

COMPUTING NEWS

WINTER 2004



An early snow frosts the branches of a fir tree on the north side of the new Lillis Business Complex.

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Darkwing Email Slow? What You Can Do to Help Speed Things Up



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In recent weeks some Darkwing users may have noticed unusually slow response times when trying to access their mail.

This slowness is a bit of a conundrum because Gladstone has over twice as many users as Darkwing (29733 vs. 12497) and is similarly equipped, yet

it does not exhibit the same behavior. What we do know about the problem is that it is related to the frequency of disk access requests, and much of that disk load is associated with email. We believe the majority of the problem is associated with a comparatively small number of users.

Users Who Are Unlikely to Be Part of the Problem...

Mail users who are extremely unlikely to be contributing to Darkwing's slowdown include those who:

1. check their email on Darkwing over a dialup modem connection
2. check their email on Darkwing using web email
3. use ssh to connect to Darkwing and then read their email using a command-line email program such as Pine

Users Who May Be Part of the Problem...

We believe those users who *may* be contributing to Darkwing's slowness satisfy *all three* of the following specific characteristics:

1. They set their email program to check frequently for new email (sometimes as often as once a minute), or check their email from multiple locations at the same time (e.g., they have their computers set to automatically check their email from their office and from a machine at home simultaneously).
2. They have a large default "inbox" containing many messages (or a smaller number of very large messages).
3. They employ a mail program that uses the POP3 protocol to access mail messages (e.g., Eudora, Outlook, Mac OS X Mail).

This behavior can be a problem because every time a mail program uses POP to access email, the *entire* default inbox gets read. If there are 11MB of mail in that default inbox, and that mailbox is checked sixty times an hour, that represents 660MB

of disk I/O for that user, or an amount of data equal to the entire contents of a CD-ROM. Multiply that by thousands of users, and you can see how that can quickly become a problem.

What You Can Do to Help:

1. Configure your email program to check mail only when you tell it to—or, if you prefer automatic connections, set the mail check interval to 15 or 20 minutes. For instructions on how to do this, go to <http://micro.uoregon.edu/email/efficiency/> or call **346-4412**.

2. If you have thousands of messages in your inbox, move them to another folder in your mailbox. If you don't have time to sort them all, you can simply create a folder with a name indicating the date range, such as "Jan03toOct03." Moving mail out of your inbox to any other mailbox will greatly help to alleviate the problem.

3. Consider using IMAP as your connection method instead of POP (see <http://micro.uoregon.edu/email/popvsimap.html> for a description of POP and IMAP). IMAP clients tend to open a single connection and maintain it instead of reconnecting to check for new mail. POP clients are more likely to connect, check for new mail, and disconnect at regular intervals, resulting in higher overhead. However, note that Eudora's support for IMAP isn't perfect, especially for high-volume email users. In addition, some users may simply prefer the way their mail program works in POP mode.

Feel free to contact us (microhelp@lists.uoregon.edu, **346-4412**) with any questions you may have about your mail connection method.

Ultimately we hope to deliver a long-term solution to Darkwing slowdowns through hardware upgrades. Until then, we sincerely appreciate your help in keeping the shared systems usable for everyone.



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Got Extras?

If your campus department receives surplus copies of *Computing News*, you may return them to the UO Computing Center for redistribution.



Mac OS X Site License Available!

This three-year agreement enables UO students, staff, and faculty to upgrade to the latest releases of Mac OS X

We're pleased to announce that the university has negotiated a site license for Mac OS X that covers all current UO students, UO faculty, and UO staff.

This license was negotiated by the Computing Center in cooperation with Apple, and is an example of an Ed Tech-funded project of tremendous value to the entire campus community. We believe this license is particularly timely, given the number of people looking for alternatives to Windows-based systems—which have been hit particularly hard by viruses and worms in recent months.

The three-year agreement means that UO students, faculty, and staff with Apple systems capable of running Mac OS X can upgrade to the latest releases of the OS X operating system at no charge for the duration of the agreement.

If you'd like to take advantage of this opportunity to upgrade, there are a few important things you should know before you get the software and install it:

System Requirements

To run OS X, you'll need a Macintosh G3 or better that has at least 256MB of memory and 2GB of available disk space. *Note that 10.3 (Panther), the latest release of OS X, cannot be installed on beige G3 hardware.*

Before You Install...

Operating system upgrades always require some caution. Following these three simple steps can save you some grief in the long run:

1. **Choose a time when you're not too busy to deal with any problems that may arise during the installation or as a result of the upgrade.**
2. **Back up critical original work or documents prior to making any operating system change.**
3. **Prior to upgrading, make sure the software and hardware you use are compatible with 10.3 (especially printers or scanners).**

For installation guidelines, see the "Installation Tips" section at the conclusion of this article.

Warning Regarding FireWire Hard Disks:

Certain types of FireWire drives have lost data as a result of upgrading to Mac OS 10.3. If you have a FireWire 800 hard disk, it's essential to check with the manufacturer for a firmware update prior to upgrading.

We recommend you disconnect any external FireWire hard disk during installation.

Benefits of Upgrading to 10.3 (Panther)

Microcomputer Services tech support staff has found OS 10.3 to be slightly faster than its predecessor, especially on machines with at least 256MB of memory.

Interface enhancements such as Exposé for better window management and fast switching between open files and folders are also worthy improvements. For a more complete list of Panther's enhancements, see <http://www.apple.com/macosx/>

How to Get Your Copy of Mac OS X

To get the software, you can either:

- borrow a set of CDs from the Computing Center Documents Room in 175 McKenzie Hall (free), or
- purchase a set of media from the UO Bookstore for \$15.

Please report your usage using the web form at <http://micro.uoregon.edu/macosx/licensing/>

Installation Tips

To start installing OS X:

1. **Insert CD #1 and restart your Mac while holding down the "C" key** (this automatically invokes the installer).
2. **Once installation has begun, it's a good idea to turn on the installer log** because it gives you a detailed installation progress report. To turn it on, select "Show Log" from the "File" menu. Then, from within the Log window, select the drop-down menu "Show Errors and Progress" to see more useful detail. *(Ignore any "bootstrap unknown error code" messages that may show up during this process; they are inconsequential and will not affect a successful installation.)*
3. **It's also a good idea to use "Custom Install" to deselect any non-English language support you don't need.** This can save you more than 500MB of disk space and shave quite a few hours off the installation time. Typical installation time if you select only English language support is less than one hour. (Of course, feel free to install any non-English language support you may need.)
4. **If the installation fails, make sure the CDs are clean** (wipe off with lint-free cloth) and try again.

If you're new to Mac OS X, you'll find a great deal of useful information on Apple's website at <http://www.apple.com/macosx/>

FindText Delivers Full-Text Journal Articles with Ease

UO Libraries' new service is a boon to researchers

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If you've ever wanted to quickly access the full text of a journal article after finding a citation for it, you've got a great friend in FindText, a new service offered by the UO Libraries.

How FindText works: After using the library catalog to locate a journal or a library-licensed database to find a journal citation, you can simply click the FindText icon that appears near the citation to generate a pop-up box showing a list of direct links to the full text of the article. Choose one of the links and—presto!—the article will open in a separate window or you will be provided with additional information on how to access it.

Should full text not be available electronically, you can quickly find out whether the UO Libraries have

a print copy of the journal in which the article appears or whether you will need to request it from another library.

You may use FindText to look directly for the electronic version of an article or journal by going to <http://breeze.uoregon.edu:9003/citation/findtext/>

You can also access this feature by clicking the FindText link near the bottom of the "Databases & Indexes" section on the UO Libraries' home page at <http://libweb.uoregon.edu/>

About 70 library-licensed databases will incorporate the FindText service in its initial implementation. These databases currently account for more 90 percent of patron searches.

You'll find complete information and step-by-step instructions for using the FindText service at <http://libweb.uoregon.edu/guides/findtext/>

Want to Add Free Google Search Service to Your UO Department's Website?

Did you know that Google's free site search program for universities is also available for any organization *within* an accredited educational institution?

This means that as long as your .edu site is publicly available on the Internet, you may add a custom search service ("Google SiteSearch") to your UO department's website that searches only the domain(s) you specify (e.g., hr.uoregon.edu).

Google updates its index every 30 days, and its search return pages are free of banner ads and other types of advertising.

For full details on how to take advantage of Google's SiteSearch offer, as well as answers to frequently asked questions, see

http://services.google.com/univ_faqs.html

Docs Room Acquires Spam Forum Videos

Last spring the Federal Trade Commission held a public forum on the rapidly growing problem of unsolicited commercial email, or spam. Panelists included representatives from AOL, Microsoft, and the Direct Marketing Association (DMA), as well as law enforcement

officials, Internet service providers, and other technology professionals. The Computing Center Documents Room (175 McKenzie Hall, **346-4406**) recently purchased a set of 13 videos covering the three-day forum. The videos circulate for one week and are renewable twice.

One-Stop Shopping for Account Management

If you have a Darkwing, Gladstone, or Oregon account, this web page can help you with all your account management functions

Forgot your password or need to change it? Need to set your email to forward to another account? Wondering if you're approaching the limit on your disk quota? With direct links to each of these vital functions, the "Account Management" web page does it all:

<http://micro.uoregon.edu/account/manage.html>

Having Problems Accessing UOnet?

How to reinstate your account if it's been shut down...

If you suddenly find you're unable to access your UO computing account via modem or wireless, or you can't access Blackboard, it's possible your account was disabled for security reasons (e.g., your computer may have been infected with a virus or worm). If your on-campus connection to UOnet no longer works, the problem could either be with a virus or with your physical Ethernet connection.

Off-campus connection problem: If you suspect you have a virus and your account has been disabled, contact Microcomputer Services (**346-4412**) to check on your account status and troubleshoot the problem. In most cases, your account can be reactivated within an hour. Microcomputer Services staff can also help restore your computer if it has crashed.

On-campus connection problem: If you can no longer access UOnet from your campus office and you have reason to suspect you may have a virus, contact Microcomputer Services for help. If you are *sure* you *don't* have a virus, your problem is most likely with your physical Ethernet connection and you'll need to contact Network Services (**346-4395**).

Anti-virus protection: For more information on how to protect yourself from Windows viruses, see <http://micro.uoregon.edu/av/>

Check Out the New UO Webmasters List

If you're involved in any aspect of web page production at the University of Oregon, you're likely to find a discussion of interest on the new UO webmasters mailing list.

To subscribe, go to <http://darkwing.uoregon.edu/~majordom/list-interface.html> and type **uowebmasters** in the "List Name" box. Hit "SUBMIT Request" and enter the full email address for the account you wish to use for your mailing list subscription.

