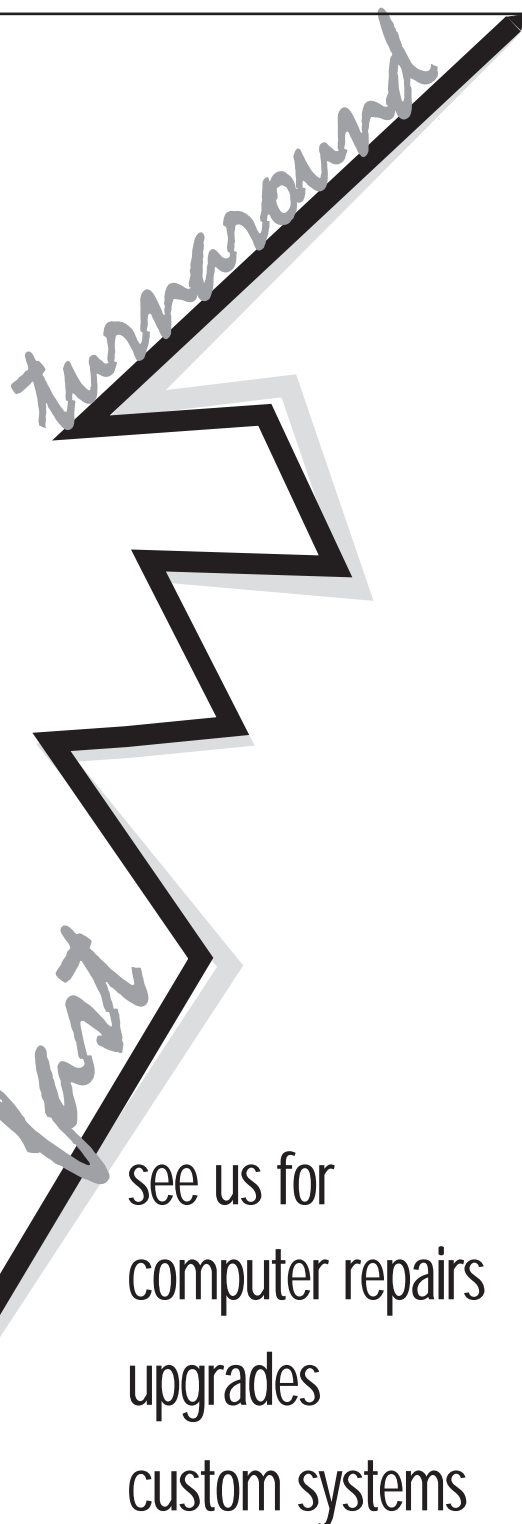
Microcomputer Services Adds 'CD Burning,' Digital Video—and More

By Dan Albrich
dalbrich@oregon.uoregon.edu

This spring, the Computing Center's Microcomputer Services group has added several new free services for students, faculty and staff.

In addition to answering technical questions about microcomputer issues, the group now offers flatbed color scanning, CD "burning," and digital video acquisition from its office in Room 202. There are three sit-down stations to accommodate each of these new services.

Digital Video. The digital video acquisition station can copy video and audio from VCR tape, camcorder, DV camcorder (IEEE 1394), S-Video, RCA, and most commonly supported formats. The machine is equipped with a real-time MPEG1 encoder, which compresses the data to a transportable size. Once the data is acquired, you can copy it to a computer across the network or write it to CD, Jazz, or Zip. The data can also be converted to *Quicktime*, AVI or other popular formats.

CD Burning. CD burning allows you to write your data to a blank CD-R disc that will ultimately be readable by most CD-ROM drives. The typical cost of a blank CD is about two dollars; it can store 650Mb of data.

Note that copyright restrictions must be observed.

Help Desk Moved to Room 202. To accommodate existing and new services, we've combined our help desk and Microcomputer Services staff. The unified help desk is now upstairs in the Microcomputer Services office (Room 202). The office is open Monday through Friday from 9am to 5pm. Microcomputer consultants can be reached by calling **346-4412** or sending email to *microhelp@oregon.uoregon.edu*

Does the Shoe Fit? Know What Statistical Analysis Method Works Best for Your Data

■ **Always consider statistical models that will work well with your data, rather than forcing your data into some specific model**

By Robin High
robinh@darkwing.uoregon.edu

The development of high-speed personal computers and user-friendly statistics software capable of performing many sophisticated procedures has increased the likelihood of choosing the wrong technique for the job. At the very least, the bewildering increase in the numbers and types of available statistical procedures has made it easy to overlook, or be unaware of, other methods that might be more appropriate to your needs.

Statistics can easily be applied incorrectly and even abused with any set of data. It's advisable to always think carefully about how a collection of numbers can and should be used. Before you even begin collecting data, ask yourself some key questions:

• Does the data collection process provide a random sample representative of the population of interest?

• Do the data address your research questions?

• Do the data come from a designed experiment or from an observational study?

• Power of a test: is the sample size large enough to find a meaningful difference between groups?

• Are the data cross-sectional or longitudinal?

• To what type of data does each item correspond (nominal, ordinal, interval, or ratio?)

