

COMPUTING NEWS

Spring 2006



The Callery pear is a spectacularly showy tree in spring when it is covered with clusters of white flowers and again in fall when its leaves turn bright yellow, mahogany, and red.

IN THIS ISSUE...

CIO Represents UO at APRU Meetings	3
Microcomputing	
UO Bookstore Offers New Microsoft Licensing.....	2
Recommended Web Browser, IMAP Email Client.....	5
Quick Guide to Color Printers on Campus.....	5
Conserve Your Computer's Energy Use.....	13
Time to Replace Obsolete Windows Systems!.....	19
New Mac VPN Client Available on CC Public Domain... ..	19
Large Systems	
<i>Uoregon.edu</i> Default Disk Quotas Increased.....	4
How Does Your Server Score on the Self-Assessment Scorecard?.....	4
UO Email Moving to <i>maildir</i> Format.....	11
Why Do I Have to Change My Password?.....	12
Darkwing SSH Users: Introducing <i>shell</i>	13
University Web Presence: Google Page Rankings.....	14
SpamAssassin for All <i>uoregon.edu</i> Accounts.....	22

Educational Technology

Introducing Amiga LiveChat.....	8
New Ed Tech Initiatives.....	9

Security

Cybercrime in the News.....	18
Security Alerts.....	20
X Windows Security.....	21
Security Products.....	21

Telecommunications Services

UO Video Conferencing Fees Reduced.....	2
---	---

Statistics

Software for Power Calculations.....	16
--------------------------------------	----

People

Who's Who at the Computing Center.....	6
--	---

Documents Room

Recent Books on Linux.....	10
----------------------------	----

Interesting Sites

.....	23
-------	----

IT Training

.....	20
-------	----

Current Map of Wireless on Campus

.....	23
-------	----

UO Bookstore Offers New Microsoft Licensing

Program will serve UO departments as well as individual UO faculty, staff, and students

Aaron Shelton
UO Bookstore
Computer Division Manager
taz@uoregon.edu

By April 17, the UO Bookstore's new agreement with Microsoft will enable it to sell Microsoft products through the company's Select License program. This new program is in addition to the open license program (Microsoft Open License Program, or MOLP) already offered by the Bookstore.

The new Select program allows purchases without a minimum, and at lower prices than are available under MOLP. It also allows for institutional, as well as individual, purchases. This means that UO departments, as well as UO faculty, staff, and students may take advantage of the special Select program prices. Turnaround time for filling orders is expected to be quick and you should have to wait no more than five business days for delivery. Individuals will be able to purchase the most common titles (e.g., Office, Windows XP) immediately upon request.

The Institution Select license program should be available April 17, and the Student/Faculty/Staff Select program is scheduled to be operating by June (or even earlier).

By April 30, a comprehensive Select License price list will be posted at <http://www.uobookstore.com/digitalduck/license/>. If you need quotes for Purchase Orders, the Bookstore staff will be happy to provide these (email electronics@uobookstore.com or call **346-4331**).

In addition to Select and MOLP, the Bookstore also offers license purchasing for Adobe/Macromedia, FileMaker, Symantec, Corel, Inspiration, and many other products. Feel free to call **346-4331** or email electronics@uobookstore.com any time for a quote.

For more details on Bookstore software offerings, visit <http://www.uobookstore.com/digitalduck/>



UNIVERSITY OF OREGON

COMPUTING CENTER

COMPUTING NEWS VOL. 21 #2

Computing News is published quarterly by the User Services and Network Applications staff of the Computing Center.

© University of Oregon 2006

Contact: Joyce Winslow
jwins@uoregon.edu

Photography: Dave Ragsdale
dave@uoregon.edu

Joe St Sauver, Ph.D.
Director, User Services
and Network Applications
joe@uoregon.edu

Website:
<http://cc.uoregon.edu/cnews/>
Telephone: (541) 346-1724

UO Video Conferencing Fees Reduced



The new rate is just \$10 per hour for all calls involving UO departments and personnel

Craig Leavy
Video Conferencing Administrator, Telecommunications Services
cleavy@uoregon.edu

Campus video conferencing services just got cheaper!

Beginning in February, Telecommunications Services reduced the cost of video conferencing to just \$10 per hour for all calls involving university departments and personnel.

This new pricing includes both ISDN and IP calls. In fact, it includes *all* aspects of setting up and conducting a video conference. There are no additional fees for other items such as room rental, test calls, or set-up time (the only exception is a possible \$25 fee to set up a multi-point bridge for a video conference call that involves more than four simultaneously connected sites).

In order to qualify for this new pricing, all that is required is a University of Oregon index number and/or activity code. Video calls that involve organizations outside the UO have a different pricing scheme. For more information, or to schedule a video conference, please contact me, Craig Leavy, at **346-1026**.



Got Extras?

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

CIO Represents UO at APRU Meetings

Don Harris

*VP for Information Services and CIO
cio@uoregon.edu*



CIO Don Harris (left) and Dr. Lawrence Loh, Secretary General of the Association of Pacific Rim Universities.

Some day, in my golden retirement years, I plan to write a book about my experiences in higher education. When I get around to doing that, one of the chapters will be on lessons learned in forming good working relationships with one's colleagues. Lesson #1 will be that one of the best ways to do this is to spend time together far way from your own campus. I learned this lesson before coming to the University of Oregon when I was part of a team that installed a computer lab in a high school in a remote part of Kenya. I learned that lesson again this past month while attending a conference in Beijing.

The occasion was the Senior Staff meeting of the Association of Pacific Rim Universities (APRU). Attending this conference is not a typical assignment for a CIO, but I was asked to attend as a UO representative because it was not known at the time whether our new Vice Provost for International Affairs, Chunsheng Zhang, would be able to make the meeting. As it turned out, Dr. Zhang was not only able to attend, he also joined me for a meeting with Dr. William Chang, who had just opened a new office of the National Science Foundation (NSF) in Beijing. Dr. Zhang was well prepared to talk about the ways he saw IT being used to support international initiatives, and over the next few days we enjoyed a lively ongoing conversation on how we could work together as we traveled in cabs, on subways, walked the streets of Beijing, and shared several meals together.

The importance of developing good relationships was also stressed by Dr. Chang on our visit to his new office,

one of only three such offices outside the U.S. to be opened by the NSF and a testament to how important it considers China and East Asia to be to U.S. research interests. Although we talked about several ongoing projects, much of our time was spent discussing future opportunities in the Chinese market. We were encouraged as a university to explore working relationships with universities outside of Beijing, including new and emerging institutions in China and other Asian countries. This theme was repeated during the APRU Higher Education Forum, which included a talk by Madam Wu Qidi, Vice Minister of Education for the People's Republic of China.

The APRU Senior Staff meeting itself consisted of reports on ongoing activities and a discussion of new initiatives (<http://www.apru.org/activities/>). Some new initiatives were of particular interest, including a program for undergraduates sponsored by Fudan University titled "Introduction to Modern China" that will offer an exciting two-week program on the politics, culture, and society of China. Other conferences on earthquakes and tsunamis, mind and brain research, the doctoral students conference, and IT and distance learning continue to bring together faculty, students, and staff from the 36 institutions within APRU.

During the discussion of new initiatives, I introduced a proposal to create a new conference for APRU CIOs and their IT professional staffs. APRU's current IT conference is primarily for faculty who teach distance learning courses, so I proposed trying to develop community among IT professionals at APRU schools, with the hope that this would allow us to further explore how best to support the academic programs being developed by our presidents and academic leaders. I am pleased to report that my proposal was well received, and APRU staff is organizing such an event for 2007.