New Online Database Makes It Easier to Access Local Statistics

Data for Local Communities
gathers a wide array of valuable
information resources in one place

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Oregonians everywhere needing statistical data or related information about counties and communities in Oregon will be happy to learn about the launch of *Data for Local Communities* (<http://libweb.uoregon.edu/dlc/>), a new online database developed and maintained at the University of Oregon Libraries.

Data for Local Communities gathers in one place a wide array of high-quality websites containing statistical, spatial, and descriptive information about cities, counties, and other civil, economic, and natural regions of Oregon.

The new resource is intended to support the work and interests of local governments, educators, students, business people, researchers, libraries, and citizens of Oregon. It was created as a project of the Orbis Cascade Alliance and received federal grant funding administered in Oregon by the Oregon State Library.

The *Data for Local Communities* website consists of a database containing more than 350 records for online statistical and descriptive resources, all searchable by keyword, title, author, or subject. The tool also allows users to search or browse by topic and geographic level and to search an online catalog for print publications on Oregon's cities and counties.

For more information on the resource, contact Tom Stave, Head of the Document Center of the UO Libraries, at **346-3060**, tstave@uoregon.edu.

**Prepare for the
Great Migration...**
Service on Oregon being
phased out

Get ready to move your email and web pages off Oregon and onto Darkwing or Gladstone! By fall 2004, we will have discontinued service on Oregon, the academic OpenVMS system.

For details on the Oregon system phase-out and how to prepare for it, see <http://cc.uoregon.edu/cnews/fall2003/migratemail.html>

Hard Drives: Bigger, Faster, Cheaper...



The quality of hard disks is not what it used to be, so backup solutions are more essential than ever

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For the last several years, it's been possible to buy a larger and faster hard disk for what you'd have paid for a much smaller and slower disk the year before. In recent times we've seen the cost for a "standard-size" disk falling as well. At the moment, it's possible to find hard disks at or below \$1 per gigabyte, making even a 120GB disk relatively affordable even when you factor in the additional cost of paying for professional installation.

So what's wrong with bigger, faster, and cheaper? The quality of some hard disks seems to be going down along with their price. Evidence of this can be seen in the Computing Center hardware repair shop, where our technicians sometimes have difficulty keeping up with the number of computers coming in that suffer from failed hard disks.

Even drive manufacturers seem to tacitly admit a decline in quality, as they've uniformly dropped to a one-year warranty from what used to be a standard warranty of three years or longer. We believe the shorter warranty period reflects manufacturers' lack of confidence in their own product, as well as their efforts to limit replacement expenses.

This is not to say that there aren't some real technical problems behind reduced hard-drive reliability. The new disks are being pushed to faster rotational rates and higher surface densities that reduce permissible tolerances. The larger disks also tend to run hotter than older drives, which makes good cooling critical (a factor that's often overlooked). In other words, even if the failure per megabyte of capacity is unchanged, the odds that your particular disk will fail have still increased.

As you know, when a disk goes bad the last thing most users care about is the cost of the drive itself. It's the value of the data that matters. Even home users now have more to lose, given that their data may include irreplaceable family photos or digital videos.

What you can do about it? Of course, the answer is to back up your data. But few of us actually back up our hard drives at all—or if we do, we do it too infrequently.

In many cases it will make sense to spend some money on your backup solution to make it convenient enough to ensure that you will actually use it.

Disk Mirroring

The most transparent type of backup solution is buying a PC with built-in disk-mirroring. This type of technology is referred to as RAID (Redundant Arrays of Inexpensive Disks). Mirroring, which is also called RAID 1, simply keeps two disks synchronized by making sure that any data written to the first disk is also written to the second.

One such solution is Dell's new Dimension 8300, which you can order with two serial ATA hard disks configured for RAID 1, at a cost of roughly \$350 more than the same PC without the RAID configuration. Before you decide that's more money than you want to spend, consider how valuable your data is! (Also note the convenience factor: this solution doesn't require you to do anything at all.)

Unfortunately, a mirror will only protect you from physical disk failure. If someone steals your PC, or your house floods, or if you're attacked by a nasty computer virus, the mirroring cannot protect you. For this reason we recommend you also employ one of the other backup mechanisms mentioned below.

Additional Backup Solutions

The auxiliary backup method you choose should reflect the size of the data you need to back up. Larger files will probably require an external hard disk, while smaller amounts of data can be conveniently backed up on portable media such as CDs or thumb drives.

External hard disk. If you have digital pictures, music, video, or other large data files to back up, your best bet is to buy an external hard disk. It's possible to get one that supports FireWire (for the modern Macintosh), or USB 2.0 (common for modern Windows PCs), or both.

Ideally, the external backup disk should be large enough to back up at least one copy of the contents of all the disks you have in your PC. These devices allow you to plug them into your PC and have the drive mount as if it were another internal hard disk. You can then drag files and folders over to the disk just as you would move files normally.

Maxtor offers an innovative external drive called "One Touch" that automatically backs up your data when you press a button. Although we haven't yet tested this drive firsthand, it looks like a nice approach to making backups as convenient as possible. After we have an opportunity to test One Touch, we'll let you know what we think of it in the next issue of *Computing News*.

and Less Reliable

CD backups. If you have Windows XP or Mac OS and a CD burner, backing up folders and files is as easy as dragging them onto the CD drive. CD burning capabilities vary across operating systems:

Mac OS: On Mac OS, you cannot add more files to a CD after you've burned it. However, Mac OS does support multiple burning sessions through its Disk Utility or the commercial software called Toast. Neither of these methods is convenient to use, but CD-RW disks can be easily reformatted and reused even on Mac OS without any special procedures.

Windows: Windows XP allows you to add files until you reach the capacity of the disk. Earlier versions of Windows require a separate piece of software for burning CDs (usually included with a new CD burner). If you're running a version earlier than XP, you might want to try the free CD-burning software "burnatonce," available at <http://burnatonce.com/>

DVDs: If your operating system has DVD writing capability, you may want to back up your files on DVDs, as they hold about six times as much information as a typical CD-R.

Thumb drives. If all you're really worried about backing up are comparatively small files such as correspondence and the like, you may just want to use a removable storage device such as a thumb drive. (This assumes that in case of a complete drive failure, you'd just reinstall the system and applications from original media.)

USB Flash Drives are a good mechanism to store files and folders—they have the same ease of use as floppy disks but they have more storage capacity and they're less prone to failure. Cost for a 16MB thumb drive is only \$15 through the Computing Center hardware repair shop ("E-Shop") in 151 McKenzie Hall. 16MB is enough capacity to store about ten floppy disks' worth of information. The E-Shop also stocks other sizes of thumb drives, with capacities of up to 512MB.

Creative solutions for small files: These would include keeping a backup copy on one of our timesharing hosts (Darkwing, Oregon) or emailing an important document to yourself. The only problem with these methods is the file size limit for email (5MB) or the storage capacity of your account (100MB by default).

Back Up, Back Up, Back Up!

A mirrored PC coupled with regular backups to an external disk will go a long way toward protecting your data, but the main idea is to have your important data in a *minimum* of two places.

We're sure there are other methods of backup we haven't mentioned here, and any method that works for you is a good one. Just be sure you use *something!*

industry news

VeriSign's 'Wildcard' Scheme

On September 15, VeriSign, which operates the .com and .net domain name registries, began cashing in on user typos with its Site Finder service—a move that wreaked havoc on many email utilities and anti-spam filters, as well as possibly violating Internet Engineering Task Force standards and VeriSign's own contract with the Internet Corporation for Assigned Names and Numbers (ICANN).

Amid a storm of protest and after repeated requests from ICANN, VeriSign announced on October 3 that it would temporarily shut down Site Finder, but it's determined to relaunch the service.

References:

1. VeriSign Wildcard Opinion Survey:
<http://sa.vix.com/~vixie/comnetsurv/>
2. ICANN advisories and other background materials concerning VeriSign's wildcard service:
<http://www.icann.org/topics/wildcard-history.html>
3. "Technical Responses to Unilateral Internet Authority..."
<http://cyber.law.harvard.edu/tlds/sitefinder/>

Microsoft Security Suit Raises Legal Issues

Microsoft is fighting a class action lawsuit in California arising from its software's notable vulnerability to viruses and worms. The suit charges the company with unfair competition and violation of customers' privacy rights through security defects in its products. To learn more, see "Microsoft security suit raises thorny questions," *CNET News.com* October 3, 2003

<http://news.com.com/2100-7348-5086385.html>

Settlement in Class Action Suit Against Manufacturer of Defective Hard Drives

In late October, the Superior Court of California announced a proposed settlement in the class action suit against Fujitsu Computer Products of America. *If you bought certain models of Fujitsu brand Desktop 3.5" IDE hard drives or a personal computer or other system containing these drives, you could benefit from the settlement.* For more information, see

<http://www.hddclassactionsettlement.com/notice.pdf>

Microsoft Makes Deal to Integrate Windows with PC Hardware

Last fall, in a move that presages integrating digital rights management (DRM) technology at the operating system and hardware level, Microsoft expanded its relationship with BIOS maker Phoenix Technologies:

<http://zdnet.com.com/2100-1104-5086853.html>

Symantec Wins Suit against Counterfeiter

In late December, Maryland Internet Marketing was ordered to pay Symantec \$3 million for selling counterfeit Symantec software:

<http://sanjose.bizjournals.com/sanjose/stories/2003/12/22/daily4.html>

Want to Try Opting Out of UO Spam Filtering?

New, flexible opt-out policy puts you in the driver's seat

Any Darkwing or Gladstone account-holder may now opt out of the University of Oregon's spam filtering environment—and then opt back in if they choose. Here's how:

You may either fill in the opt-out form online at <https://password.uoregon.edu/spamme/> or take the following steps:

1. Log in on your Gladstone or Darkwing account using ssh
2. At the system prompt, enter the command:

```
% touch .spamme
```

Note: This command creates a file that exempts your account from virtually all spam filtering. In order for it to work, you must use this exact syntax (including the dot preceding **.spamme**) and you must put this file in your account's home (default) directory.

Within an hour or so, the spam filtering exemption will take effect.

If after spending some time in unfiltered mode you decide you don't

like it, simply log back in and reset normal default filtering:

1. Log in on your Gladstone or Darkwing account using ssh
2. At the system prompt, enter the command:

```
% rm .spamme
```

Normal spam filtering will resume in about an hour.