• Are the data objectively measured with a physical instrument (e.g., heights, weights, lengths, etc.) or do they come from a more subjective measuring device, such as Likert scales used in surveys or consumer ratings?

• Do the data have discrete levels (e.g., gender: male/female) or are they collected on a relatively continuous measurement scale?

The answers to these questions are critical, because they define what statistical techniques are most appropriate for your data and research questions.

Common Pitfalls

Chi-square test. For example, the commonly used chi-square test is most appropriate for nominal data (discrete data which have levels in no inherent order). If discrete data have an order (i.e., ordinal levels) or if the data are measured on a more "continuous" scale (interval or ratio), some other technique will probably produce a much more powerful and appropriate test.

T-tests. A simple example of choosing a less than optimal data analysis procedure occurs with a comparison of the two-sample t-test versus the paired t-test. Both tests require the presence of two "columns" of interval/ratio data.

The two-sample t-test assumes two independent groups of experimental units, with not necessarily equal sample sizes, where the difference between the two column means is of interest. With the paired t-test, the experimental units have some inherent or planned matching feature, so that the mean of the paired differences between the two columns is of interest. In the first situation, the data are assumed independent of each other. In the second, there is an implied correlation, either positive or negative, that must be considered. The use of the words "means" and "differences" in these two situations give a very different interpretation of the problem.

"Normal" theoretical models. A more complex example involves data analysis that is perceived in terms of a "normal" or "bell-shaped" theoretical model, such as those used with the analysis of variance or linear regression. These methods are usually among the first procedures taught and in many respects are the most easily understood. If necessary, data may be transformed to make this "normal" theory model fit.

In many situations these normal theory models are good approximations; however, statistical computing has reached the level where models based on other distributions can be applied to the data. *Discrete data can and should be treated differently from continuous data.*

For example, if the data are counts, Logistic or Poisson regression may be much more appropriate than ANOVA or linear regression.

Choose Appropriate Models

To summarize, it's essential for you to understand which statistical analysis is most appropriate for your data. Always consider statistical models that will work well with your data, rather than forcing your data into some specific model.

Don't Overlook Advantages of UO Statistics Packages

■ **Powerful statistics software packages are available free to all faculty, staff, and students**

By Robin High
robinh@darkwing.uoregon.edu

While many people use statistical programs on their personal computers, they might also want to be reminded that UO computing systems have very sophisticated and powerful statistics software packages that are available free to all faculty, staff, and students.

OREGON Software. Statistics packages on OREGON include *SAS*, *SPSS*, *SCA*, *SHAZAM*, *LINDO*, *LIMDEP*, and *PRELIS/LISREL*. Programs can be submitted in batch mode by writing the code with a text editor such as *pico*.

For example, to run a SAS program, enter the program commands into a file called **myfile.sas** and type

```
$ sas myfile
```

The **.sas** extension is not necessary when submitting the command. You will always be given a file called **myfile.log** where you can check the execution for completeness, and if it produced output, you'll find it in a file called **myfile.lis**. *SAS* and *SPSS* can also be run in a more interactive mode through an *X-Windows* interface.

DARKWING Software. DARKWING statistics packages include *sas*, *bmdp*, *Splus*, *eqs*, and *rats*. (Note that DARKWING is case-sensitive, so the program names must be entered exactly as shown.) To run a program, first edit it with a text editor and then submit the command:

```
% sas myfile
```

A file called **myfile.log** will also be produced on DARKWING, and output will appear as **myfile.lst**. Each of these programs has its own command structure.

ALPHA Software. ALPHA, another UNIX-based system, should be used for computationally intensive programs written in *sas*, *spss*, and *Splus*.

As DARKWING and ALPHA are both UNIX systems, their commands are interchangeable. All your DARKWING files are accessible on ALPHA: just log on to ALPHA with your DARKWING userid and password.

To run an *spss* program on ALPHA, enter

```
% spss -m myfile.sps > myfile.lis
```

Further Advantages of Running UO Software

Running statistical programs in batch mode requires you to write a set of computer codes in a syntax file to perform the desired tasks. One feature of some of the latest versions of personal computer programs is a "point and click" style of moving from one window or task to the next. While this method has its advantages, far too often people work their way into oblivion, not keeping a record of what they did.

A step-by-step record allows you to grasp the complete picture of what was done and places you in a better position to repeat the process in future, if necessary.

Assuming you can type and are able to use a text editor, one of the real strengths of writing code in *sas*, *spss*, *Splus*, and other statistical programs is that these programs document the entire procedure. All the steps you take, from initial input to final data analysis, are clearly written into the program. This is known as the "syntax" method.

Note on PC Versions

Although both the "point and click" and "syntax" methods are available with PC versions of the major statistical programs (e.g., *SPSS 8.0* for *Windows*), documentation of the process is often not written into a syntax file. This makes it easy to lose track of the sequence of steps or options selected. It also takes more time to repeat the analysis later or transfer your data to another user without confusion. The syntax method is also highly efficient if you have a lot of repetitive tasks or many variables to process.