I did not leave Beijing before spending some quality time on a Chinese university campus. APRU meetings were held at Peking University, but on the last afternoon of the conference we were all paired with another Beijing university for a more informal time. I spent my time at Beijing Normal University, where I was joined by colleagues from the University of the Philippines and Osaka University. We met with the Director of International Exchange and his staff, and our open conversation about higher education in China and the Pacific Rim was one of the highlights of my trip.

I appreciated the opportunity to represent the UO at the APRU meetings, and I look forward to being involved—and to involving the UO IT community—with our colleagues at universities within the Pacific Rim as well as throughout the world. Building good working relationships with members of our own campus, as well as with colleagues at other universities, is indeed critical for our success in the years to come.

Running a Server? How Does It Score on the Self Assessment Scorecard?

Joe St Sauver, Ph.D.
*Director, User Services and
Network Applications*
joe@uoregon.edu

The University of Oregon has many servers, both within the Computing Center as well as in the various departments and departmental units on campus. Those servers are crucial to the smooth delivery of campus services, and for the most part they fulfill their mission quietly and efficiently.

Occasionally, however, something goes awry and users (or even the institution as a whole) are negatively impacted. What can we, as a campus community, do to improve the overall quality of server administration? Are there things we should be doing systematically, but which we perhaps have overlooked or forgotten?

To help UO users take a structured look at this issue, the Computing Center has prepared a brief "Server Administration Self Assessment Scorecard" (SASAS). You can get a copy of the SASAS at <http://cc.uoregon.edu/serveradmin.htm>

The 37-item SASAS will systematically guide you through thinking about a host of areas that could impact the stability and availability of your server, including items relating

to its hardware, operating system, accounts/passwords, application software, networking, staffing, and operational practices.

We encourage you to download a copy of the SASAS and review each of your servers at your earliest convenience. Because this is a tool for *your* self-assessment, we urge you to complete the SASAS candidly and self-critically, and to work toward remediating any deficiencies it may help you to identify.

What if you've completed the SASAS and your server's in fine shape according to the checklist? Does that mean you can rest on your laurels? Well, not entirely. Although it's great to learn that your server had a tip-top score, the SASAS is really just a starting point, an outline of areas worth thinking about. It is not meant to be a comprehensive replacement for a professional, detailed risk assessment or operational review.

Once the basics are out of the way, you may want to review a copy of *The Practice of System and Network Administration* by Thomas A. Limoncelli and Christine Hogan (Addison-Wesley, Boston 2002, ISBN 0-201-70271-1). This 774-page book does an excellent job of treating both technical and non-technical aspects of professional server administration practice in much more detail than is possible in a brief scorecard-type format.

Chronicle Now Available Online

The Chronicle of Higher Education, which bills itself as "the No. 1 source of news, information, and jobs for college and university faculty members and administrators," is now available online to all UO faculty, staff, and students.

The current issue of the *Chronicle* and archived issues going back to 1989 are available on any networked campus computer, as well as on off-campus computers with proxy access (<http://libweb.uoregon.edu/dbs/proxy/>). UO users should use and bookmark the following URL, since the *Chronicle's* own URL will not provide online access: <http://0-chronicle.com.janus.uoregon.edu/>

Another channel of access to the online *Chronicle* is the UO Libraries' catalog. Conduct a title search for "Chronicle of Higher Education" in the catalog and click the link for the online version of the *Chronicle* listed in the search results.

The *Chronicle's* home page is updated daily with the latest news from academe. The complete contents of each current issue, which prints and mails on Friday, are posted for online access the following Monday morning. A "Back Issues" link on the *Chronicle's* home page offers access to all issues from 1995 forward. The "More Options" link on the home page can be used to retrieve articles, commentaries, and essays in issues going back to 1989. The UO Libraries maintains a microform archive (<http://libweb.uoregon.edu/govdocs/microservices.html>) of the complete contents of the *Chronicle* from 1985 forward.

Default Disk Quotas Increased for uoregon.edu Accounts

The Computing Center recently increased the default disk quotas for uoregon.edu accounts from 250MB to 500MB. This serves two purposes:

1. It will prevent users from easily exceeding their quota now that the email attachment limit is 10MB.
2. It will make it easier for users to store important files in their uoregon.edu account.

You can check your quota usage by visiting <https://password.uoregon.edu/quota/> or by clicking on the "Space Usage" tab after logging in on Alpha Mail (<https://alphamail.uoregon.edu/alphamail/index.html>).

Recommended Web Browser and IMAP Mail Client: Firefox and Thunderbird

Joe St Sauver, Ph.D.

Director, User Services and Network Applications
joe@uoregon.edu

While the UO has a long history of trying its best to support whatever web browser and email client users may want to run—and we will continue to do so—we believe it's important to indicate what browser and email program we'd recommend if you have no preference, or if the programs you've been trying aren't working well for you. For purposes **other than Banner**, both on Windows and Mac, our recommendations are:

- Mozilla Firefox 1.5.0.1 (or later) for web browsing
- Mozilla Thunderbird 1.5 or later (if you use a dedicated email program rather than just UO web email)

Firefox and Thunderbird are available to download at no charge from <http://www.mozilla.com/>

I Use Banner for Administrative Tasks — What Browser Should I Use?

On PCs, Internet Explorer is an Oracle-certified browser for Banner. On Macs, Safari is an Oracle-certified browser for Banner. On Linux, Mozilla is an Oracle-certified

browser for Banner. Some UO users have successfully used Firefox with Banner, *but* there are a few Banner forms that are known not to work with Firefox. While you may need Internet Explorer for Banner, we recommend you use IE only for Banner (and for Microsoft Windows Updates), not for general Internet browsing.

But I Like the Program I'm Currently Using!

If you really like the program you're currently using and it is working well for you, there's no need for you to change programs at this time. However, you should be aware that if you do run into a problem with a non-recommended browser or email client, part of our work in helping you to resolve that issue will likely involve talking with you about our current recommendations.

Firefox and Thunderbird will also be the web browser and IMAP email program we'll be featuring on the Fall 2006 Duckware CD-ROM.

Questions?

If you're a UO faculty member, student, or staff member with questions or concerns about our recommended web browser or IMAP email application, please feel free to contact me at joe@uoregon.edu or **346-1720**.

Quick Guide to Color Printers on Campus

- **A&AA Output Room** (280 Lawrence Hall) **346-2081**
<http://aaa.uoregon.edu/computing/output/>
- Letter and tabloid size color laser printer
- Wide format inkjet printers (42 inches wide)
- **CC-EMU Lab** (22 EMU) **346-1769**
<http://www.uoregon.edu/~microlab/cc-emu.html>
Ricoh Aficio CL7000
- **CC McKenzie Lab** (101 McKenzie Hall) **346-0787**
<http://www.uoregon.edu/~microlab/cc-mckenzie.html>
Dell 5100cn laser printer (standard duplex)
- **CC-Millrace Lab** (113 Millrace I) **346-0316**
<http://www.uoregon.edu/~microlab/cc-klamath.html>
HP Designjet 800ps (24 inches wide)
- **Knight Library ITC** (second floor) **346-1935**
<http://libweb.uoregon.edu/kitc/>
HP 4650 color laser printer
- **Science Library ITC**
(lower level, Onyx Bridge Bldg) **346-1331**
<http://libweb.uoregon.edu/sitc/>
HP Color LaserJet 3800
- **SSIL Lab** (442 & 445 McKenzie Hall) **346-2547**
<http://ssil.uoregon.edu/ssil/>
Duplex color laser printer (up to 11 x 17)
HP large format plotter (42 inches wide)

Paying for Printing

All printing locations **except** SSIL now accept payment with UO Campus Cash accounts. To register for Campus Cash, go to <https://millrace.uoregon.edu/ccash/index.cfm>

A&AA and CC-Millrace also accept payment via prepaid punch cards that are available from the A&AA Bookstore in Lawrence Hall, at the main UO Bookstore downstairs, at the cashier's desk on the first floor of Oregon Hall, and at Knight Library's Checkout/Information desk.