Some things to keep in mind:

1. Opting out of spam filtering is not available on Oregon; it is for Gladstone and Darkwing accounts only.
2. If you choose to exempt yourself from spam filtering, please do *not* report any spam you may subsequently receive to spam@uoregon.edu
3. If you want to try using *SpamAssassin* to filter content-based spam, see "Taking Control of your email on Darkwing and Gladstone" at

<http://twin.uoregon.edu/~joelja/taking-email-control.html>

How to Report Spam at the UO

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If you're a UO faculty member, UO student, or UO staff person and you're currently receiving spam on your Darkwing, Gladstone, or Oregon account, please report it to us so we can take appropriate steps to limit or eliminate it.

There are a few things you'll need to keep in mind when reporting spam:

1. We need a copy of the complete spam with full headers. Please see <http://micro.uoregon.edu/fullheaders/> for information on how to get full headers.
2. We need to get the spam that slipped through to your account within a day or two of the time it was sent to you.
3. Please send the spam to spam@uoregon.edu

It's also important to note that we can help *only* with spam sent to your UO email accounts on darkwing.uoregon.edu, gladstone.uoregon.edu, or oregon.uoregon.edu

If you receive spam sent to a departmental email account, or spam sent to a third-party account you may use (such as an AOL account or a Hotmail account), you will need to report it directly to the people who are responsible for those systems.

Thanks for sending in spam you may receive on Darkwing, Gladstone, or Oregon!

**new
opteron
computer
cluster
available**

To supplement the computing resources available to Darkwing users, we've built four dual processor 64-bit AMD Opteron workstations running Red Hat Linux. These are intended to play much the same role as that of our now-decommissioned cluster of Dec Unix workstations (geyser, hotspring, etc.). Home directories from Darkwing are mounted on the new Opteron cluster, as is the Darkwing **/scratch** directory (mounted as **/darkwing-scratch**). A local scratch directory (**/scratch**) is available for projects or storage that exceed the size of your home directory.

To learn more and to sign up for an account, Darkwing users should see the UO Computing Center Intensive Computation Resources page at <http://acad-cl0.uoregon.edu/> ("acad dash cee el zero dot uoregon.edu")

NY Times Describes Eugene ID-Theft Ring

Dumpster-diving for discarded nuggets of information, stealing mail out of mailboxes, hacking into databases, creating phony web pages that mimic legitimate e-commerce sites to “phish” for personal information—all are the standard stock-in-trade of identity thieves. A *NY Times* writer reports on all this and more, in an interview with an ID-theft insider in Eugene, Oregon. See <http://www.nytimes.com/2003/12/21/magazine/21IDENTITY.html>

Virginia Arrests Its First Spammer Under Tough New Anti-Spam Law

The state of Virginia has charged a North Carolina man with four counts of using fraudulent means to send spam. Under the state’s new anti-spam law, this could carry a penalty of up to 20 years in prison. For details, see <http://www.computerworld.com/governmenttopics/government/legalissues/story/0,10801,88176,00.html>

Feds Indict Illegal Internet Pharmacy Group

On December 3, a federal grand jury issued a 108-count criminal indictment against 10 members of an illegal Internet operation that used many websites to sell controlled substances. The group’s illegal operations were a major source of spam. See <http://www.miami.com/mlm/miamiherald/7407522.htm>

Operation Cyber Sweep Coordinates National Crackdown on Cybercrime

Since its inception on October 1, 2003, Operation Cyber Sweep has coordinated the efforts of federal, state, local, and foreign law enforcement agencies to crack down on a variety of Internet economic crimes. See the U.S. Department of Justice’s press release at http://www.usdoj.gov/usao/lae/hotnews/operation_cybersweep.htm

Australian Nabbed for Global Email Fraud

After a four-month investigation, Sydney police arrested an Australian man suspected of being part of a global scam that dupes victims into believing they can claim a reward for helping recover the foreign assets of the Nigerian president. For the full story, see <http://www.guardian.co.uk/australia/story/0,12070,1074069,00.html>

Nigeria Cracks Down on Internet Fraud

Anxious to restore its country’s good name, the Nigerian government is taking steps to deal with the notorious 419 email scam that’s been successfully stealing money from the gullible and the greedy for the past 20 years. See <http://news.bbc.co.uk/1/hi/world/africa/3241710.stm>

Federal CAN-SPAM Bill in Effect January 1

Full text of the measure is available at <http://www.spamlaws.com/federal/108s877enrolled.pdf>

Text of Oregon Anti-Spam Bill Online

See http://pub.das.state.or.us/LEG_BILLS/PDFs/ESB910.pdf

California’s Tough New Spam-Busting Bill

On January 1, the toughest spam-busting bill in the nation became law in California. The law enables consumers to seek civil damages against spammers amounting to \$1000 per email and \$1 million per incident. See <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2003/09/24/MN259134.DTL>

California Marketing Firm Fined \$2 Million for Spamming

In what was hailed as a landmark case, the State of California won its first anti-spam judgment on October 24. PW Marketing was fined \$2 million for sending out millions of unsolicited emails telling people how to spam. See “California Chalks Up a Spam Win” at <http://wired.com/news/print/0,1294,60968,00.html>

FTC Case Mounts Against Spammer

Federal Trade Commission documents relating to the civil action against the “Married But Lonely” spammer Brian D. Westby are available on the FTC site at <http://www.ftc.gov/opa/2003/09/fyi0357.htm>

Two Spammers Murdered in New Jersey

An October 30 posting in *Slashdot* notes that two shady spammers who promoted stock deals online via www.stockinvestor.com recently paid with their lives. The case is still under investigation. See <http://slashdot.org/articles/99/10/30/0841215.shtml>

New York State Goes After Spammers

A six-month collaborative investigation between Microsoft and New York State Attorney General Eliot Spitzer has led to punitive action against a New York-based spamming ring and its accomplices. On December 18, Spitzer and Microsoft filed parallel lawsuits charging the ring with sending illegal spam through 514 compromised Internet Protocol addresses in 35 countries. For complete details, see

http://www.oag.state.ny.us/press/2003/dec/dec18b_03.html

<http://www.microsoft.com/presspass/press/2003/dec03/12-18NYSAGandMicrosoftFS.asp>

<http://darkwing.uoregon.edu/~joe/syn1.pdf>

<http://darkwing.uoregon.edu/~joe/syn2.pdf>

Equifax Cuts E-Marketing Operations

In response to recent federal anti-spam legislation, national credit reporting agency Equifax is cutting staff and closing some facilities in its e-marketing unit. This action effectively eliminates the company’s bulk email products. See

http://money.cnn.com/2003/12/19/technology/equifax_spam

How Statistical Programs Such as SAS



How to test for and report the presence of missing data in a program such as SAS

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In the ideal data collection project, complete data would exist for all variables across all experimental units (also called subjects, cases, or observations). Unfortunately, for a number of reasons it is inevitable that some values won't be collected, will become lost, or will be unusable.

Understanding how statistical programs work with missing data is an important step in dealing with this situation. Establishing mechanisms to track sources of missing data may help you better understand your data and how to present results. It's also helpful to know the various ways to test for and report the presence of missing data with a computer program such as SAS. This article focuses primarily on how SAS works with missing numerical data.

Missing Data in Statistical Procedures

When dealing with missing data, the first step is to understand the three basic ways in which it typically occurs:

MCAR (data are missing completely at random): A "missing" value does not depend on the variable itself or on the values of other variables in the database.

MAR (data are missing at random): The probability of missing data on any variable is not related to its particular value. The pattern of missing data is traceable or predictable from other variables in the database.

NMAR (not missing at random): Missing data are not random and depend on the values that are missing.

Next, it's important to anticipate how a given statistical program handles missing data: will it be listwise or pairwise?

Listwise or casewise deletion. Many statistical procedures will eliminate an entire observation or case if there are any missing data in the defined variables. This is known as listwise or casewise data deletion and occurs when a record has missing data for one or more identified variables. For example, repeated measures or multivariate analyses with the General Linear Model (GLM) in SAS or SPSS will only use data from subjects where all identified variables in the model are completely recorded. This means available data from a substantial number of experimental units could be omitted from the analysis if missing values in any combination of variables are present.

Pairwise data deletion occurs for some procedures that work with data in "pairs." Correlations and covariances computed with PROC CORR are instances where statistics can be computed with complete data for pairs of items that do not need to account for missing data with other variables. Pairwise data deletion is available in a number of SAS and SPSS statistical procedures. The SAS procedure PROC MIXED also works in this manner; it can analyze linear models without deleting subjects with missing data. However, missing data combinations, especially if they are numerous, can cause computational problems.

Coding Missing Data

Three basic methods are commonly applied to code missing numerical data: the single period (.), a blank space, or "impossible" numeric values. A blank space or period are the common choices for missing character data. These choices will work with just about any program to work with missing data read from external files.

Impossible numbers that lie outside the relevant range, such as -99 or -9, often represent missing data. For example, when entering survey data, a negative number works well when the value is always positive, such as a person's age; a positive value such as 9 or 99 works well with responses that have a restricted range (such as a Likert scale from 1 to 5).

Visually, a negative number may have the greatest impact (especially when you expect to see a positive value). However, if such numbers are added to the data file, make sure that they will not be used in any numerical computations to avoid biased or illogical results. SPSS allows you to define up to three discrete numerical values or a range of values to be defined as missing in addition to the period or blank space. This approach can also be used with data read into SAS. However, when doing so you must convert the number to a SAS missing value (such as the period) before you perform any numerical computations. Another option is to enter a WHERE statement into the list of statements for the DATA or PROC steps to specify values that lie within the relevant range.

A more flexible method of coding missing data is to apply single-letter codes (**a, b, c, ..., y, z**). The advantages of this technique when used in SAS will become apparent as you continue to read this article.

Entering Missing Data in Excel

When entering data into an Excel worksheet that will eventually be read into SAS, you have two basic options to transfer data: have SAS read the Excel file directly with PROC IMPORT or ODBC, or save the Excel file in text format and have SAS read it with a DATA step. For either situation you should first review the strengths and limitations of Excel for data entry, how to structure the worksheet, and how PROC IMPORT accesses external files (see <http://cc.uoregon.edu/cnews/spring2003/datadesign.html> and <http://cc.uoregon.edu/cnews/summer2003/sasupdate.html>).

Work With Missing Data

If you choose to apply only the three basic missing data coding schemes, SAS easily reads data from an Excel worksheet. The key to making the data transfer work properly is to format the range of cells with one data type for each column and either leave cells with missing data blank, or enter a period or an “impossible” number. With a single consistent format in each column and variable names placed in the first row, SAS can effectively import data from Excel worksheets.