Check Web Stat Resources

By Robin High
robinh@darkwing.uoregon.edu

Statistical resources abound on the web. Whether you want to learn more about statistical theory and applications, are looking for product information, or want to test demonstration software, you'll find a variety of web sites serving your needs:

1. Online statistics texts and courses: **http://www2.chass.ncsu.edu/garson/pa765/texts.htm**

While it's not designed to replace coursework or consulting help, this site offers definitions, explanations and interactive demos to help you understand the broad range of statistical tests and what types of analyses would work with your data.

2. Product information (including special features, recent upgrades, new versions, product descriptions, and more):
SAS: **http://www.sas.com**
SPSS: **http://www.spss.com** (includes a free demo of *SamplePower for Windows 95/NT*)
Splus: **http://www.mathsoft.com**

3. Other useful information and links to pertinent *SAS*, *SPSS*, *Splus* and statistics sites: **http://darkwing.uoregon.edu/~robinh/statistics.html**

Outlook Email Users - Watch Out for HTML Formatting Glitch!

By Hervey Allen
Microcomputer Support Specialist, Computing Center
hervey@oregon.uoregon.edu

Microsoft makes its *Outlook* email client available to users of both Microsoft *Office* and Microsoft *Internet Explorer 4.x*. While the email client included with *Outlook* has some very nice features, it also includes one that may cause problems when sending email to non-*Outlook* users.

By default, *Outlook* formats your email text with Hypertext Markup Language (HTML), the same language that's used to format web pages. While many email clients can read HTML-formatted messages, there are some notable exceptions.

For example, if you send email to anyone using *Pine*, your message will appear as an attachment and will be difficult to read. Even if your *Pine* readers save your message to a file and try to open it, they'll still have difficulty reading it. This is a significant drawback because *Pine* users are numerous—

they comprise a significant percentage of the thousands of people who read their email on DARKWING, GLADSTONE, or OREGON daily.

At this time, *Outlook* comes in two common versions, *Outlook Express* and *Outlook 98*. Below are some simple instructions for turning off *Outlook*'s HTML formatting under *Windows 95/98*, and resetting it so that your email is sent as plain text—which is what almost every email client expects.

Outlook Express

1. Start the program.

2. Go to the *Tools* menu.

3. Click on the *Send* tab.

4. In the "Mail sending format" box, check the "Plain Text" radio button instead of the HTML button. (The default settings under the "Settings..." button are fine.)

5. Click on "OK" or "Apply" and you should be able to send email without having it formatted as HTML.

Outlook 98

1. Start the program.

2. Go to the *Tools* menu and choose "Options..."

3. Click on the *Mail Format* tab.

4. There is a pull-down menu labeled "Send in this message format." Set this to "Plain Text."

5. The additional buttons labeled "Settings..." and "International Options..." should be fine as they are.

6. Now click "OK" or "Apply" and you should be able to send email without having it formatted as HTML.

Formatting Messages Individually: While it's possible to turn off HTML formatting on a per-message basis by choosing the *Plain Text* option in the *Format* menu whenever you start a message, we generally recommend that you send *all* email as plain text unless you're sure the person receiving your message can read any formatting you may wish to include.

No More Maintenance for VMScluster Line Printers

By Rick Millhollin
rickm@oregon.uoregon.edu

The Computing Center recently removed both the line printers on the VMScluster from service contract, opting

to perform repairs on a per-call basis instead.

As a result, turnaround on repairs may be slower (DEC/Compaq gives higher priority to devices that are on contract). In the event of a serious breakdown, it is also likely that the line printers will not be replaced.

We encourage everyone to move their printing jobs to their own local printers or to the Computing Center's Xerox N24 laser printers if need be.

The name of the queue for the Xerox lasers is **sys$docuprint**

Trying to Decide Which

■ **Here's a crash course in email fundamentals to help you make a choice**

By Spencer Smith
spencera@oregon.uoregon.edu

There are many email programs on the market today; some are even available free from the Internet. This article is to help you decide which email program would be best for you, depending on the way you access your email.

If you're satisfied with your current email program, congratulations! You should stick with it. Changing email programs can cause delays, problems, and even result in the loss of your email entirely.

But if you've been having problems doing what you want to do with your email and you're ready for a complete change, then please consider the information presented here. (Changing back and forth between multiple email programs will almost certainly cause you to lose email, so consider carefully.)

Pine and *Eudora*

The email programs used most widely on campus are *Pine* and *Eudora*.

Pine is widely used because of its low overhead; it runs in a text-based environment (without buttons, menus, or other graphical enhancements) on virtually any computer, and it operates the same way from wherever you run it. Just about any computer that can use a modem or connect to the UO network can use *Pine*.

Eudora is widely used because it is free, has been available (and free) for a long time, and brings a graphical, point-and-click ease of use to email. *Eudora* also uses the Post Office Protocol (POP) method for handling email, which has long been the standard method for email programs to access email.

POP and IMAP Protocols

While POP has historically been the standard, in the last few years a growing number of email programs have been written using the Internet Message Access Protocol (IMAP). *Mulberry*, *Eudora Pro,* and *Outlook Express* are examples of email programs that use IMAP. There are differences in the way the two protocols work that will affect the way you read and use your email.