SSIL payments must be made in cash to the consultant in 460H McKenzie Hall.

Who's Who at the Computing

Introducing two of our Administrative Services employees...

Joyce Winslow

jwins@uoregon.edu



*Micah Sardell, Systems Administrator
Administrative Services and Computing Facilities*

Micah Sardell's introduction to the world of computers was through gaming. As an adolescent, he monopolized the family computer to such an extent that his parents finally insisted he buy his own. By the time he was in college, Micah was helping to organize and set up large-scale LAN (local area network) gaming parties like the "Million Man LAN" (2001) and "The Promised LAN" (2002) in Portland, which attracted hundreds of participants.

Despite his passion for computer games and a facility that soon pressed him into duty as the primary technical consultant for his mother's small retail business in Corvallis, Micah's serious interests originally had little to do with the world of computer technology. In fact, when he enrolled at the UO in 1999, it was with the intention of majoring in music. A versatile musician, Micah trained on the clarinet but segued to both saxophone and tuba while playing in the UO Marching Band.

Although his interest in music never waned, Micah switched to political science early in his undergraduate career, and in 2003 he earned a B.A. in political science

with a minor in planning, policy, and development. This seemingly radical shift reflects Micah's long-standing interest in community service, which dates back to the days when he volunteered at the state capitol for high school academic credit and got a firsthand look at representative government in action.

Service is a constant theme in Micah's life, and he brings an attitude of service to every endeavor. You may recognize him from his days as one of the friendly faces at the Microcomputer Services Help Desk, where he worked as a student technical consultant for three years. He also assisted the UO College of Education as a student departmental tech consultant, and most recently he worked in the Computer and Information Science Department assisting Dr. Allen Maloney with his parallel and distributed computer networks research on neuro-informatics. Micah's new job as a systems administrator at the Computing Center also gives him the satisfaction of providing a valuable service: monitoring our evolving administrative computing systems and keeping them running smoothly for the UO community.

So how did a tuba-playing political scientist from Corvallis come to be hired in a demanding job requiring expertise in server management? As it turns out, all that early computer gaming had a serious educational component. "When you run a LAN party, you have to provide all of the network infrastructure, as well as set up and maintain game servers," Micah explains, and because at that time the only free game server versions were Linux, "this drove me to learn how to use free open source tools to accomplish service goals." So without really intending to, Micah prepared himself very well for a career in server administration.

Micah has little spare time these days, but when he can he likes to hit the road on his Felt F1X Cyclocross bike for a long-distance workout, or enjoy a hike or backpacking trip with his wife Rachel. And when it comes time to relax after returning home from their respective jobs, the Sardells always have the option of curling up on the sofa with their cats Jeeves and Simba.

quick links ...

Help Desk resources: <http://micro.uoregon.edu/>

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

Read your email: <http://email.uoregon.edu/>

Change your current password (if you know it): <https://password.uoregon.edu/>

Change your current password (if you don't know it): <https://password.uoregon.edu/authorize/>

Center: Meet Our Staff



*Tanya Denison, Systems Analyst and Database Administrator
Administrative Services and Computing Facilities*

Last March marked the first anniversary of Tanya Denison's debut as a systems analyst and database administrator at the Computing Center.

Tanya's arrival here was the culmination of a casual inquiry about employment prospects in Eugene that unexpectedly led to a whirlwind uprooting from her longtime home in Moscow, Idaho. In the space of five short months, she interviewed with and was hired by UO Administrative Services, left her job as part of the database administration team at the University of Idaho, packed up, and started a new life in Eugene with her husband Ken.

Tanya and Ken first became acquainted with Eugene while touring the Oregon coast, and they were favorably impressed with its college town atmosphere. Among other things, Ken liked the kayaking opportunities and the prospect of doing post-graduate work at the UO, and Tanya appreciated the nearly seamless transition in moving from one university work setting to another.

Aside from occasional travels, neither Tanya nor Ken has strayed very long from their Idaho home. Tanya grew up in the tiny rural community of Deary (sometimes

humorously referred to as "Dreary" by its residents), where her hardworking parents juggled academic careers with running a small farm. Tanya and her brother grew up helping with a myriad of chores—shearing sheep, cleaning out the barn, lambing, bringing in hay, tending the large vegetable garden, milking the goats, and even butchering ("Ugh! That's why I'm vegetarian now," she exclaims).

Tanya's rugged upbringing gave her an appreciation for outdoor pursuits such as horseback riding, rafting, and hiking, but it also engendered a longing for something completely different—which explains her initial choice of Northwestern University in Chicago, where she enrolled right out of high school. Chicago was more culture shock than she'd bargained for, however, so after a year she returned to Idaho and eventually finished her math degree at the University of Idaho.

Being someone who loves intellectual challenges for their own sake, Tanya chose to major in math without a clear career path in view. Her interest was in theoretical math and theory of computation, but along the way she took some programming classes and programming job opportunities naturally followed.

Tanya's responsibilities at the Computing Center include managing the database for Blackboard, checking new technologies for compatibility with UO administrative computing systems, and closely monitoring systems performance. Her extensive Banner experience from her work at the University of Idaho has been a plus in adapting the demands of her new job, which requires adjusting to frequent Banner updates and gearing up for big changes when the UO migrates away from OpenVMS in 2007.

Away from the job, Tanya has plenty to do helping Ken fix up the house they bought last year, caring for their dogs Shadow and Cricket, and indulging her "addiction" to knitting. And, as many of her Computing Center colleagues can attest, she's also been known to bake some pretty wicked lemon bars.

... quick links

Create vacation/auto-response message: <https://password.uoregon.edu/vacation/>

Forward mail: <https://password.uoregon.edu/forward/>

Remove mail forwarding: <https://password.uoregon.edu/noforward/>

Change spam filtering preferences: <https://password.uoregon.edu/spam/>

Check your disk quota: <https://password.uoregon.edu/quota/>

Introducing Amiga LiveChat

The Yamada Language Center's latest addition to its suite of teaching tools adds a simple multimedia dimension to the classroom, and it can be used in conjunction with Blackboard

Joyce Winslow
jwins@uoregon.edu

Last January the Yamada Language Center (YLC) introduced the latest in its suite of web-based teaching tools, Amiga LiveChat.

The new application was created for the YLC and the University of Oregon by Jim Duber of duber.com (<http://duber.com/>), thanks to generous grants from the UO Ed Tech Fund (see article on page 9) and the Northwest Academic Computing Consortium (NWACC).

Two versions of Amiga LiveChat are currently available. One is a plug-in for the Blackboard course management system, and the other is a standalone version. The Blackboard version is a "building block" compiled by Computing Center streaming media specialist Tony Kay and is for UO use only. The standalone version is designed more specifically as a language tutoring tool.

Amiga is Flash-based and may be used on any modern web browser. It functions equally well on either Mac OS X or Windows 2000.

Among Amiga's strong points are the fact that it's Unicode-compliant (which means it works with any foreign language character set available on a user's computer), it's ad-free, and it has rather modest hardware and system requirements (for example, the audio works fine over 56K modem). And, of course, Amiga affords the flexibility of distance learning, freeing instructor and students to work almost anywhere, anytime, and providing a "virtual community" where they can interact with each other online.