If missing data are represented by “impossible” numbers, you need to immediately convert them to a SAS missing value in a DATA step. For example, suppose you apply one or more numeric codes (e.g., -99, -9, 9, 99, etc.) to represent missing values. To convert one or two specific numbers or a range of numbers to a missing code, enter an appropriate IF statement in a DATA step:

```
IF (x_var EQ -99 OR x_var EQ -9) THEN x_var = . ;
IF (-99 LE x_var LE -1) THEN x_var = . ;
```

If a period represents missing data, an OPTIONS statement with **missing='M'** placed at the beginning of the sequence of commands specifies what symbol to print. In this case, the letter M (or another letter of your choice) will be printed for any missing data.

To utilize SAS’s ability to apply a variety of missing data codes, a second data transfer approach is necessary. Assume you decide to enter missing data in Excel with a variety of single-letter codes **a, b, c, d, ..., z** (in addition to the three basic codes). Before you can read this data into SAS you will need to save the worksheet as a text file (e.g., comma separated value **.CSV** or tab-delimited **.TXT** file). A DATA step with **MISSING**, **INFILE**, and **INPUT** statements can then be used to read the data. Note that character values placed where SAS expects to find numbers will produce error messages in the log file. To avoid this, place a **MISSING** statement within the DATA step to tell SAS what specific character values should be treated as missing, e.g.,

```
OPTIONS missing='M' ;
DATA new;
MISSING n r u;
INFILE cards DLM=', ' dsd;
INPUT a1 a2 a3;
CARDS;
n,3,2
3,r,1
u,1,1
3,n,.
;
```

In this example the letters **n, r,** and **u** defined on the **MISSING** statement represent legitimate missing values placed in the input data file (they act as if they were a period). The **OPTIONS** statement designates that any other data value read as missing, such as another letter or the period, will be printed with the letter M. Observe what happens to the missing values when the data set is printed:

```
PROC PRINT DATA=new; VAR a1 a2 a3; RUN;
obs a1 a2 a3;
1 N 3 2
2 3 R 1
3 U 1 1
4 3 N M
```

Twenty-eight (28!) Varieties of Missing Data

A missing data value in SAS is actually a special, reserved floating point number. You can choose from 28 possible missing data codes (including the period), each having its own inherent sorting order, as follows:

1. An underscore followed by a period: **_.**
2. A period by itself: **.**
3. A period followed by an alphabetic letter: **.a .b .c**
.... **.x .y .z**

The advantage of using SAS coding. Often in data collection—especially surveys—you should preserve the precise reason why data are missing. Suppose you collect data on a person’s income. Missing data for this sometimes sensitive question can occur for a variety of reasons. The SAS system allows you to assign codes for missing data that distinguish why income could not be collected for specific reasons, such as:

```
n for "No Response"
r for "Refused to Answer"
u for "Unemployed"
. for "Unknown"
```

You can then create your own formats for the actual income levels, including separate codes for the missing values:

```
PROC FORMAT;
VALUE incm 1='less than 15000' 2='15000 to 30000'
3='30000 to 45000' 4='greater than 45000'
.n="no response".r="refused to answer"
.u="unemployed".="unknown";
RUN;
DATA two;
LABEL income="Income";
FORMAT income incm. ;
MISSING n r u; * the letters n r u refer to
                specific reasons for missing data from
                income, listed in PROC FORMAT;
INPUT id income @@;
CARDS;
1 1 2 . 3 r 4 4
5 2 6 n 7 u 8 1
;
PROC PRINT NOobs Label;VAR id income;RUN;
PROC TABULATE NOseps missing;CLASS income;
TABLE income, n="Count"*f=7.0 / RTS=20;
RUN;
```

Missing data are read with a single letter code; however, the associated formats include a period placed before the letter. Income for **id=2** is missing for an unknown reason; thus it is assigned a period rather than one of the specific missing data codes.

The output from **PROC PRINT** and **PROC TABULATE** (Figures 1 and 2 on the following page) demonstrate how a variety of missing data formats allows you to work within the coding of the variable itself to include additional discrete levels. The “missing” option on

How to Handle Missing Data, continued...

the PROC TABULATE statement tells SAS to print the number of missing data items that exist for each type of missing data.

Figure 1: Program Output for PROC PRINT

```
id Income
1 less than 15000
2 unknown
3 refused to answer
4 greater than 45000
5 15000 to 30000
6 no response
7 unemployed
8 less than 15000
```

FIGURE 2: Program Output for PROC TABULATE

	COUNT
Income	
unknown	1
no response	1
refused to answer	1
unemployed	1
lt 15000	2
15000 to 30000	1
30000 to 45000	0
gt 45000	1

Without missing data coding systems, one could only ignore multiple types of missing data and move on. Such codes may also obviate the need to create different fields to explain the reasons for missing data. Looking at your data with a variety of missing data codes can potentially tell you a lot about your study.

Testing for Missing Values

One way to test if a given variable is missing is to enter an IF statement in the DATA step. With missing data stored as periods, to take some specific action if true, one would typically use:

```
IF (x_var EQ . ) THEN
  DO; < insert statement(s) > ; END;
```

This statement legitimately tests whether the current value of **x_var** is missing; however, it only checks for one of the 28 possible missing data codes. If **x_var** has been set equal to **n**, **r**, **u**, or one of the other missing data codes, this statement won't work.

SAS also has a MISSING data function which tests for the presence of any missing data, not only numbers, but other data types as well (character, date, etc.) The function returns **0** (zero) if the value of the argument is not missing, and returns **1** if the value is missing.

```
IF (MISSING(x_var) EQ 1) THEN
  DO; < insert statement(s) > ; END;
```

The MISSING function is generally preferred where the existence of missing values requires the program to take some specific action.

To appreciate the usefulness of a variety of missing data values, it's essential to know the ascending order in which SAS evaluates them:

```
_. < . < .a < .b < .c < .. < .x < .y < .z
```

Even though they are not considered numerical data, missing data codes behave as if they had unique, ordered numerical values. Since **.z** is defined to be the so-called "largest" missing data value, a more comprehensive check that will work for all missing data codes is:

```
IF (x_var LE .z) THEN
  DO; < insert statement(s) > ; END;
```

Comparisons with Real Numbers

Perhaps what you should be most concerned about with missing numerical data is that SAS treats them as if they were negative numbers of extremely large magnitudes. As a result, the internal value of a missing data item is comparatively "less than" any negative number you would ever compute or even be able to assign. You can test this:

```
DATA one;
IF (.z < 100) THEN a=1;
IF (.z < -99) THEN b=1;
IF (.z < -1.797654321E308) THEN c=1;
RUN;
PROC PRINT DATA=one NOOBS; RUN;
a b c
1 1 1
```

Notice that when **.z** (the "largest" of the missing data values) is compared with any real number, no matter the magnitude of the number, positive or negative, the indicator variables **a**, **b**, **c** all evaluate to 1 (i.e., they indicate a true expression). From the viewpoint of SAS, comparing numerical data value with an open-ended IF statement is risky. For example:

```
IF ( x_var LT <any real number> ) THEN
  DO; <enter statements>; END;
```

This IF statement will be "true" whenever **x_var** contains a missing value. As a result, the statement(s) following THEN will be performed—and this is likely to give you a result you don't want. In other words, open-ended IF statements with no lower bound such as (**x_var LT <any number>**) are evaluated to be true whenever **x_var** contains any one of the 28 missing data codes. To avoid this situation, two possible solutions are to use the MISSING function or to always insert a lower bound into IF statements:

```
IF ( <lower bound> LT x_var LT <upper bound> ) THEN
  DO; < SAS statement >; END;
```

Remember that missing data values behave in comparison expressions as if they were negative numbers with very large magnitudes, even larger than SAS can represent them. Although missing data codes behave as if they have unique, ordered, numerical values, they are not included in any numerical computations.

References

1. Allison, P. D. (2001) "Missing Data." *Sage University Papers in Quantitative Applications in the Social Sciences*, 07136. Thousand Oaks, CA: Sage.
2. Little, Roderick J. A. and Donald B. Rubin. *Statistical Analysis With Missing Data*, 2nd Edition, New York: John Wiley and Sons, 2002.

Who's Who at the Computing Center

Meet the newest member of our staff...

Joyce Winslow
jwins@uoregon.edu



Derek Wormdahl
Systems Analyst
Administrative Services

Derek Wormdahl laughs ruefully that he is “a jack-of-all-trades and master of none,” but in fact he is simply a multi-talented guy.

This Oregon native not only has a deep and varied background in his chosen field of computer programming, but he has also put in some serious time as a remodeling carpenter and American Legion baseball coach, and is currently pursuing perfection in the demanding arts of fly fishing and golf.

After graduating from North Eugene High in 1988, Derek headed for Western Oregon University in Monmouth. Initially, he intended to major solely in business, but once his interest in computer science was kindled, he added it to his agenda and graduated with a double major in business and computer science in 1994.

Like most programmers, Derek enjoys problem solving and is a self-described “tech buff” who never tires of challenging himself to learn something new. His first job out of college was as a software developer at Sony Disc Manufacturing in Springfield, where he developed manufacturing and automation software as well as software for core information systems.

One of his most demanding assignments at Sony was developing software to integrate automated machinery (automated guided vehicles, automated storage and retrieval systems) into the manufacturing process. This involved getting automated machinery to perform precise tasks in confined spaces where there was little or no margin for error.

Derek enjoyed the variety of his assignments at Sony, but when the company shut down its operations in Springfield he had to move on. Fortunately, the Oracle and C skills and Java and web development experience he'd gained at Sony were a good fit for the Computing Center, and, scarcely missing a beat, Derek joined our staff in September 2003.

Derek's new responsibilities offer no lack of challenges, either. He is currently working on two major projects to streamline campus administrative systems. With UO Assistant Registrar Jim Bouse, he is serving as joint project leader for the ambitious Document Imaging project, which could span several years. The team is currently researching Banner-compatible software packages that can scan, store, index, and search electronic documents (student records, transcripts, and the like), with a view toward tailoring that software to the UO environment.

Derek is also teamed with Jim Bouse on the “Resource 25” project. The two are working to expand the use of this third-party scheduling application, which is used for such tasks as scheduling events and reserving classrooms.

It would seem that with all this Derek would have time for little else, but he is also a family man. He and his wife Brandy, a math teacher and soccer coach at North Eugene High, are the parents of four-year-old daughter Jordan and are expecting another baby in May. Not surprisingly, Derek is engaged in a flurry of remodeling projects, expanding their Santa Clara home (which he also helped to build) to accommodate the new arrival.

UO Users: Get the Scoop on Critical Windows Updates

See the UO README file at <http://public.uoregon.edu/software/Security/>

(Note that this URL is available only from connections affiliated with the UO)

Security Alerts...

— Microsoft Windows—

Serious New IE 6 Flaw Discovered

Some versions of browsers other than IE may also be vulnerable

A newly discovered bug in Microsoft's Internet Explorer could allow malicious hackers to convincingly replicate ("spoof") commercial websites such as eBay, luring unsuspecting visitors to reveal sensitive personal information that could be used in identity-theft crimes. The bug was reported by Secunia, a Danish security company, on December 9.