The main difference between POP and IMAP is where they keep their mail files. POP brings the mail onto the local machine (the machine you're using to read your email), and manipulates that email locally. IMAP keeps all the email on the server (e.g., DARKWING, GLADSTONE, OREGON) and manipulates the email files there.

POP Pros and Cons

Convenience. POP makes one connection to the email server and does all its transferring and negotiation at one time. It can easily filter and redistribute your email, since it has to read it all coming in anyway. And since it makes a local copy, you can save all your mail onto floppies or other storage directly.

Backups. On the down side, keeping all your email on your local machine can cause problems. Most POP email programs are already set up to delete your email off the server once the transfer is completed. That means that your local machine is the *only* place that your email exists. Unless you back up your email every day, you could lose all your email if something happens to your local machine.

Security. Anyone unscrupulous enough to want to read your email could do so from your local copy, as security of desktop computers is not as bulletproof (generally) as that of the central computers.

Mobility. Mobility suffers somewhat with POP. If you're using your POP email program, and your email program is set to delete email after it's been downloaded, then the computer you use to read your email is the *only* place that email exists. People who travel, or who use several computers to read their email, may have problems with this aspect of POP.

Disk Quotas. Here on campus, our mail machines have a quota, an upper limit on the amount of disk space that's available to the user. If the POP email program is set to delete all messages from the machine after it reads them, then there is no quota problem. But if the client is set to leave the messages on the email server, email continues to pile up without your knowledge. When you read your email on your local computer and delete it, you may assume it's gone altogether, but actually it's still there on the server, taking up space.

After a POP email program deletes a message, it deletes only the *local* copy. This invisible buildup of mail has stung many people who use POP email programs.

IMAP Pros and Cons

Backups. IMAP-based email programs keep everything on the email server. Since our central computers are backed up on a regular basis, a recent backup of your email is always available.

Convenience. Deletions take place on the machine, and are reflected in your email listing, so you always know exactly what email exists at any given time and can easily remove unwanted messages. Multiple mailboxes can be created to sort and categorize your mail. And since everything takes place on the email server, you can access your email the same way from multiple locations.

There are, however, some disadvantages to IMAP. Because the IMAP email program needs to maintain a connection to the email server, and messages never get downloaded to the local computer, there is no "off-line" mode.

This could cause problems for people who want to do their reading and composition while they are disconnected from the network—on a laptop com-

Email Program to Use?

puter on a plane, for example. Since email remains on the email server, if you are used to a POP email program taking your messages off the email server, the buildup of email on the server may take you by surprise.

Good News for Travelers

If you travel a lot and want to be able to access your email anywhere, anytime, browser-based email programs like *WebMail* offer an attractive alternative to POP- or IMAP-based programs. One such program, *WebMail,* is now up and running at the UO (see *Welcome to WebMail* on page 3 of this issue).

WebMail handles the display, composition, and sorting of your email through any browser, anywhere on the Internet. This is a cool feature but be warned! If you are using *Eudora* or any other POP email program now,

and you use *WebMail* to peek at your mail and try it out, all of your messages will be marked unread! So if you have been using *Eudora* for a long time, deleting messages and believing them gone, using *WebMail* will make *Eudora* download all your email again the next time you read your email.

If you use an IMAP email program like *Mulberry*, or if you use *Pine*, you can evaluate *WebMail* without these problems.

Why Switch Programs?

If you're currently satisfied with your email program, then there is no pressing need to switch. On the other hand, if you're dissatisfied, here are a few pointers to think about:

• If you always read your email from one place, *Eudora* is a good choice as your POP email program.

• If you want to get your email from several places (home, school, and while travelling), an IMAP email program lik *Outlook Express* might be a good choice. Or, you might want to try a browser-based program like *WebMail.*

• If all you want is a quick peek at your mail from wherever you are, with no frills, then *Pine* may be right for you.

Web Resources

For a discussion on the relative merits of various IMAP email programs, see
http://www.unc.edu/dande/eval/current.html

For a general discussion of a variety of email programs, see
http://www.ccs.yorku.ca/Compnews/archive/Fall98/mailcompare.htm

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Setting *Outlook Express* to use IMAP

To set Microsoft's *Outlook Express* to use IMAP rather than POP, follow these steps:

- Open *Outlook Express*.

- Select "Accounts…" from the "Tools" menu.

- Select the "Mail" tab in the dialog box that appears.

- In the "Mail" dialog box, click the "Add" button and select "Mail."

- A new dialog box will appear with a space for your name (e.g., "Bob Bogus"). Enter it and click "Next."

- In this dialog, enter your email account (e.g., *bbogus@oregon.uoregon.edu)* and click "Next."

- The third dialog asks for your host information. For the IMAP host, enter whatever is after the @ sign in your email address. In our example, Bob Bogus would enter **oregon.uoregon.edu** Enter the same information for the SMTP host as for the IMAP host (they're the same for major email machines).

- In the fourth dialog, you need to enter the part of your email address **after** the @ sign. In our example, Bob would enter **bbogus**. You may also enter the email password for this account, but that can cause some security problems. If you leave the password field blank, *Outlook Express* will ask you for this information the first time you try to send or receive mail.