Among the first UO faculty members to try the new software is career counselor and PODS (Professional Outreach and Development Services) coordinator Kassia Dellabough, who immediately recognized Amiga's value as a teaching tool and decided

to experiment with it when it was released last term.

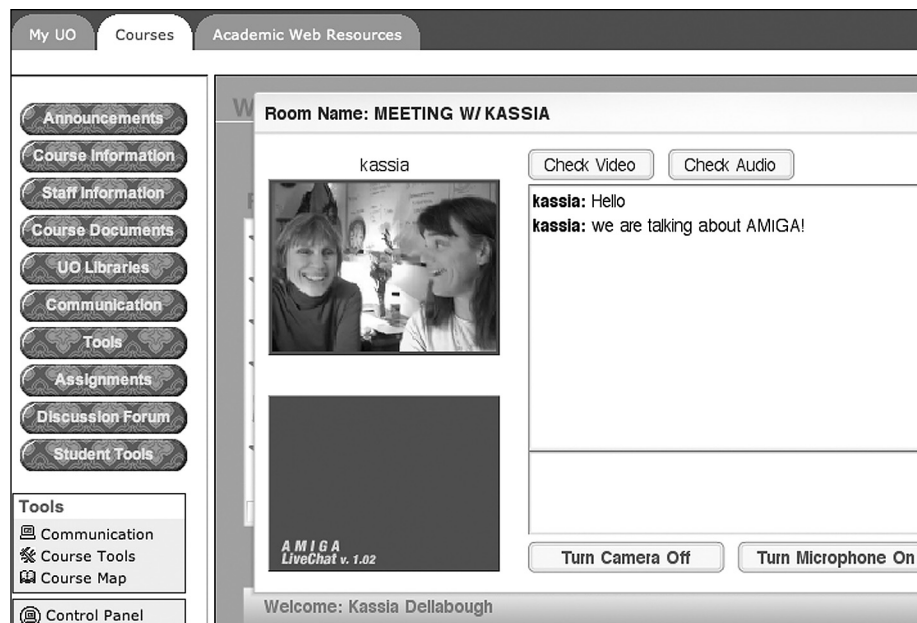
An intrepid pioneer in incorporating technology into her teaching methods, Kassia was among the first to use Blackboard when it became available at the UO in 1997, and she found the Blackboard Amiga plug-in particularly useful for her Art and Human Values course. Because this course is entirely online, Kassia greatly appreciated Amiga's one-on-one video interface—particularly when she gave students sensitive feedback on their assignments.

Kassia also appreciated the fact that this "baby video conferencing tool," as she likes to call it, is so easy to use. The technology is simple, requiring only a microphone and/or webcam (making it virtually plug-and-play for a Mac), and the Amiga template provides a functional, consistent, user-friendly workspace. After testing the waters, Kassia plans to use Amiga more regularly this term, both for her online class and for long-distance career advising through the PODS office.

Although Amiga LiveChat is ready to use in its present incarnation, Yamada's development team is continuing to enhance the tool's capabilities. Among other improvements, they anticipate being able to double Amiga's chat capability, enabling four-way chats later this year.

A detailed Amiga instruction manual complete with hardware and software requirements, chat room setup instructions, and answers to frequently asked questions, is available online at <http://babel.uoregon.edu/amiga/>

Amiga is freely available to all UO faculty who are interested in incorporating a web-based multimedia component into their coursework. For more information, contact the UO Yamada Language Center (541-346-4011, ylchelp@uoregon.edu).



This Amiga LiveChat window shows UO instructor Kassia Dellabough (right) demonstrating the application's video and text messaging features to Computing News editor Joyce Winslow. In a two-way chat, the other participant's video and text message would appear on the lower half of the screen.

New Ed Tech Initiatives Aim to Improve Learning

UO focuses on applying student technology fees toward enhancing the classroom experience

Ron Renschler

Director, Library Communications

UO Libraries

ronr@uoregon.edu

After years of investment in educational technology infrastructure, including course management systems such as Blackboard, expanded wireless access, and increased availability of computers and other equipment in classrooms and labs, the University of Oregon is now directing additional resources toward developing and deploying technology-based instructional tools and teaching methods, according to John Moseley, senior vice president and provost at the UO. "We've made strong progress on the networking, hardware, and access fronts," Moseley says. "Now it's time to help students reap the full educational benefits of that investment."

Moseley points to the way the Educational Technology Steering Committee (<http://libweb.uoregon.edu/edtech/>) has restructured its annual distribution of student technology fees as evidence of the new focus.

Funding is now being distributed in four phases:

- Phase I, deans' allocations, for routine or ongoing technology purchases and discretionary needs
- Phase II, a major new initiative to create improved classroom environments that maximize instructional technology use
- Phase III, for new large-scale projects at the college or school level
- Phase IV, for assisting individual faculty members in developing new instructional tools.

Project Proposals Sought

In January 2006, the Ed Tech Committee, as it is popularly known, issued requests for proposals (RFPs) for Phases III and IV.

The Phase III RFP (<http://libweb.uoregon.edu/edtech/Phase3final.doc>), entitled "Enhancing Student Learning and Student Engagement through Instructional Technology," invites schools, colleges, and academic support units to submit requests for large-scale projects that will add a strong technology component to curriculum and educational services delivery. Some \$750,000 is available for these projects. Proposals selected for funding will be announced by April 1 for the 2006-7 academic year.

The Phase IV RFP (<http://libweb.uoregon.edu/edtech/Phase4final.doc>) seeks proposals from individual faculty members who would like to integrate technology more deeply into their teaching or develop new teaching and learning tools for particular courses. Faculty members can request up to \$50,000 in development funds for this purpose. Proposals selected for this phase will be announced in May.

Deborah Carver and Greg Bothun, committee co-chairs, believe the entire campus community will benefit from the changes in the distribution process. "We have a great opportunity to make improvements and invest at several different levels—from the departmental classroom, to the individual course, to the academic program," Carver says.

Terri Warpinski, vice provost for academic affairs and a key player in the deployment of educational technology on campus, is excited about the potential for creating positive advancements in the way education can be delivered. "We encourage all interested faculty members to consider new ways to integrate instructional technology more deeply into their teaching," Warpinski says. "Our goal is to give university students a new and different educational experience, add to their body of knowledge in their areas of study, and help them develop an array of technology skills they'll be able to use after they graduate."

Other Progress

Several other developments over the past two years show that new energy is being directed at increasing the use of instructional technologies.

- **Top-level administrative support.** In August 2005, Don Harris joined the university as the vice provost for information services and institutional chief information officer. Harris fully supports the use of information technology resources in instruction and research by faculty and students. "I am excited about working with faculty to explore the options for utilizing IT resources in ways that, hopefully, will not only engage students, but also lead to deeper understanding of course content," Harris says.
- **Blackboard success.** Since its implementation in September 2003, Blackboard use by faculty as a course management tool has grown significantly. As of November 2005, more than 1,100 faculty and GTFs were using Blackboard for managing courses, and about 85 percent of all students were enrolled

-continued on page 10

Ed Tech, continued...

in at least one course where Blackboard was used. “The continuing demand for more powerful course management tools within Blackboard indicates that this is not a passing fad—faculty and students alike have learned how powerful, convenient, and essential these teaching tools can be,” says the library’s J.Q. Johnson, who oversees Blackboard with support from the Computing Center.