Test your browser: Secunia has provided a web page at <http://www.zaphthedingbat.com/security/ex01/vun1.htm> where users may test their browser to see if it is affected.

Until a patch is developed, Microsoft is recommending that users follow these basic security procedures:

- keep software (including antiviral software) up-to-date
- install firewalls
- don't follow links from suspicious sources

References:

http://zdnet.com/2100-1105_2-5119440.html

<http://www.secunia.com/advisories/10395/>

Windows 2K/XP Bug Could Still Leave Door Open for Another Fast-Spreading Worm

Another fast-spreading worm of "Blaster" magnitude could evade existing workarounds to exploit a buffer overflow flaw in the Windows Workstation Service, which is enabled by default in Windows 2000 and XP.

The suggested workarounds (disabling Workstation Service and using a firewall to block specific UDP and TCP ports) are not sufficient protection, according to the latest reports by testers at Core Security Technologies. For full protection, Windows 2K/XP users need to install the patch Microsoft released in November (**MS03-049**: <http://www.microsoft.com/technet/treeview/?url=/technet/security/bulletin/MS03-049.asp>).

See also the December 10 *eWeek* article, "Security Experts Warn of New Way to Attack Windows," at <http://www.eweek.com/article2/0,4149,1408902,00.asp>

Latest Microsoft 'Critical' Flaws

Late last fall, Microsoft instituted a new policy of issuing monthly security updates and fixes. The first of these, issued in mid-October, cited seven security flaws in a variety of programs, five of which were deemed "critical."

Windows 2000/XP Users: Each of the critical updates for September and October are available on the latest version of the **Windows Security CD**, as well as on the public domain server security site at <http://public.uoregon.edu/software/Security/>

The Security CD is available at the Microcomputer Services Help Desk (151 McKenzie Hall) and in the Documents Room (175 McKenzie Hall); this CD is free to all UO faculty, UO staff, and UO students.

The easiest way to get up-to-date is to follow these steps:

1. **Check to make sure your machine is patched.**
You can test your computer for the **MS 03-026** and **MS 03-039** security flaws by using the automated checker at <http://rpctest.uoregon.edu/>
2. **Make sure the computer is not on the network.** If it has built-in wireless, try to be in a place where no wireless network exists (or turn off the wireless if the computer can do this).
3. Power-up the computer and enable the Windows built-in firewall on all interfaces.
(Start->Settings->Control Panel-> Network Connections-> Double-click on each icon, i.e., Local Area Connection -> Properties-> Advanced -> Enable ICF)
4. Restart and verify that the firewall is enabled.
Allow Windows to fully boot, and log in.
5. Now attach the Ethernet cable while Windows is running, and run Windows Update from the Start Programs -> Windows Update menu.
6. You will almost certainly be forced to restart during the Windows Update process. Unplug the Ethernet cable and restart once Windows is running. Then plug the cable back in and continue with the updates.
(**Note:** The firewall in XP takes a few seconds to load. Simply rebooting may result in your computer becoming infected if the Ethernet cable is plugged in while starting up—even with the firewall enabled!)

Windows Messenger Test for NT/2000/XP: It's a good idea to disable Windows Messenger Service if it's not in use on your machine. Messenger is vulnerable to a buffer overflow exploit described in **MS03-043_KB828035**. To learn more, visit Steve Gibson's site at <http://grc.com/stm/shootthemessenger.htm>

Making Sense of All the Current Windows Updates: For a detailed explanation of Microsoft patches, see Microcomputer Services' information page, "Microsoft Windows Packages," at <http://public.uoregon.edu/software/Security/> under "UO README.txt"

Microsoft Offers Cash Bounty for Information on MSBlast and SoBig

Microsoft is offering a half-million dollar reward for information leading to the capture of the authors of the two most destructive Windows exploits to date, "MSBlast" (aka Blaster, LovSan) and SoBig. For the full story, see <http://www.cnn.com/2003/TECH/biztech/11/05/microsoft.bounty/index.html>

— Unix —

UO Systems Get Additional Antiviral Protection

In an effort to step up campus defenses against worm and virus attacks, the Computing Center Systems staff has adapted a product called the Procmail Email Sanitizer to Darkwing and Gladstone and extended existing “defanging” capabilities on Oregon. (“Defanging” refers to the practice of disarming malicious email attachments by renaming them.) The following have been added to the list of extensions that are considered suspicious: **asd, asx, cil, eml, mda, mdw, nws, ocs, pl, pm, wma, wmd, wms, wmv, wmz, and wsz**

For a full description of the new defanging mechanisms, see Bob Jones’ deptcomp posting, “New worm-defanging mechanisms on Oregon and darkwing/gladstone” at <http://darkwing.uoregon.edu/~consult/deptcomp/2003/msg01577.html> More information on Procmail Email Sanitizer is available at <http://www.impsec.org/email-tools/procmail-security.html>

Four OpenSSL Security Issues

Affects all versions up to and including 0.9.6j and 0.9.7b, some platforms running 0.9.6k, and all versions of SSLeay

In late September, the National Infrastructure Security Coordination Centre (NISCC) issued an advisory concerning three specific vulnerabilities discovered in the OpenSSL Libraries. Two of these could lead to a denial-of-service attack, and the third may allow an attacker to execute malicious code.

The **0.9.6j**, **0.9.7b**, and **SSLeay** vulnerabilities are described in full in *NISCC Vulnerability Advisory 006489/OpenSSL*, at <http://www.uniras.gov.uk/vuls/2003/006489/openssl.htm>

The **0.9.6k** vulnerability is described at http://www.openssl.org/news/secadv_20031104.txt

Solution: Upgrade to OpenSSL 0.9.6l or 0.9.7c and recompile any OpenSSL applications that are statically linked to OpenSSL libraries. Version 9.7 is not affected. Download locations are available at the OpenSSL site: http://www.openssl.org/news/secadv_20031104.txt

Latest Release of Portable OpenSSH Fixes Bugs in Earlier Versions

Multiple vulnerabilities that exist in Portable OpenSSH 3.7p1 and 3.7.1p1 have been corrected in the latest release, OpenSSH 3.7.1p2. This release is available from the mirrors listed at <http://www.openssh.com/portable.html> All users are advised to upgrade.

Note: These bugs do not exist in OpenBSD’s releases of OpenSSH.

— Mac OS X —

Mac OS X Advisory

Affects Mac OS X Server 10.3, Mac OS X 10.2, and Mac OS X Server 10.2 (all versions through at least 11/26/03). Earlier versions of Mac OS X and Mac OS X Server are also likely affected.

This vulnerability exposes affected systems to exploitation at the root access level. For details, see <http://docs.info.apple.com/article.html?artnum=32478> and <http://www.carrel.org/dhcp-vuln.html>

Workarounds for System Administrators: Until the patch is released, you can work around this problem by taking the following steps:

1. Go to /Applications/Utilities/Directory Access/
2. In Directory Access, uncheck LDAPv3 and NetInfo in the Services tab if you don’t intend to use them.

If you *do* need the LDAPv3 and NetInfo options, you can disable DHCP for LDAP and NetInfo as follows:

1. Go to /Applications/Utilities/Directory Access/
2. Select LDAPv3 in the “Services” tab.
3. Click “Configure.”
4. Uncheck “Attempt to connect using broadcast protocol” and “Attempt to connect using DHCP protocol.”

NAV 9 Not Fully Compatible with OS X 10.3

Because of some incompatibility between Norton AntiVirus 9 and Mac OS X 10.3 (Panther), Panther users need to be aware that they must *manually* run LiveUpdate and any other scheduled events normally handled by Norton Scheduler. Symantec is currently working to make its latest version of Norton AntiVirus software compatible with OS X 10.3.

Potential Data Loss Bug in Mac OS X

In mid-November, *Ars Technica* reported a bug in Mac OS X that could cause the unwary to lose data if they save filenames longer than 992 characters in any Cocoa application such as TextEdit.

Mac OS X does provide a warning (“A file with this name already exists. Do you wish to overwrite?”), but if users ignore it, the system overwrites the *entire folder* in which the file is being saved. For full details, see <http://episteme.arstechnica.com/6/ubb.x?a=tpc&s=50009562&f=8300945231&m=940102>

Panther 10.3.2 Update Released

In addition to other enhancements, this release includes previous stand-alone security updates. See http://www.apple.com/downloads/macosx/apple/macosxupdate_10_3_2.html

More Selected Elements of the

Part two of a series on the evolution of university websites

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At the request of the University of Oregon administration, we conducted a comparative study of 172 university websites in the summer of 2003. (For a complete list of the universities studied, see <http://darkwing.uoregon.edu/~joe/2003-web-study/sites.txt>)

In the Fall 2003 *Computing News* (<http://cc.uoregon.edu/cnews/fall2003/webstudy.html>) we discussed some of the mechanical issues associated with university web page delivery, including “natural minimum web page sizes” and the web servers and Apache modules these universities chose to use. In part two, we’ll look at some design trends we’re seeing in higher education home pages.

Web Page Design Trends

University web pages, both at the UO and elsewhere, have undergone a series of revisions over the years. Because university websites are publicly available, and the first thing that virtually all universities do when considering revising their own website is to see what their competitors are doing, it should not be surprising that university websites often evolve along common paths.

We will now consider a couple of those design trends.

I. Segmentation

We had received some feedback that a growing number of college and university websites apparently had begun to explicitly segment their audience into narrow categories on their home page. In evaluating that claim, we found that indeed, 78.4% (135 out of the 172 sites in our study), now do this.

What is segmentation? A university might choose to offer a number of parallel versions of its home page: one version for prospective students, another for current students, a third for faculty and staff, a fourth for sports fans, a fifth for alumni, a sixth for parents and families of students, a seventh for donors, an eighth version for members of the news media, and so forth.

Visitors to the website are typically presented with a choice of website “views,” often via a link explicitly titled, “Information for...” The site visitor’s page choice is sometimes remembered via a session cookie (or a persistent cookie). At other times, the visitor’s choice is not saved, and merely serves to determine the next page shown. (Saving audience state via persistent cookies can lead to bizarre usability problems when done on lab computers or other shared systems employed by diverse audiences.)

Examples of segmented university websites: UCLA is one example of a university that segments its website—in this case, into a total of eight visitor categories. Rice University, another university site that segments, breaks its audience into thirteen categories (and not surprisingly, Rice prominently offers a page explaining how to use its “Audience-Focused Homepages” for those who find the whole process rather baffling).