- In the fifth dialog, enter a name to be displayed in your account list in *Outlook Express*. This name won't have any effect on the way your mail is handled. "Oregon Mail," "U of O Mail," "Campus Mail" are good choices.
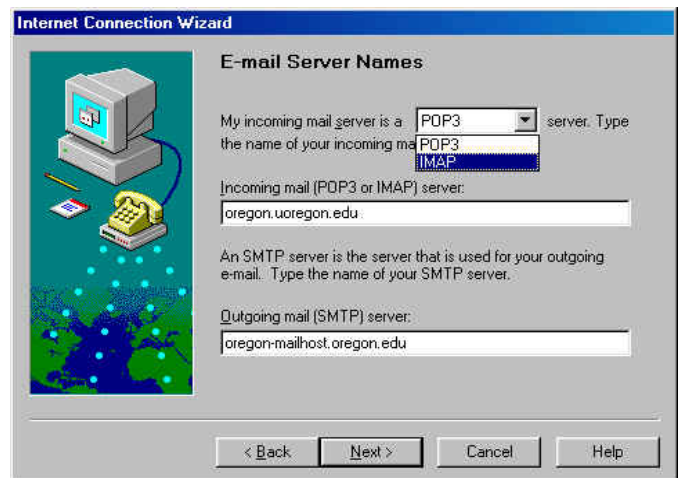
- In the sixth dialog, you're asked to set up your connection. If you're on campus, choose the "Using my local area network" option. If you're dialing in from home, the "Make Connection Manually" choice is best. The other choice, having *Outlook Express* dial your modem, has caused some people problems.

- In the seventh dialog, *c*lick the Finish button.

- Click OK at the "Mail" dialog (back where we started), and you'll be taken back to *Outlook Express* to begin getting your email. In the left-hand navigation bar, double-click the new folder (named whatever friendly name you chose), enter your email password if prompted for it, and begin reading your email!

Time to Upgrade that *Windows 3.1* Machine

■ **Upgrading now can help you avoid future problems**

By Hervey Allen
hervey@oregon.uoregon.edu

While the thought of upgrading your *Windows 3.1* operating system may seem daunting, now may be the best time to take the plunge. If you're still running *Windows 3.1* on your computer, Microcomputer Services staff strongly recommends upgrading to a newer operating system (e.g., *Windows 98*, Macintosh OS, *Windows NT*, etc.*)* to avoid future problems.

We're making this recommendation now to ensure that campus departments have sufficient time to plan ahead for next year's budget, which will be in place July 1, 1999. We also suggest that any such upgrade be scheduled for quiet periods of the year, such as summer term or spring break.

What's Involved?

Before making a change, you'll probably want to consult your local computer support person, if you have one, to formulate an overall plan for your work group.

As you may already suspect, a system upgrade is not a trivial operation. You'll most likely need to purchase a new computer and some new software, transfer your data, and prepare yourself for some initial training or learning to become comfortable with your new system.

There are other factors to consider as well. You may have a personal attachment to using a program that has served you well and may not look forward to learning a new one. And then there are the costs: the real cost of purchasing new equipment to run the newer system, and the intangible costs of time and possible frustration.

Despite these obstacles, we think there are many good reasons to upgrade now. Some of these are cited below:

• *Windows 3.1* is a discontinued product, and has been for almost four years.

• The last version of *Microsoft Office* available for *Windows 3.1* (*Office 4.2*) is no longer compatible with *Office* versions for the Mac and PC.

• There are basically no new applications for *Windows 3.1* and none will be available in the future.

• Many older 486 and 386 class computers won't work correctly on January 1, 2000. This means that *Windows* won't work correctly, either.

• *Windows 3.1* offers very little to no support for modern hardware (e.g., printers, scanners, large hard drives, USB devices, etc.)

• *Windows 3.1* has no built-in support for PCMCIA cards for portable computers. This makes using newer PCMCIA cards very difficult.

• *Windows 3.1* has no built-in support for networking, which makes networking a *Windows 3.1* machine much more difficult.

• *Windows 3.1* is not supported by BANNER and can't run the new BANNER GUI system

• 486 and 386 machines have almost no market value, so they are generally not worth upgrading

• Future versions of the Duckware CD-ROM may not contain any *Windows 3.1* software.

• While *Windows 3.1* will run on newer hardware, it can't take advantage of it. For instance, no single *Windows 3.1* application can use more than a theoretical maximum of 16MB of RAM. This makes manipulating large files very difficult.

• There are very few new support staff personnel with *Windows 3.1* knowledge or training, and there will be *no* new training of any Computing Center support staff in *Windows 3.1*.

• Many *Windows 3.1* machines have hard drives that are five years old or older. These hard drives had a life expectancy of no more than five years. It's critical that you have backups of your data!

Windows 3.1 and Y2K

If you're interested in learning more about *Windows 3.1* and year 2000 (Y2K) issues, see the Microsoft's Year 2000 web site at
http://www.microsoft.com/technet/year2k/product/product.htm

Test your hardware. You may want to download a small DOS utility that will test the hardware on your machine for Y2K compliance. This utility is available at
http://www.nstl.com/html/ymark2000_instructions.html

Y2K at the UO. For an overview of Year 2000 issues and to see what the UO has done about Y2K compliance, go to **http://y2k.uoregon.edu/**

BANNER 3 Users Migrate to 'DEWEY' and 'HUEY'

By Susan Hilton
hilton@oregon.uoregon.edu

Last February, the Computing Center added two new *Windows NT* servers, DEWEY and HUEY, which should enhance BANNER system performance and reliability.