- **Workshops and project support.** Last year, the Office of Academic Affairs began sponsoring a faculty support program (<http://oaa.uoregon.edu/itif/>) to advance teaching through instructional technology. The program offers a series of summer workshops on important topics, including an introduction to instructional technology and the use of multimedia in teaching. A second program

component allowed six faculty members to receive a 2005-6 Instructional Technology Resident Faculty Fellowship Award, which funded their work with campus IT service units to develop teaching tools for use in their courses (see “Instructional Technology Fellows Named for 2005-6,” <http://cc.uoregon.edu/cnews/winter2006/itfellows.htm>).

- **A new educational technology service unit.** Last year the University Libraries created CET, the Center for Educational Technologies (<http://libweb.uoregon.edu/cet/>), a central production unit for faculty members who want to use technology more efficiently in teaching. CET offers assistance with graphics and digital images, digital video and audio, Blackboard, scanning, instructional design, and web design and development.

Recent Books on Linux

Visit the Documents Room in McKenzie Hall for some of the latest and greatest in Linux titles

Vickie Nelson
Documents Room Librarian
vmn@uoregon.edu

Linux comes in lots of flavors—and Linux users do too. Whether you’re a beginner just preparing to get your feet wet or an old hand thinking of building a Linux cluster, the Documents Room Library has recent titles to make your experience run more smoothly:

Linux Desktop Garage by Susan Matteson

Matteson aims at non-techie beginners who want to try running Linux from a graphical interface. Writing in a breezy style, she concentrates on Fedora and Mandrake and covers email, web browsing, CD-ROM burning, photo editing, and other common daily computing tasks.

Linux Desktop Hacks: Tips and Tools for Customizing and Optimizing Your OS by Nicholas Petreley and Jono Bacon

Need to reduce the startup time for OpenOffice or create an Internet phone? Browse through this O’Reilly book when you’re ready to begin tweaking your system. The 100 hacks cover the gamut of Linux issues and can help you improve the look and behavior of your desktop.

How Linux Works: What Every Superuser Should Know by Brian Ward

Directed at the technically savvy reader who wants to master Linux from the ground up, the book begins

with a good overview of Unix and then moves on to intermediate and advanced information on how Linux internals work.

A Practical Guide to Linux Commands, Editors, and Shell Programming by Mark G. Sobell

Linux guru Sobell offers a clear and comprehensive guide that shows users how to get the most out of using Linux from the command line regardless of the particular distribution of Linux they may be using. A reference that will help users master the power and flexibility of the operating system.

Linux Enterprise Cluster: Build a Highly Available Cluster with Commodity Hardware and Free Software by Karl Kopper

An excellent and straightforward guide for the system administrator planning to build a network of computers that function as one powerful computer. Kopper provides not only a detailed guide on how to do it, but also the theoretical background on why to do it.

In addition to its collection of books on Linux, the Documents Room also has various distributions of Linux available on disks for checkout and installation, including, Debian, Fedora, Gentoo, Knoppix, Mandrake, SuSE, and Ubuntu.

Call **346-4406** for more information, or visit the Documents Room website at <http://docsrn.uoregon.edu/>

uoregon.edu Accounts, *maildir* Format Mailboxes, and *Dovecot IMAPd*

Joe St Sauver, Ph.D.

Director, User Services and Network Applications

joe@uoregon.edu

Uoregon.edu accounts have traditionally used the classic Unix mailbox format for storing mail, with multiple email messages concatenated one after the other in a single file.

While this traditional format is simple, efficient in its use of disk storage, and broadly supported, it slows down and generates unnecessary input/output (I/O) as the size of the mailbox increases. For example, deleting a single mail message from the middle of a traditional mailbox requires that the entire mailbox be rewritten, potentially generating hundreds of megabytes worth of I/O. There are a number of alternative mailbox formats, each with its own strengths and limitations.

One of those alternative formats, (the format we'll be moving to) is called "maildir."^[1] This format stores each message as a separate file, instead of storing dozens (or hundreds or thousands) of messages in a single mailbox file. It is true that maildir is slightly less efficient in utilizing disk space (even a one-word email message takes up a minimum of 8KB on our filer), but mail access and manipulation tends to be far more nimble.

Moreover, because each message is stored in a separate file, a mail user agent (MUA) can read and delete messages while new mail is being delivered without the need for complex file-locking gyrations.

As a first step toward moving uoregon.edu accounts to maildir format, and because UW IMAPd does not have native maildir support, we've replaced UW IMAPd^[2] with Dovecot.^[3] Overall, it's been a smooth transition for UO users.

Later this summer, our systems staff will convert user mailboxes from the traditional format to the new format—again, a step that should not be noticeable to most UO mail users. This article is simply meant to alert you to the fact that this change will be taking place this summer.

Frequently Asked Questions

Q. I'm a UO web email user. Do I need to do anything as a result of this change?

A. Web email will continue to work as usual and you don't need to do anything as part of this change.

Q. I use an IMAP or POP client (such as Mozilla Thunderbird, Eudora, or Outlook or Outlook Express). Do I need to do anything as a result of this change?

A. IMAP and POP also will continue to work as usual, and you do not need to make any changes.

Q. I use a command line email program such as Pine at the % prompt. What about me?

A. We will centrally reconfigure Pine for all users so it accesses uoregon.edu mail through IMAP. Pine should work as it normally does, except you'll be prompted to log in with your uoregon.edu username and password when you start Pine. If you use a command line email program at the % *other than* Pine, please email consult@uoregon.edu so we can discuss the potential impact of

this conversion on the mail program you use. (Some command line email programs support maildir, and some do not).

Q. I forward my mail to another account. Does this change impact my ability to do that?

A. No. You will continue to be able to forward your mail to another account.

Q. You mentioned that maildir is less efficient in terms of the amount of disk space it uses. I'm close to using all my disk space now. When you convert to the new format will I go over my quota?

A. We will be increasing user disk quotas at the time of the maildir conversion to make sure the new format doesn't push anyone over quota.

Q. What's the exact date of the mailbox format conversion?

A. That date is still being determined at press time; we will provide further scheduling information as we get closer to the conversion date. Information will be posted to the deptcomp and sys-status listservs, as well as to the shell.uoregon.edu message of the day and the web page at <http://status.uoregon.edu/>

Q. I have a question you haven't covered. Who can I talk to about that?

A. If you have any questions about the conversion to maildir format, please email consult@uoregon.edu or call 346-1758. UO faculty, students, and staff should also feel free to contact me directly (joe@uoregon.edu or 346-1720).

Notes:

[1] <http://cr.yip.to/proto/maildir.html>

[2] <http://www.washington.edu/imap/>

[3] <http://www.dovecot.org/>

FileMaker Pro Workshops Available Online

For the convenience of off-campus students and community members, Mary Harrsch, the network and information systems manager for the College of Education, has posted her FileMaker Pro Essentials course materials online. These materials are freely available for review or self-study, with downloadable sample files at:

<http://interact.uoregon.edu/techweb/COEworkshops.html>

‘Why Do I Have to Change My !@\$%#*& Password?’

Joe St Sauver, Ph.D.
*Director, User Services and
Network Applications*
joe@uoregon.edu

Sometimes new UO users are unhappy to learn that they need to change their uoregon.edu password at least once every six months, especially since the UO insists that all accounts have extremely secure passwords.

We’d like to take a moment to explain *why* we require strong passwords, and why you need to change your UO account password at least twice a year.

The Need For Strong Passwords

If you’re not a system administrator, you may not realize that UO systems, like most Internet-attached systems, are subject to a constant stream of unauthorized access attempts. Hackers are continually probing for vulnerable accounts, accounts which can then be used as a stepping stone for launching attacks on other accounts or systems. Thus, even if your account doesn’t have anything particularly private or sensitive on it, access to your account represents an extremely valuable “foot in the door” to the bad guys. Strong passwords play a key role in helping keep those cyber intruders out.