In some cases, the degree of microsegmentation is rather stunning: Carnegie Mellon, for example, in addition to a number of relatively routine segments, carves off no fewer than three categories of visitors: “faculty visitors,” “general visitors,” and “corporate visitors” while also offering a page for “researchers.”

In other cases, some audiences are distinguished by their absence. At UCSB, for example, there are links for “future students,” “current students,” “alumni & friends,” and “visitors,” but there’s a strange silence when it comes to a “faculty/staff” segment (see Figure 1 below).



Figure 1. Detail of UC Santa Barbara’s home page, showing segmented visitor categories.

Presumably, UCSB faculty and staff are expected to be the default audience for the default version of the UCSB page, but their absence from what’s otherwise a fairly inclusive list is still a bit disconcerting.

Sometimes the decision to segment simply reflects a desire to accommodate more direct links than could reasonably be crammed into a single integrated page; segmentation obviously makes more real estate available, and reduces the need for a web page designer or web oversight committee to tell some folks no, their sites won’t be getting directly linked. In other cases, segmentation appears to have been done simply because other sites were doing it, with no discernible substantive rationale and largely undifferentiated page versions for each of the different audiences!

That lack of differentiation at some segmented sites is not surprising: it can be quite difficult to keep half a dozen or more different home pages in sync and updated. For example, consider the relatively straightforward issues

2003 University Home Page Study

associated with creating just three or four fresh news items that are uniquely relevant to each “carved-off” audience! That is quite a task, and thus it isn’t surprising that sites quickly begin using common news items across all their “different” segments.

Unsegmented university websites: The remaining 37 sites, university websites that do not employ explicit segmentation include the UO, Berkeley, Cal Tech, Cornell, Dartmouth, Harvard, Washington, and Yale.

The approach the current UO home page takes is typical of this group. Rather than explicitly asking users to categorize themselves, we take a more subtle approach toward guiding users where they need to go. For example, if you look at the UO’s current home page, you’ll notice that we carve off some audience segments via direct links (Alumni, Sports, The Arts, Visitors), while offering other links that are important to particular audience segments *directly* from the home page.

Consider the current UO home page links of interest to prospective students and currently enrolled students:

- Prospective students: the UO’s current home page includes *direct* links to admissions, financial aid, housing, students, the academic calendar, the catalog, the class schedule, the campus map, the bookstore, and so forth.
- Enrolled students similarly have direct links from the home page to web email, DuckWeb, the calendar, catalog, class schedule, weather, major Internet search engines, computing, and the library, etc.

We believe this sort of hybrid design, as used at the UO and a number of Ivy League institutions and regional competitors, will eventually be seen in virtually all university home pages because it improves the transparency and navigability of the site, and because it reduces the user’s click count when trying to access crucial data.

II. University “Portal” Websites

A few years ago, universities were under tremendous commercial pressure (as well as substantial peer pressure from those who’d already jumped on the portal bandwagon) to move to a “portal” model for their institutional home pages.

Of course, one of the first problems universities faced was figuring out just what a “portal” actually was. A good definition has always been elusive, but there was fair consensus that a portal would:

- require users to log in (a process which would allow users to customize the portal to best reflect their interests—interests which could then be recalled during subsequent logins).
- somehow be inclusive enough to act as the user’s default start page, having everything the user wanted or needed.

- tightly integrate with existing administrative systems and existing teaching and learning systems (such as Blackboard or WebCT).

In some cases, portals were also billed as a way for universities to raise revenue via the sale of online advertising. Universities were told that soon “everyone” would have a true portalized home page. Portalize or die, they were effectively told.

University administrators were also told that the straightforward secure websites they’d been deploying (like the UO’s DuckWeb), sites which allowed students to perform administrative tasks online such as registering for classes or looking up grades, were *not* portals. Students would *not* routinely log in to websites of that sort (unless they had a specific administrative task to accomplish), and it was extremely unlikely that anyone would make one of these secure administrative websites their default home page.

So now that two or three years have gone by, where are all the university portals? Has the “portalization of higher education” actually occurred? *No*.

No universities in our study sample has a portalized home page, and only 36 schools (about 20 percent) even have a link to a web portal from the school’s default home page, often via a none-too-prominent link.

Examples of universities that have a portal linked from the home page include the “My<whatever>” portals at Albany, American, ASU, Buffalo, Georgia, Miami (Ohio), Minnesota, NJIT, North Carolina, Northeastern, St Thomas, Tennessee, Texas Christian, UCDavis, UCLA, University of the Pacific, Virginia Tech, Washington, Wisconsin (Madison), William and Mary, and WPI, and comparable sites with more unique names, including BYU (“Route Y”), Catholic (“Home@CUA”), Delaware (“UD&me”), George Washington (“GWebPortal”), Tulsa (“CampusConnection”), etc.

In other cases, an institutional portal may have been marginalized to the point where it is only being targeted at a smaller audience, such as current students. For example, UC Santa Cruz’s home page is silent about the existence of a portal site (you only learn it exists if you dig down into its segmented “for enrolled students” website); the University of Connecticut clearly defines its target audience by labeling its portal site <http://www.students.uconn.edu/>

We believe that university portals are currently at their zenith, and as time goes by, those universities which did experimentally deploy a portal will most likely retire that model and return to a simpler functional model.

Other schools, still under local pressure to develop a portal by administrators who may not realize that the portal craze has largely passed, may seize upon the

University Web Page Study, continued...

ambiguity in what makes a portal a portal, and simply rename their existing functional secure administrative websites to have a “portal-like name,” thereby allowing them to “declare victory” in the “portal wars” while minimizing the hassles, costs, and risks they might otherwise face.

III. Animation

Another area of web page design which occasionally gets mentioned is use of animation—having the pictures on the home page change slide-show style, for example, or incorporating the use of Macromedia Flash to “increase visual interest or impact” or to grab attention, much in the way that many commercial banner ads are animated. (In looking at whether or not a site used animation, we explicitly excluded use of rollovers, e.g., things like pull-down menus or text highlighting that occurs when a mouse is passed over an area of the page.)

With that definition in mind, when we look at our 172 study sites, only 17 sites (Cal Poly, Clark, George Washington, Gonzaga, Loyola (Chicago), New Jersey Institute of Technology, New School, Pepperdine, Rutgers (Newark), SUNY Buffalo, University of California Riverside, University of Chicago, University of Colorado (Boulder), University of Dayton, University of Georgia, University of Maine, and Yeshiva)—less than ten percent of the study sites—made any use of animation on their institutional home pages.

Clearly, the perception that “everyone” is deploying animated images or Macromedia Flash-enabled home pages is not borne out by the empirical data from our study.

IV. A-to-Z

One problem that virtually all university home pages face is how to handle the laundry list of links to departments, programs, labs, initiatives, functions, and “stuff” that need linking, a function that is currently handled under the home page “Departments” link at UO, as it is at some other universities (such as Duke, the University of New Mexico, or the University of North Carolina).

At a growing number of other sites, including 60 of the 172 in this study, the preferred name for that omnibus listing link now appears to be “<university abbreviation> A-to-Z” or “A-to-Z Index” or a full listing of letters along the lines of “Index A B C D E F G H I [...] X Y Z” or possibly a “cutesy” permutation such as “Departments A2Z.”

The other alternative to “Departments” or “A-to-Z Index” that is commonly seen is for that type of link to be labelled “Site Index” or “Index” or “Directory” (although that last nomenclature will often be confusing to users looking for a phone or email directory).

V. Verbose News Items

Some universities view their home page as a “table of contents,” while others view the home page as more akin to a university magazine.

Universities which lean toward that latter role tend to feature verbose news items on the institutional home page. For the purpose of our study, a news item was considered to be “verbose” if it included a headline and more than a single sentence of accompanying text. A simple headline (with no accompanying text), or a headline with one line of “teaser” text was not considered to be a verbose news item. Of our 172 sites:

- 136 sites (nearly 80%, including the University of Oregon) had no verbose news items on their home page
- 15 had a single verbose news item
- 4 had two
- 6 had three
- 5 had four

A few sites had a very large number of verbose news items: Georgia Tech and Lewis and Clark each had pages with 6; USC had 7; Boston College, 9; Rensselaer, 10.

Next Time...

In the next issue of *Computing News*, we’ll look at the use of specific technologies such as favicon.ico, Platform for Privacy Preferences files, and robots.txt files.

FCC Opens Door for Smart Radios

Responding to increased demand for radio spectrum, the Federal Communication Commission (FCC) is opening discussion on the regulation and use of smart radios (SDRs), which are expected to be more widely employed in the future.

Some SDR capabilities are already being used in commercial wireless services, but until now they have been used primarily by industry and government (especially military and national security-related agencies). SDRs can sense the conditions in which they are operating and adapt their use of spectrum accordingly. They also have the potential to avoid hostile interference and keep communication channels open that might otherwise be blocked.

References:

http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-242312A1.pdf

<http://www.sdrforum.org/>

<http://cc.uoregon.edu/cnews/spring2001/sdr.html>

Web Browser Hijacking: What Is It and How Can You Protect Yourself?

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We've recently become aware of malicious websites that exploit a vulnerability in unpatched versions of Internet Explorer. If your system is unpatched and you happen to visit one of these "booby-trapped" websites, you may find that your web browser has been hijacked.

What Does It Mean to Have a "Hijacked Web Browser"?

When your web browser is hijacked, attempts to view some websites (such as common search engines or popular web directory sites) get automatically redirected to an alternative website of the hijacker's choice without your consent, frequently via a BHO (Browser Help Object). Because it is common for alternative sites to feature explicit adult content, this can obviously be a rather disconcerting experience.

Moreover (and as if that weren't enough), at least in some cases:

- the modifications made by the browser hijacking code may result in system stability issues or general system performance slowdowns,
- the browser hijacking code may compromise your privacy or the security of what you do online by "reporting back" to its controllers on the sites you visit, or information you pass to those sites,
- your desktop may begin displaying pop-up advertisements, and
- the browser hijacking code may contain features designed to actively resist removal of the infestation using standard anti-spyware or anti-virus programs.

Am I at Risk? What Should I Do?

Now that you're aware of this threat, what should you do?

As always, make *sure* you've run Windows Update and have installed any critical updates available for your system. To start Windows Update, you can either go to Start -> Windows Update or visit <http://windowsupdate.microsoft.com/>

Details of the vulnerability involved in many of these web browser hijackings is available at MS Security Bulletins **MS03-011** (<http://www.microsoft.com/technet/treeview/default.asp?url=/technet/security/bulletin/MS03-011.asp>) and **MS00-075** (<http://www.microsoft.com/technet/treeview/default.asp?url=/technet/security/bulletin/ms00-075.asp>)

I Think I May Be Infected

First, make sure you really are infected. At least in some cases (e.g., you begin seeing pop-up advertisements

directly on your desktop but see no other odd symptoms), you may merely need to disable Windows Messenger (see <http://www.stopmessengerspam.com/>).