All BANNER GUI users were required to update their systems to use one of the new servers by April 1, 1999, when the old BANNER 3 server was disconnected. Throughout the month of March, users were reminded of the system update each time they logged in on BANNER.

If you still have questions regarding the upgrade, please contact your department's support person or Microcomputer Services at **346-4412**.

Required by Law...

By Matthew Latterell
Assistant Dean,
Educational and
Information Technology
UO School of Law

■ **...sharing the lessons learned from the UO School of Law computer requirement and the use of technology in enhancing an academic curriculum**

Winter is always the time I start thinking about my garden. What should I plant this year, what work needs to be done to the soil before I plant, and how soon can I actually get something in the ground?

Winter at the School of Law is also the time to think about what laptop computer configuration we are going to recommend for next year's entering class. Going hand in hand with this is how we can get better tools to our faculty and staff—computers that are at least as good as those used by our students. We are contemplating every possibility: buying or leasing, laptops or desktops, new machines or upgrades, Macintosh or *Windows*.

The possibilities listed above, we have come to realize, are mostly a matter of personal preference and financial resources. The real choices we must make are less about the hardware and more about the software, less about the individual machine and more about the entire network infrastructure, less about how a person uses his or her own computer and more about how our data is accessed, shared, and distributed.

The other day a faculty member wanted to share a file with his students. But some of his students were using Microsoft *Word* and some were using Corel *WordPerfect*. Some were using the *Windows* version of *WordPerfect* and some were using the Macintosh version. Some of the Macintosh students use Claris *Emailer* for their email—others use *Eudora*. Because of application compatibility problems and file attachment issues, less than one-quarter of his students were able to use the file he sent. Students attempting to share common documents have similar experiences.

The problems are not caused by the operating system or platform, but by the applications. *Word* and *WordPerfect* are strangers to each other on the Macintosh. *WordPerfect* routinely alters formatting between its Macintosh and *Windows* versions. Claris *Emailer* sends attachments using compression and encoding not easily understood by most email packages on either platform.

The applications we recommend to students affect the applications that must be available to faculty and staff. These recommendations in turn affect the quality of machine—new or upgraded—that must be on that staff or faculty member's desk.

Another decision that must be faced is the role the floppy drive will play (or should play) in our computing environment. Part of this is driven by the fact that the new Macintosh desktop systems—both iMacs and the "blue" G3s—are floppy-free. The lack of floppy drives on these machines is a challenge to conventional computing. It presupposes that the computer is in some way attached to a network. And at the

new Law building, with over 1000 network ports for just over 600 individuals, this will be very much true.

The need for a floppy drive is inversely proportional to the strength and accessibility of the network. Being able to plug a floppy-free laptop or desktop into a network is one thing; sharing data across that network is another. File servers go down, disrupting access to shared and personal files and, for many *Windows* users, access to printing. Dial-up access to network-based data is slow at best. Downloading a large email attachment over a standard 56k modem can be done, but even more could be done with that time using a document saved to a floppy or some other removable media.

Computers with or without floppies require transparent network access. This understanding affects everything from the networking hardware in our laptops and desktops to the server hardware and software we choose and the underlying network infrastructure in the Law building itself.

Coming up with answers about software applications, floppy drives and network access when contemplating our computer recommendations and purchases for the Law School is very much like figuring out what the soil behind my house needs before I can plant the garden: if we don't see to the fundamentals, we won't get the results we desire. The computers that students, faculty and staff use must be appropriate for their needs. Even more importantly, the computing environment must be up to the task of making these computers as easy to use and as functional as possible so that the real task at hand—the study of law—can proceed.

Save Space and Speed Up Your Web Pages by Converting Gifs to Jpgs

■ **Use a simple script to convert your image files in one fell swoop**

By Joe St Sauver
joe@oregon.uoregon.edu

Many web designers are used to relying primarily on gif-format images, when often jpg-format images are actually preferable.

For example, jpgs tend to be smaller than comparable gifs for continuous-tone photographic images, and they also render color more faithfully.

If you have thousands of existing images in gif format, the thought of converting them all to a different format might be a little daunting. Fortunately, however, you don't need to convert them one at a time. Instead, you can use this simple script on DARKWINGto convert them *en masse*:

```
#!/bin/csh -x
foreach f ( *.gif )
 set base = `basename $f .gif`
 giftopnm $f | cjpeg -quality 50 > $base.jpg
end
```

(Note that the backticks on line three are just that: backtick marks, *not* apostrophes.)

The script assumes that your gifs have the suffix **.gif** and reside in your current directory. It also shows a typical JPEG quality factor of 50; higher or lower values may be appropriate if you want better image quality or better image compression.