Do passwords need to be so strong? It seems anything I pick is rejected as being a word in a dictionary—even foreign words don’t work!

One approach hackers use is a so-called “dictionary attack,” trying one word after another with the expectation that users at many sites will pick a word in the dictionary for their password. Some particularly determined hackers may use a merged copy of all word lists they can find (whether English words, slang, technical terms, or foreign language words). Because the bad guys do this, so do we, with the result that any potential new passwords are checked

against a pretty comprehensive list of dictionary words (as well as those same words spelled backwards, with a single additional character tacked on the end, and so on).

Why do passwords need to be so long? The five-character password I tried was rejected for being too short!

Another approach that hackers take is a so-called brute force attack. They simply try every combination of letters, numbers, and symbols that can be used as a password. The shorter your password, the fewer the combinations they need to check. That’s why the UO insists on a minimum password length, and that’s also why we insist you use something besides only lower case letters. We want to make sure the bad guys have to try combinations including upper *and* lower case letters, numbers and special symbols.

Why do I need to periodically change my password? I finally found one that was both strong and easy to remember, and now I have to change it! I use that password on all my accounts!

We do indeed make you change your password at least twice a year, and we do so for a number of reasons:

- If you’re required to change your password at least every six months, someone who’s hacked your password and has been accessing your account without your knowledge will immediately be shut out once your password is changed. Some may think this is an uncommon scenario, but people commonly sell an old computer and forget to erase passwords they may have saved for dialing in or for accessing their email.
- If you change your password at least every six months, hackers who may be trying to crack your password using brute force (as described above) basically need to start over because your password may now have been changed to some pattern they’ve already tried and rejected.

- Forcing a password change also discourages users from using the same password on multiple accounts. (Using the same password on multiple accounts is bad because then your password is only as secure as the least secure of the systems sharing that common password, and if your account does get compromised, the bad guy suddenly has access not just to one account, but to multiple accounts, magnifying the scope of the problem).

I got mail from a funny looking address asking me to change my password...what’s up with that?

What you should know about password-related email you may receive:

- Because we require a password change at least every six months—and once your password expires you’ll be denied access to your email, Blackboard, the UO wireless network, Campus Cash, the VPN or UO’s dialin modems—we *do* send you mail warning you that your password is about to expire.
- However, you should know that it is also common for miscreants to try to con UO users into divulging their password by sending mail with a link asking them to login to a bogus site. Don’t fall for that ruse!

The *only* URL you should visit to change your uoregon.edu password is <https://password.uoregon.edu/> Do *not* click on a link you receive in an email! It may *look* like it’s a link to <https://password.uoregon.edu/> but it may really go to some other bogus site. Protect yourself by manually entering <https://password.uoregon.edu/> in your browser when you want to go to the UO’s password changing website.

Questions or Concerns?

UO faculty, students, or staff with any questions about password-related policies should feel free to contact me at joe@uoregon.edu or **346-1720**.

Darkwing SSH Users: Introducing shell

If you log in to Darkwing with ssh and work at the percent sign prompt (%), you should know that we've now installed a new general purpose academic timesharing shell server for your use.

Like the old Darkwing, the new shell server is also a Sun, but unlike the old server (which used SPARC processors), the new server has four dual core Opteron 875 2.2GHz processors and 16GB of RAM. The new server runs Redhat Enterprise Linux with a 2.6.9 kernel for its operating system.

As described in the Winter 2005 *Computing News* architecture overview^[1], the new shell server mounts its file systems from the university's new NetApp NearStore R200 filers.^[2] We think you'll find it to be a fast and fun server that will help you get your work done efficiently and painlessly.

Frequently Asked Questions

Q. When can I get at the new shell server? What's it called? How do I get a username and password for the new shell server?

A. The new shell server is available now. You can connect to the new shell server by logging in via ssh onto shell.uoregon.edu using your regular uoregon.edu username and password.

Q. Will the new shell server have the same programs that were on the old Darkwing?

A. In general, yes. We'd encourage you to log in to the new server and confirm that the software you need is there. If what you need is *not* on the shell server, please email consult@uoregon.edu or call Unix Consulting at **346-1758** so we can work to address that.

Q. What will happen to the old Darkwing?

A. Because we're paying increasingly expensive maintenance on the aging "classic Darkwing," we'd like to take the old Darkwing out of service as soon as possible, hopefully by this summer.

Q. How does the new shell server relate to the academic compute cluster, acad-cl0.uoregon.edu ?

A. The shell server is intended for general purpose work at the % shell prompt, and the acad-cl0.uoregon.edu academic compute cluster is intended for computationally intensive projects.

Q. What's the default shell on shell.uoregon.edu? We're used to csh from the classic Darkwing, but the normal Linux shell is bash. What will shell.uoregon.edu use?

A. The default on shell.uoregon.edu is currently csh, but we hope to move to bash this summer. In the meantime, if you don't like your default shell,

you can ask that your default shell be changed by emailing a shell change request to consult@uoregon.edu. Please note that because the password file is shared across multiple servers, the shell you select for one server, such as shell.uoregon.edu, will also apply to all other uoregon.edu servers (such as the acad-cl cluster hosts).

Q. I have additional questions or concerns about the new shell server or "classic Darkwing"—who should I contact about those?

A. Feel free to call **346-1758** or email consult@uoregon.edu. You should also feel free to contact me directly at joe@uoregon.edu or **346-1720**.

Notes:

[1] "The New Darkwing," <http://cc.uoregon.edu/cnews/winter2005/darkwing.htm>

[2] "The New NetApp NearStore R200 Filers," <http://cc.uoregon.edu/cnews/spring2005/filers.htm>

Please Do What You Can to Help the UO Save Energy and Money!

A typical computer, monitor, and associated peripherals can easily consume twenty-five cents worth of electricity a day. That doesn't sound like much at first, but over the four-or five-year life of a typical system left on around the clock, it can add up to as much or more than was paid for the computer system itself:

$$(\$0.25/\text{day}) (365 \text{ days}/\text{year}) (5 \text{ years}) = \$456.25$$

Help the UO save energy and money by using the energy conservation features built into your computer. For easy steps you can take to help, see "Minimize Your Computer's Energy Use" at http://cc.uoregon.edu/cnews/winter2006/energy_use.htm

Web Presence and Influence: How Google Rates

Joe St Sauver, Ph.D.

Director, User Services and Network Applications
joe@uoregon.edu

Of the 4,236 American colleges and universities^[1], only a few are titans in the world of “.edu” websites.

Which domains form the core of the .edu online web? Which have the most clout? We looked at a total of 215 colleges and universities, focusing primarily on large national research universities connected to Internet2, plus some additional institutions of special relevance to Oregon. We think you may be surprised by what we found.

Web Presence

We began by considering “web presence,” which for the purpose of this study was simply the raw number of web objects^[2] or web pages a university has online. As most folks know, there’s no definitive register of all university web pages. We do, however, have something that’s not a bad approximation: the set of all web pages known to Google. By doing constrained Google searches using the Google “site:” query modifier, we can limit our search of Google to a particular domain or subdomain and find out how many web pages from that domain or subdomain are known by Google to exist.

For example, we can begin by checking to see approximately how many web pages are in the entire .edu domain by Googling for “site:.edu” At the time this article was being written, the answer to that query was a staggering 2.67 billion pages. If those 2.67 billion .edu web pages were uniformly distributed across all 4,236 American colleges and universities, that would imply each school would have about 630,000 web pages. Realistically, however, we know that the distribution of web pages isn’t uniform: some schools have millions of web pages, while others may only have a few thousand, or (hard as it may be to believe) none at all.