If your browser is definitely being hijacked (e.g., you attempt to go to Google but get sent to some other site instead), your first step should be to run Norton AntiVirus, which is available for free to UO faculty, UO students, and UO staff under UO's site license via the Duckware CD-ROM. (Be sure you download the most current anti-virus definitions before scanning your system.)

Your second step should be to run Spybot Search and Destroy (<http://cc.uoregon.edu/cnews/summer2003/spybot.html>) and/or Ad-aware (<http://www.lavasoftusa.com/>). Our experience has been that they will flag and remove at least some spyware software that Norton doesn't catch.

In other cases, however, your browser may still exhibit symptoms of hijacking. In that case, you may want to check *SpywareInfo's* Browser Hijacking site (listed in the "More Information" section below). This site provides additional excellent suggestions for regaining control of your browser.

Finally, you should recognize that no matter how thoroughly you decontaminate your system once it's been hijacked, it's *extremely* easy to miss one or more residual security vulnerabilities. Assuming you have good backups dating from prior to the time you were infected, the best approach (when feasible) is to do a low-level format of your hard drives and then reinstall your system from scratch.

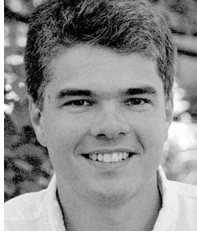
Important note: If you decide to do a complete reinstall from scratch, please *be sure* you patch your Windows system using the UO Security CD *before* you connect your newly reinstalled system to the network (see <http://cc.uoregon.edu/cnews/fall2003/securitycd.html>).

If you *don't* patch your newly reinstalled system using the UO Security CD *before* you connect to the network, you will almost certainly find yourself replacing a browser-hijacking infestation with some other nasty virus or worm—and you'll end up having to start all over again. (Yes, the online world has become a very crazy and hostile place if you're using Microsoft Windows!)

More Information

1. *SpywareInfo's* Browser Hijacking Info Site
<http://www.spywareinfo.com/articles/hijacked/>
2. "The CoolWebSearch Chronicles"
<http://www.spywareinfo.com/~merijn/cwschronicles.html>
3. "BHO Cop Keeps IE Problems at Bay"
<http://cc.uoregon.edu/cnews/spring2003/bhocop.html>

iTunes: Free Music Download Software is Much



The latest incarnation of iTunes—now also available for Windows—is a digital jukebox, electronic storefront, and more

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Time Magazine recently named Apple Computer's iTunes the 2003 Invention of the Year. That says a lot for software that was originally Macintosh-only and did nothing more than store and play music. The editors at *Time* were excited at how iTunes, especially iTunes Music Store, bridged the gap between buying CDs, pirating music, and purchasing legal songs online.

Now available for Windows, iTunes has grown into much more than a music player. Among other things, iTunes is a digital jukebox and electronic storefront all in one program.

iTunes easily imports music from CD. Drop a CD into the computer and iTunes downloads album and track information for that CD from the Internet. Click the Import button and iTunes copies the contents of the CD to your hard drive. iTunes supports the popular MP3 format as well as Apple's own AAC format. (As always, please respect copyright and make sure you digitize CDs only where copyright provisions permit.)

Computer-based music players give us the ability to arrange and rearrange song order. Essentially, you can build your own albums. iTunes accomplishes this through the use of playlists. To use a standard playlist, create a new list and drag songs or albums to that list. iTunes also offers Smart Playlists, where the contents of the list are based on rules you devise. Want to listen to all rock and pop from the 1970s? Reggae songs between three and five minutes in length? Smart Playlists will manage the task. Plus, these lists can be set to automatically update as new music is added to your library.

If you find yourself short on music, iTunes offers an alternative: iTunes Radio. Click "Radio" in the source list and iTunes lists 19 categories of audio, from Classic Rock to Talk. Each category contains a variety of radio stations (more accurately, audio streams) from which to choose. If the preset list is not sufficient, you can listen to hundreds of other stations available from around the world. For a directory of additional stations, visit <http://www.shoutcast.com/> (Note: listening to online music radio stations uses comparatively expensive network bandwidth, so during peak times please limit your use of Internet radio services.)

Another way to expand your musical horizons is by listening to music owned by others. With Music Sharing, iTunes can share some or all of the music in its library.

With music sharing enabled, other iTunes users on your local network can browse and play music from your computer. Unlike peer-to-peer file sharing programs, iTunes honors copyright law and does not permit music to be copied. On campus, Music Sharing does not work across subnets; you will be able to connect only to other computers within your department or building. At home, iTunes automatically lists iTunes servers on your home network.

The highlight of iTunes is the Music Store. Apple CEO Steve Jobs negotiated contracts with the big five music publishers and many independent labels, and that music is now available for purchase. Customers can browse or search iTunes Music Store by genre, artist, and album. When you find something of interest, iTunes offers shoppers free 30-second previews of every song in the store.

Individual songs are priced at 99 cents each. Most albums are \$9.99, with some a little less and others more. In some cases a specific song on an album can be purchased only as part of the entire disc, usually when there are less than 10 tracks on an album. (Otherwise, you could buy all the songs on an album at 99 cents each and pay less than the album's asking price. For an example, see Miles Davis' album "Kind of Blue;" the longest track on the CD, "All Blue," is not available separately.)

iTunes Music Store is not a complete offering of every song and album every released. Most major artists are represented (with a few exceptions, including The Beatles and Madonna). Finding music by independent artists is more difficult due to the nature of Apple's agreements with the major music publishers. If you are looking to buy 1970's punk, do not look to iTunes Music Store.

Compared with other online music stores, iTunes has few limits on what you can do with music you have purchased. iTunes will play purchased music on any computer that has been authorized by the purchaser, and you can authorize up to three computers at a time. You can burn songs and albums to CD up to 10 times. If you want to make more copies, iTunes requires a change to the playlist.

iTunes also organizes and uploads music to portable music players. Currently the Windows version of iTunes supports only Apple's iPod. On the Macintosh, iTunes supports the iPod and a variety of other music players. Transferring music requires either FireWire or USB 2.0. Some USB 1.1 devices are supported, but music files transfer too slowly to be useful.

The name "music store" has already become a misnomer. iTunes has a selection of audiobooks available for purchase. The standard fiction and nonfiction titles are

More than a Music Player



iTunes Music Store menu page.

there, supplemented by a few periodicals and copies of syndicated radio shows. (Back episodes of “Car Talk,” anyone?) iTunes forces its music classification system onto the audiobook selections, which makes it difficult at times to search for or browse specific titles.

New in iTunes 4 are *Gift Certificates* and *Allowances*. Both can be configured in values from \$10 to \$200 in \$10 increments, and the value expires two years after issuance or the date of last use, whichever is later. iTunes users can purchase gift certificates and send them via email. *Allowances* are automatically renewing gift certificates that give parents a way to limit the amount of money their children spend at the iTunes Music Store.

iTunes is free and available for both Windows and Mac OS X.

For Mac users, iTunes requires a minimum of Mac OS X 10.1.5, though for some features you need Mac OS X 10.2.4 or later. A 400MHz G3 or faster Macintosh with 256MB of memory is also required.

Windows users must be running Windows 2000 or XP on a 500MHz Pentium or faster. A sound card, speakers, and 256MB of RAM are also required.

Apple recommends a high-speed Internet connection for buying and streaming music. A modem connection will not be sufficient.

To download iTunes, visit <http://www.apple.com/itunes/>

What Registrars Do Spammers Use?

If you've ever wondered what domain name registrars spammers use when registering their body-part enlargement domains, you may want to see the table at <http://www.polarbeach.com/topics/Registrars.htm> which ranks domain name registrars by the number of spammer domains they've registered per month.

Wonder Why Google Isn't Returning Some Hits It Should Be?

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Recently, high-ranking sites that had long appeared at the top of Google search results suddenly dropped drastically in rank or disappeared entirely. Some analysts speculate that this may be the unintended consequence of an anti-spam measure that Google implemented in mid-November.

Based on reports, it appears that Google is using a new complex and proprietary filtering algorithm that attempts to remove web pages which have been artificially manipulated in ways designed to inflate their placement in search results.

While that's generally a laudable goal, Google's new filter can have some unexpected results. For example, consider an ISP using Google to investigate a potential new customer: if Google suppresses certain web pages related to that customer with its new filter, the ISP may assume the customer has a “clean online record”—when in fact that may be the furthest thing from the truth.

In our view, Google should offer an unfiltered viewing option for those who need it for research purposes, or who otherwise want to see all hits relevant to a given search term, whether tainted by spam or not.

References

For more information on Google spam filtering and its possible consequences, see

- “Google Bayesian Spam Filtering Problem?”
<http://sethf.com/anticensorsware/google/bayesian-spam.php>
- “Bayesian spam filters used in the Google search engine”
<http://www.isedb.com/news/index.php?t=reviews&id=578>
- “Google Florida Update—Penalty Filter Flow Chart—Revision #22”
<http://www.vaughns-1-pagers.com/google-florida-chart.htm>
- “Florida Fever: The Google Update Uproar”
<http://www.searchengineposition.com/info/netprofit/floridaupdate.asp>
(See <http://inventory.overture.com/d/searchinventory/suggestion/> for the tool mentioned in that article.)