For seat-of-the-pants calibration, a sample image I converted had the following quality versus size relationship:

Original gif: 220520 bytes

Quality	Size
jpg @ quality 90	149242 bytes
jpg @ quality 80	97294 bytes
jpg @ quality 70	71116 bytes
jpg @ quality 60	56573 bytes
jpg @ quality 50	48203 bytes

A Few Caveats

Before you use this script, here are a few more things to keep in mind:

• The resulting jpgs are left in the same directory.

• You'll need to adjust any web pages referring to the old gif images so that they point to the new jpg images instead.

• Be sure to check the protections on the new jpg files to ensure that they're properly accessible.

• *This conversion is intended for use with generic gifs that need to be converted into generic jpgs; if you're using gifs which exploit extensions, this script probably won't work for you.*

See **man giftopnm** and **man cjpeg** for more information on those two commands.

If you run into problems or have questions, feel free to send mail to *joe@oregon.uoregon.edu*

UO Faculty, Staff Eligible for NWACC Grants

UO faculty and staff are eligible to apply for two awards offered by the Northwest Academic Computing Consortium (NWACC), a consortium of over 40 academic institutions from six states.

This year's two-grant program, in accordance with NWACC's primary goal, is aimed at stimulating innovative uses of new information tools in education and research. A total of $150,000 is available for awards in two categories: *Faculty Incentive Awards for Web Use* and *Collaborative Program Development*.

Faculty Incentive Awards. This program provides small grants directly to faculty members to promote innovative ways of using the World Wide Web for instruction. Up to sixteen $3000 grants are available for faculty summer stipends, and up to five $10,000 grants will be distributed for larger projects requiring student assistance, travel, etc. Applicants may submit proposals for either the $3000 or the $10,000 award, but not both.

Collaborative Program Development. This program supports collaboration between NWACC institutions for using technology resources. It funds travel and other activities, such as workshops, related to formulating joint proposals and significant interinstitutional partnerships. Grants range from $2000 to $10,000 dollars. Preference will be given to proposals that provide maximum leverage through institutional, foundation, and other funding matches.

If you have any questions regarding either of these grant programs, you may contact Joanne Hugi, Chair of the Grants Committee, at **(541) 346-1702**, or *hugi@oregon.uoregon.edu* More information on NWACC programs, including grant application forms and guidelines, is available at **http://www.nwacc.org/**

Security Alert! OSU Computing System Compromised

System administrators at Oregon State University have informed us that one of their main systems was compromised several weeks ago (estimated at Feb. 28, 1999). If you never log in on Oregon State University computers, you can safely disregard the rest of this article. *If, however, you have logged in on any OSU systems within the past month, please read on.*

OSU administrators are still investigating the incident. They are aware that the intruder had installed, among other things, a program which recorded network traffic, including usernames and passwords, for some systems at OSU. *This means that if you logged into any OSU systems within the past month or so, usernames and passwords for any account to which you established a session (telnet, ftp, Eudora, rlogin, ...) may have been captured by the intruder. Any such account is now vulnerable to attack by that intruder.*

We have received information on a very limited number of accounts that are known to be vulnerable, and we are contacting the owners of those accounts directly. If you do not hear from us, but you have logged into any OSU systems within the past month, you should still consider yourself vulnerable and you should change your OSU account password(s) *promptly*.

Users who have not logged into an OSU system since Feb. 27 are probably safe.

For information on changing passwords on OSU accounts, see **http://consulting.orst.edu/helpdocs/academic_mainframe** or **http://osu.orst.edu/dept/consulting/helpdocs/dialing_in/Annex_Password.html** ... or contact the OSU consultants (*consulting@ucs.orst.edu*, **541-737-3474**).

For information on changing passwords on UO accounts, see **http://cc.uoregon.edu/docs/passwd_policy.html** ...or contact a UO consultant at *consult@oregon.uoregon.edu*, *consult@darking.uoregon.edu*, *consult@gladstone.uoregon.edu* ... or call **346-1758.**

Documents Room Acquires More CD-ROMs, Books

By Vickie Nelson
vmn@oregon.uoregon.edu

The Computing Center Documents Room is starting to build a small collection of training CD-ROMS to complement its popular collection of training videos.

The first instructional CD titles cover *Office 97*, *Windows 98*, *Excel 97*, and *Word 97* We also recently acquired a series of CDs on *Linux* topics, including
- *Linux Red Hat 5.2* (Apollo)
- *Linux Rough Cuts for M68K Processor*
- *Linux Rough Cuts for MIPS Processor*
- *Linux Rough Cuts for PowerPC*
- *Linux Rough Cuts for Ultrrasparc*

The CD-ROMs may be checked out for one week.

Recent book acquisitions include several *Windows 98* offerings, ranging from the *Microsoft Windows 98 Resource Kit* to *Windows 98 for Dummies*. So whatever your level of expertise with *Windows 98*, you should be able to find something to meet your needs.