What about the University of Oregon? If you check **site:uoregon.edu** Google will tell you that there are currently a respectable 5.2 million web pages living in the .uoregon.edu domain.^[3] That’s a *lot* of web pages! But as large as the UO’s web presence may be, there are some institutions that have quietly been building absolutely *huge* online web presence:

- Just four universities (MIT, Berkeley, Stanford, and Harvard) collectively account for over one quarter of all the 2.67 billion .edu web pages known to Google, with each of the institutions in this group having a minimum of 108 million web pages online. MIT alone has a phenomenal 278 million pages.^[4]
- A mere 22 universities (the four schools already mentioned, plus Washington, Wisconsin, Texas, Illinois, Cornell, Michigan, Yale, Columbia, Penn State, UCLA, Chicago, Maryland, Penn, Vanderbilt, Virginia, Minnesota, Princeton and Indiana)

collectively account for over *half* of all .edu web pages. Each institution in this group has a minimum of 18,900,000 web pages online.

Obviously, we’re seeing a tremendous concentration of online information. It is also clear that some institutions, faculty, staff, students, or programs are doing an excellent job of bringing content online. Sheer institutional web page count isn’t the only measure worth examining, however. What about “web influence?”

Web Influence

For the purpose of this study, we’ll define an influential web page to be one with a high Google PageRank score. In Google’s system, each page has a PageRank from 0 to 10, with the most important^[5] websites having a PageRank score of 10. For example (not surprisingly),

<http://www.google.com/> itself is rated a 10, as is

<http://www.nytimes.com/> and <http://www.whitehouse.gov/>

By way of comparison, <http://www.yahoo.com/>,

<http://www.msn.com/>, <http://www.aol.com/>,

<http://www.cnn.com/>, and <http://thomas.loc.gov> — all

popular and important web pages — have a PageRank score of “only” 9.

Curious about the PageRank of a website we haven’t mentioned? Install Google’s Toolbar.^[6] Once the Google Toolbar has been installed as an add-on to your web browser, the Toolbar will automatically display the PageRank of each web page you visit. For example, if you install the Google Toolbar and test <http://www.uoregon.edu/> you’ll see the UO receives a very respectable (and typical for a large research university) PageRank score of 8.

What’s the PageRank of Other American Universities?

- Two American university home pages have a Google PageRank of 10: MIT and Harvard.
- There are 45 American universities whose home pages have a Google PageRank of 9 or more: the two schools just mentioned, plus Berkeley, Stanford, Washington, Wisconsin, Texas, Illinois, Cornell, Michigan, Yale, Columbia, Penn State, UCLA, Chicago, Maryland, Penn, Minnesota, Princeton, Indiana, Michigan State, UC Davis, UC Irvine, Arizona, UC San Diego, UC Santa Barbara, Carnegie Mellon, North Carolina, Purdue, Duke, Johns Hopkins, Arizona State, Rutgers, Northwestern, USC, Iowa State, Pittsburgh, Iowa, Brown, Washington University at St Louis, Caltech, UC San Francisco, Colorado, Massachusetts, and Florida State.
- PageRank 8 schools (besides the UO) include Case Western, Dartmouth, Emory, GWU, Georgetown, LSU, Missouri, Nebraska, Notre Dame, NYU, Ohio State, Oregon State, RPI, Utah, and many others.
- Many PageRank 7 (and lower) schools are smaller liberal arts colleges, regional colleges, colleges with limited websites, and the like.

Leading American Universities in 2006

Test some other college and university sites you're familiar with and see what you think.

A Relationship Between PageRank and Raw Institutional Page Count?

Some of the universities with the largest number of web pages are also among those with the highest PageRank scores. You might be tempted to generalize from that observation to assert that raw institutional page count strictly influences a site's PageRank. While that would be delightfully straightforward and might very well inspire a stampede of new page creation as universities attempt to catch up to MIT and Harvard, unfortunately things don't actually work that way.

For example, Berkeley and Stanford (both PageRank 9 schools) each have more pages online than Harvard (a PageRank 10 school). Similarly, there are some PageRank 9 schools which run as low as 3.51 million pages (Florida State), while there are other PageRank 8 schools with over 15 million pages each (such as Vanderbilt, Virginia and Florida).

The two measures, page count and PageRank, while generally positively correlated, are not strictly linked. Influence (as measured by a high PageRank score) requires more than just lots of web pages.

Discussion/Limitations

- Web page counts and PageRank values are dynamic. At least some of the sites in this study are currently under active revision, and the values reported in this study may have changed since our data was collected. Fortunately you can always reconfirm page counts and PageRank values for yourself using the approach described above.
- PageRank, like straight "A-B-C-D-F" grading without +'s and -'s, is a relatively crude measurement construct. That is, an "8" home page might be a *very high* 8—almost a 9—but PageRank will still report it as an 8. Similarly a "9" might be a *very low* 9, almost an 8, but it will still be reported as a 9 because the Google Toolbar reports only integer-valued PageRank scores.
- For this study, we measured the PageRank of the institution's default home page, normally <http://www.<domain>.edu/> In some cases, however, a number of sites immediately redirect visitors away from that "normal" URL to some other semi-obscure page, a page that is virtually certain to look low-ranked to Google (even though it is effectively the institution's default home page). For example, if you go to <http://www.tufts.edu/> you'll currently be redirected to <http://www.tufts.edu/main.php?p=flash> Although Tufts.edu has 6.19 million web pages, the <http://www.tufts.edu/main.php?p=flash> "home page" scores only a disappointingly low PageRank score

of 5 rather than the more typical 8 or 9 that one would expect for a site of its size.

- Many institutions have institution-only web pages that are not known to Google or accessible to the public; obviously those internal pages are not reflected in what Google sees, counts, and evaluates. Institutions such as MIT that make their courseware broadly available are at a substantial advantage with respect to online presence relative to sites that hold their instructional web pages in a proprietary teaching and learning system such as Blackboard.
- Some institutions may use non- .edu domains as well as .edu domains, or an institution may have (and use!) more than one legacy .edu domain. Our study just looked at the primary .edu domain name for each school.
- Because our focus was largely on Internet2 member schools plus selected additional institutions of special relevance to Oregon, we may have missed one or more high PageRank institutions. If you're a university with a 9 or 10 PageRank and we missed you, please let us know. Please also note that we've not evaluated international universities such as Toronto or McGill in Canada or Cambridge or Oxford in the UK.
- We've made no attempt to dig down and figure out site-by-site what makes up the huge number of pages that some institutions are fielding.^[7]

Notes:

- ^[1] *Chronicle of Higher Education* "Almanac Issue," August 26, 2005, page 4.
- ^[2] Technically, some of the online objects indexed by Google don't look much like a traditional web page, but we will colloquially refer to them all as "web pages" for the remainder of this article.
- ^[3] There may be UO web pages that are not known or are inaccessible to Google. For example, most UO Blackboard web pages will not get indexed by Google because they are all access-controlled.
- ^[4] For a copy of the complete data, see <http://www.uoregon.edu/~joe/google-data.html>
- ^[5] <http://www.google.com/technology/>
- ^[6] For example, for the UO's recommended web browser, Mozilla Firefox, see <http://www.google.com/tools/firefox/toolbar/index.html>
- ^[7] We'd love to hear from folks working on major web projects at .edu sites with ten million pages or more known to Google. What are you putting up? Digitized library resources? Open source software project pages? Archives of mailing list postings? Collections of digital images? Student portfolios? We'd love to hear about what's currently up and what's in process.