« sites worth seeing »

1. **“Joe Average User Is In Trouble”**... Scott Granneman reports that most users are unaware of even the most basic computer security measures, and proposes some solutions:
<http://www.theregister.co.uk/content/56/33599.html>
2. **“The Great MS Patch Nobody Uses”**... The Outlook Email Security Update has been around since June 2000 and is effective against most malicious code—but very few people know about it:
<http://www.wired.com/news/technology/0,1282,48756,00.html>
3. **“Help! my Belkin router is spamming me”**... Consumer networking vendor Belkin drew fire from users when it began spamming them with pop-up ads via its wireless routers:
<http://www.theregister.co.uk/content/69/33858.html>
4. **Third Annual Firewall Buyer's Guide**... A good overview of firewalls gleaned from the ICSA firewall certification website. Covers basic firewall concepts, types of firewalls, and some policy and design issues. Although this guide makes no specific hardware recommendations, it's helpful to those looking to buy just the right product for their needs:
<http://security/fwbuyers.pdf>
5. **DIRECTV cracks down on signal piracy**... Nearly 160 Oregonians now face federal charges for allegedly buying pirate access devices for stealing TV satellite signals:
<http://www2.kval.com/x30530.xml?ParentPageID=x2649&ContentID=x42525&Layout=kval.xsl&AdGroupID=x30530>
6. **Changes to Functionality in MS Windows XP Service Pack 2**... This 73-page document details Microsoft's new set of security technologies in the beta release of XP Service Pack 2 for the 32-bit versions of Windows XP Professional and Windows XP Home Edition.
http://download.microsoft.com/download/8/7/9/879a7b46-5ddb-4a82-b64d-64e791b3c9ae/WinXPSP2_Documentation.doc
7. **AOL's director of anti-spam operations discusses the relationship between network security and spam**... The text of Carl Hutzler's talk, which was presented at the NANOG 29 meeting in October (NANOG is the acronym for the North American Network Operators' Group):
<http://www.nanog.org/mtg-0310/pdf/hutzler.pdf>
8. **“The Big Download Debate: Politics of Digital Copyright or, What part of ‘Jailhouse Rock’ don't you understand?”**... Matt Oppenheim and Robert Hamilton's October 24 debate on the ethics of filesharing is available on video and partial transcript at:
<http://www.cit.cornell.edu/oit/UCPL.html>
9. **DNS checker**... Handy free service for DNS experts who need to troubleshoot a variety of DNS problems:
<http://www.squish.net/dnscheck/>
10. **Abilene Observatory Research Data**... The greater computer science community can now access this data, which offers an extensive overview of network status and performance:
<http://abilene.internet2.edu/observatory/>
11. **“Low Cost Academic Solutions Now Available from Red Hat”**...
http://www.redhat.com/about/presscenter/2003/press_education.html
12. **“Biculturalism (Unix and Windows)...**”
<http://www.joelonsoftware.com/articles/Biculturalism.html>
13. **Darwin Streaming Server**... Open source version of Apple's QuickTime
<http://developer.apple.com/darwin/projects/streaming/>


Quartz Text Display Fuzzy in OS X?

If you're among those whose eyes rebel at the new OS X text display, here are some tips for improving it

Although “fuzziness” is largely in the eye of the beholder, the way Mac OS X displays text is definitely problematic for some users.

The type of screen you're using is a factor in display quality, of course, but short of going to the expense of replacing your monitor, there are some tricks you can employ:

System Preference Settings

1. Open the  menu and go to the “System Preferences Folder.”
2. Go to “Appearance.” Go to “Font smoothing style” and make the selection most appropriate for your monitor.
3. Try resetting the “turn off text smoothing” feature to different font sizes.

TinkerTool

If modifying System Preferences doesn't work for you, you can disable smoothing completely with Tinker Tool, available free from
<http://www.bresink.com/osx/TinkerTool.html>

Reset the Anti-alias Threshold

This hint originates from
<http://www.macintoshhints.com/> :

To set the anti-alias threshold to 128 points or higher, type this at the command prompt:

```
defaults write g Apple AntiAliasing  
Threshold 128
```

(A few users have reported problems with Photoshop crashing if the value is set so high. You can reset the feature by using the value 12 in place of 128 in the line above.)

WINTER WORKSHOPS

These information technology ("IT") workshops are free and open to currently enrolled students, as well as staff and faculty. **There is no registration;** all seating is first-come, first-served. Requests for accommodations related to disability should be made to **346-1925** at least one week in advance of the workshop. For more information, contact the Office of Library Instruction (**346-1817**, cbell@darkwing.uoregon.edu, <http://libweb.uoregon.edu/instruct/>).

This schedule is subject to change. See <http://libweb.uoregon.edu/it/> for course outlines and the most current information, including answers to frequently asked questions (such as why you can't use your Oregon account in most of these workshops).

Workshop	Day/Date	Time	Location	Presenter
Web Publishing, Multimedia ✓ Prerequisites				
Basic Web Design for the Non-Designer	Fri Jan 23	1 - 2:50 PM	144 Knight Library	Bell
Web Publishing I... ★✓ Prerequisites: Familiarity with a web browser such as Netscape or Internet Explorer and an account on Darkwing or Gladstone (not Oregon!); you must know your username and password	Fri Jan 16	1 - 2:50 PM	144 Knight Library	Frantz
	Tue Jan 27	10 - 11:50 AM	144 Knight Library	Frantz
Web Publishing II... ★✓ Prerequisites: Web Publishing I or equivalent knowledge and skills, and a web page you've created	Fri Jan 30	1 - 2:50 PM	144 Knight Library	Jablonsky
	Tue Feb 3	10 - 11:50 AM	144 Knight Library	Harper
Web Publishing III... ★✓ Prerequisites: Web Publishing II or equivalent knowledge and skills	Fri Feb 13	1 - 2:50 PM	144 Knight Library	Bell
Websites with PHP... ★✓ Prerequisite: Web Publishing I & II or equivalent knowledge and skills, and an account on Darkwing or Gladstone (not Oregon!). Learn how to use this general-purpose scripting language that's especially suited for dynamic web pages.	Fri Feb 20	1 - 2:50 PM	144 Knight Library	Lechnyr
Dreamweaver I... ✓ Prerequisite: Web Publishing I & II or equivalent knowledge and skills	Tue Feb 17	10 - 11:50 AM	144 Knight Library	Nesselroad, Harper
Dreamweaver II ✓ Prerequisite: Web Publishing III and Dreamweaver I (or equivalent knowledge and skills)	Tue Feb 24	10 - 11:50 AM	144 Knight Library	Smith

Course Websites, Copyright, Presentation & Research Software

Blackboard for Instructors... Learn how to provide an online component for your courses	Fri Jan 9	3 - 4:20 PM	144 Knight	Johnson
	Fri Mar 12	3 - 4:20 AM	144 Knight	Johnson
More Blackboard for Instructors...	Fri Jan 16	3 - 4:20 PM	144 Knight	Johnson
SAS for Statistics and Data Management	Fri Feb 6	2 - 2:50 PM	144 Knight	High
Visualizing Spatial Data with ArcView	Tue Feb 3	2 - 2:50 PM	144 Knight	Zaleski

You may also arrange a workshop on the following topics for your class or campus group by contacting the instructor:

HTML Forms...	David Lechnyr (david@hr.uoregon.edu)
Intro to Flash	David McCallum (mccallum@darkwing.uoregon.edu)
Intro to Digital Video	Andy Kirkpatrick (andrewn@oregon.uoregon.edu)
Intro to Photoshop...	Will Harmon (wharmon@oregon.uoregon.edu)
Art of Recording Audio...	Andy Kirkpatrick (andrewn@darkwing.uoregon.edu)
Shooting Great Digital Images...	Andy Kirkpatrick (andrewn@darkwing.uoregon.edu)
Net a Job: Use the Web!...	Tina Haynes (thaynes@oregon.uoregon.edu)
Managing a Majordomo List (Basic & Advanced)...	Lucy Lynch (llynch@darkwing.uoregon.edu)
Using MhonARC to Create a Web Archive for a Majordomo List	Lucy Lynch (llynch@darkwing.uoregon.edu)
...Copyright Content and Your Course Website...	Colleen Bell (cbell@darkwing.uoregon.edu)
Things You Should Know About Copyright...	Christine Sundt (csundt@oregon.uoregon.edu)
EndNote/ProCite... Katy Lenn (klenn@uoregon.edu) or	Annie Zeidman-Karpinski (annie@uoregon.edu)
Power Point (Basic & Advanced)...	JQ Johnson (jqj@uoregon.edu)
New Classroom Technology Showcase...	Stan Hall (shall@oregon.uoregon.edu)
Star Panels (electronic presentation devices)...	Stacey DeHart (sdehart@uoregon.edu)
Web of Science (science database)	Colleen Bell (cbell@darkwing.uoregon.edu)
Publishing with Equations	JQ Johnson (jqj@uoregon.edu)
PsychINFO (psychology database)	Barbara Jenkins (jenkins@uoregon.edu)

★ Requires an active account on Darkwing or Gladstone

COMPUTING CENTER GUIDE

UO Website

<http://www.uoregon.edu/>

Computing Center Website

<http://cc.uoregon.edu/>

Microcomputer Services

<http://micro.uoregon.edu/>

(151 McKenzie Hall)

- microcomputer technical support
- help with computing accounts, passwords
- scanning, CD burning, digital video
- help with damaged disks, files
- system software help
- Internet connections, file transfers
- public domain software, virus protection
- software repair (carry-in only, \$60/hour, 1/2 hour minimum)

346-4412

microhelp@lists.uoregon.edu

Documents Room Library

<http://darkwing.uoregon.edu/~docsrn/>
(175 McKenzie Hall)

346-4406

Modem Number

Dialin modem number for UOnet, the campus network: **225-2200**

Large Systems Consulting

<http://cc.uoregon.edu/unixvmsconsulting.html>

(225-239 Computing Center)

- VMS, Unix (Gladstone, Darkwing, Oregon)
- email, multimedia delivery
- scientific and cgi programming
- web page development

346-1758

consult@darkwing.uoregon.edu

consult@gladstone.uoregon.edu

consult@oregon.uoregon.edu

Statistics Consulting

Robin High

219 Computing Center

346-1718

robinh@uoregon.edu

Electronics Shop (151 McKenzie Hall)

http://cc.uoregon.edu/e_shop.html

Computer hardware repair, installation, and upgrades.

346-3548

hardwarehelp@oregon.uoregon.edu

Network Services

<http://ns.uoregon.edu/>

Provides central data communication and networking services to the UO community.

346-4395

nethelp@oregon.uoregon.edu

Administrative Services

<http://ccadmin.uoregon.edu/>

Provides programming support for campus administrative computing, including BANNER, A/R, FIS, HRIS, and SIS. Call **346-1725**.

Computing Center Hours

Mon - Fri 7:30 A.M. - 5:00 P.M.

McKenzie Building Hours

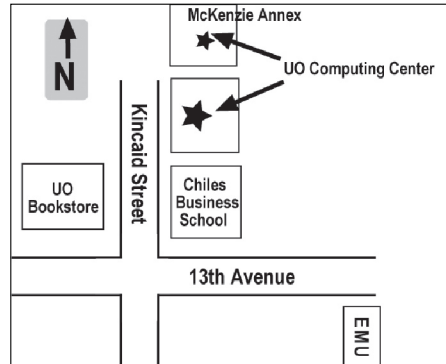
Mon - Thu 7:30 A.M. - 11:30 P.M.

Friday 7:30 A.M. - 7:30 P.M.

Saturday 9 A.M. - 9:30 P.M.

Sunday 9 A.M. - 8:30 P.M.

- Note: These are *building* access hours; hours for individual facilities may vary.



UNIVERSITY OF OREGON

UO COMPUTING CENTER

1212 University of Oregon Eugene, OR 97403-1212