Other popular new titles include
- *Red Hat Linux Secrets*, 2nd edition
- *Chinese, Japanese, Korean, Vietnamese Information Processing*
- *Java Servlet Programming*
- *The Little iMac Book*
- *The Non-Designer's Scan and Print Book*
- *Photoshop Artistry*
- *Perl Cookbook*

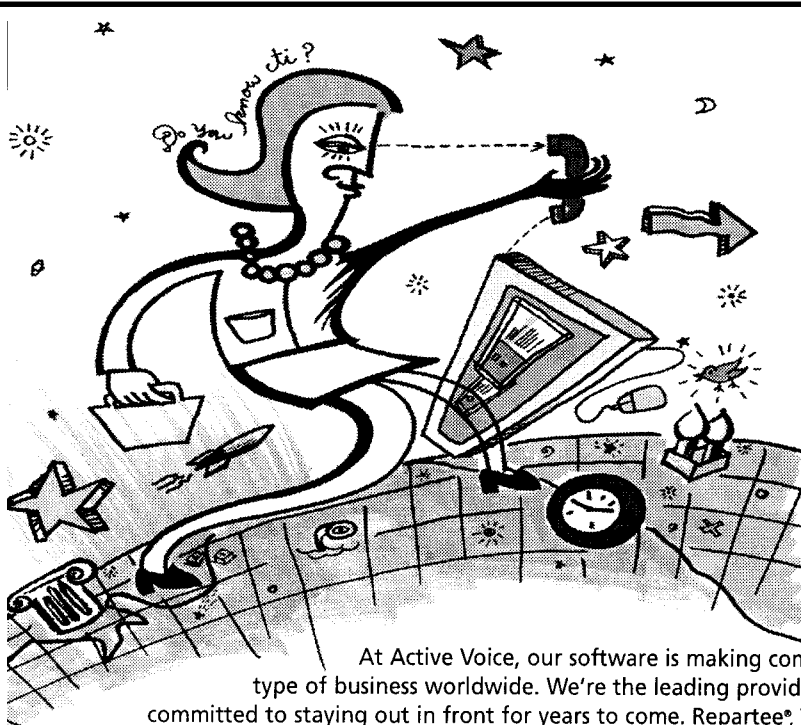Books may be checked out for a two-week period.

The Documents Room is located on the second floor of the Computing Center in Room 205. Hours are 9:30am to 5:00pm Monday through Friday during the academic term.

For more information, call **346-4406** or see
http://darkwing.uoregon.edu/~docsrm

Mail Upgrade Improves Spam Filtering

On March 23 the Computing Center upgraded *sendmail* and *procmail*, two mail system components on DARKWING and GLADSTONE. The upgrade is expected to improve mail system performance and spam-filtering measures. Aside from that, you shouldn't notice any dramatic differences because *procmail* and *sendmail* are the "plumbing" of the mail system that delivers messages to your mailbox, and you usually don't interact with either of them directly.

If you have questions about the upgrade, contact a consultant (**346-1758**; *consult@darkwing.uoregon.edu*, *consult@gladstone.uoregon.edu*).

COMPUTING CENTER GUIDE

Computing Center Web Site
http://cc.uoregon.edu

Microcomputer Services
(Room 202)

- *Windows* and Macintosh software and hardware
- Internet connections, file transfers
- public domain software, virus protection
- help with damaged disks, files

346-4412
microhelp@oregon.uoregon.edu
http://micro.uoregon.edu

Large systems consulting
(Rooms 233-239)

- VMS, UNIX (GLADSTONE, DARKWING, OREGON)
- statistics packages
- email

346-1758
consult@darkwing.uoregon.edu
consult@gladstone.uoregon.edu
consult@oregon.uoregon.edu

Help Desk (Room 202)
- microcomputer technical support
- computing accounts, passwords
- scanning, CD-burning, digital video

Documents Room Library
(Room 205)
346-4406
http://cc.uoregon.edu/~docsrm

UO Computing Center

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N

Kincaid Street

UO Book Store

Chiles Bus. School

13th Avenue

EMU

Electronics Shop
For computer hardware repair, installation, and upgrade services, call **346-4403**.

Network Services
Designs, installs, maintains, and troubleshoots networks and network software for a wide variety of platforms.
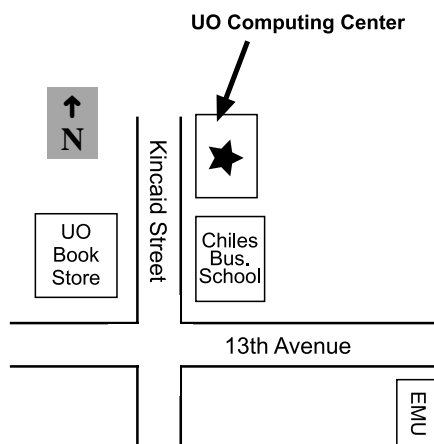
346-4395
nethelp@oregon.uoregon.edu
http://ns.uoregon.edu

Modem Numbers
Dial-in modem numbers for UOnet, the campus network:

- V.90/x2 **346-6520**
- Kflex/V.90 **346-3565**
- V.34+ (33.6 Kbps) **346-5975**

Computing Center Hours
Sunday	9 am - 8:30 pm
Monday - Friday	7:30 am - 8:30 pm
Saturday	9:00 am - 4:30 pm

COMPUTING NEWS
UO COMPUTING CENTER
1212 UNIVERSITY OF OREGON
EUGENE, OR 97403-1212