Computer Software for Power Calculations



Robin High
Statistical Programmer and Consultant
robinh@uoregon.edu

The material in this article is based on power analysis concepts first presented in an introductory *Computing News* piece I wrote a few years ago. The important concepts haven't changed, and you can read them at <http://cc.uoregon.edu/cnews/summer2000/statpower.html>

Essential Points to Review

When planning a study or an experiment, for each research question a null hypothesis (HO: no difference) and an alternative hypothesis (HA: an effect exists) are presented. For example, under the design of two groups with subjects selected independently for each group, to test the population means for a continuous response variable across groups, relevant hypotheses are:

HO: the two population means are equal
HA: the two population means are different

The typical choice to test these hypotheses is the two-sample T-test. Power is defined as "the probability that the significance test will reject the null hypothesis for a specified value of the alternative hypothesis." Given this background, you would begin a power analysis by planning the study's objectives, then specifying a statistical model and an appropriate test statistic. Your input for power analyses would include the following essential components:

1. Significance level (the probability of a Type I error). Common choices are $\alpha = .05$ or $.01$.
2. Desired power to detect a difference expressed as $1-\beta$, where β is the probability of a Type II error. Power = 0.80 or 0.90 are common choices.
3. Effect size the researcher determines to be a meaningful difference to detect. Effect size depends on the design and population parameters; the most common ones are summarized in Cohen (1988, 1992) and Cortina (2000). The values of these parameters are often determined from the researcher's experience or by utilizing data from existing studies.
4. Sample size: the number of subjects to be studied.

These diverse components are not independent: in fact, the specification of any three of them automatically determines the fourth. The usual objective of a power analysis is to calculate the sample size (4) required to satisfy values given for (1)-(3). It can also be utilized in studies with limited resources where the maximum total sample size (4) is known. In this situation power analysis becomes a helpful tool to determine if sufficient power exists (2) for specified values of (1), (3), and (4). As a result, the researcher can evaluate whether the study is worth pursuing.

Power Calculations in SAS 9.1

This article briefly introduces PROC POWER and PROC GLMPOWER, two new procedures in SAS 9.1 that are specifically designed to compute power for a variety of statistical designs to assist you with study planning.

PROC POWER calculates power for the most common statistical design problems, including one and two-sample T-tests, correlations, and proportions, as well as regression and one-way ANOVAs, among others.

For example, suppose you want to compute the total sample size required to test the equality of population means from two independent groups (A and B) with a two-sample T-test. The statistical design assumes equal group sizes (they can also be unequal). The response variable y is normally distributed in each group with means μ_A and μ_B respectively, and have a common standard deviation (σ). The following hypotheses for the difference between these population means are specified:

HO: $\mu_A - \mu_B = 0$
HA: $\mu_A - \mu_B \neq 0$

HA is a two-sided test, since deviations in either direction from 0 would be important to determine. For a power analyses you can also specify one-sided tests where \neq is replaced with $<$ or $>$.

What is the total sample size required, such that the probability of obtaining a t statistic equal to or larger than a critical value is $\alpha = .05$ under HO and power = .9 for a specified effect size (which belongs to the values from HA)? To make this calculation, the procedure is invoked with the PROC POWER statement followed by a statement specifying which statistical test is to be made and also includes your the relevant inputs:

```
PROC POWER;  
TWO SAMPLE MEANS  
TEST = diff /* difference in means */  
ALPHA = .05 /* significance level */  
SIDES = 2 /* 2-sided test */  
MeanDiff = 2 /*  $\mu_A - \mu_B$  */  
STDDEV = 4 /* standard deviation in each group */  
GROUPWEIGHTS = (1 1) /* equal group sizes */  
NTOTAL = . /* NTOTAL =  $n_A + n_B$  */  
POWER = .9 /* desired power */  
;  
RUN;
```

The effect size for the difference in two population means can be inferred from the items listed on the POWER statement (MeanDiff = 2) divided by the standard deviation (STDDEV=4):

$$\text{Effect Size} = (\mu_A - \mu_B) / \sigma = 2 / 4 = 0.5$$

The effect size for this example is the difference in the two means divided by the standard deviation, giving a medium effect size equal to 0.5, according to Cohen (1988).

Notice how all four of the required components of a power analysis are included among the options for the

TWOSAMPLEMEANS statement with one of them set to 'missing' (in SAS the period is the usual missing value entered for numbers). Thus, by replacing any one of the numbers specified above with a period and entering relevant values for the other options, you can solve for the missing item.

In the example given above, when the missing item is the total sample size (NTotal= .) the following output gives the total sample size:

Actual Power	NTotal
0.903	172

The total sample size required to meet the specified inputs is NTotal=172, which implies 86 subjects are needed in each group. The actual power printed on the output is 0.903, which is slightly higher than the specified value of power=.90 since an integer for the number of subjects in each group is required and these two numbers must add to 172. The program rounds the computed sample size up (the actual total sample size to achieve power=.90 is NTotal = 170.063), thus NTotal=172, evenly divisible by 2, slightly increases the actual power of the study.

The POWER procedure allows you to enter multiple values of each parameter for each option. For example, you can enter ALPHA = .05 .01 to compute power under two choices of alpha. You can also enter multiple values of Ntotal with the individual numbers (50 100 150 200) or abbreviated notation (50 to 200 by 10) to compute how power changes with increasing sample sizes. Although PROC POWER does have the capability to produce plots, the most flexible approach is to place the output into a SAS dataset with the Output Delivery System (ODS). These results can then be plotted with PROC GPLOT to produce a smooth curve for each level of alpha for varying sample sizes. The specific sample size where power reaches 0.8 and 0.9 can easily be determined through a visual inspection of the plot. Examples of how this process works are available at http://www.uoregon.edu/~robinh/130_power.html

Power computations to compare the means from two groups can also be illustrated with PROC GLMPOWER to introduce how one may compute power for ANOVAs:

```
DATA anv;
INPUT group mean @@;
cards;
1 10 2 12
;
PROC GLMPOWER DATA=anv;
CLASS group;
MODEL mean = group;
POWER Alpha = .05
      StdDev = 4
      Ntotal = .
      Power = .9 ;
RUN;
```

Error DF	Actual Power	NTotal
170	0.903	172

The syntax for PROC GLMPOWER looks much like a combination of PROC GLM and PROC POWER. It computes power for multifactor designs that include main effects and interactions and also specific contrasts among the levels of the factors of interest. However, the example shows that one major difference is that the computation of the effect size (as defined by the differences among the means) is determined from inputs to an 'exemplary' dataset in addition to the common cell standard deviation and equal group sizes assumed here. Since effect size computations for ANOVAs depend on the values of means across all levels of the categorical variables, entering them into a dataset is more efficient than entering them into the procedure itself.

GLMPOWER can assist you with power calculations for more complex designs such as ANCOVA, which include specification of variance reduction due to one or more covariates in the model. Calculations for even more complicated designs such as repeated measures or multi-level models are not yet available as supported features in SAS, although approaches for them are available with other software or through simulation techniques (see Chapter 12 of Littell, et al.).

Comments

The specification of an appropriate effect size is usually the most difficult input for a power analysis. A difference between two means of interest is usually simple to define, yet the standard deviation (σ) may be difficult to estimate; it gets even trickier for other designs.

For example, when computing power to test correlations and proportions you need to apply transformations such as Fisher's Z and the arcsin respectively to compute effect sizes. The narrow range of possible values for these two parameters makes computations of differences between actual values inappropriate.

The effect size for linear regression is a transformation of r-square. R-square is the square of the correlation which equals:

$$r = \beta * \sigma_x / \sigma_y$$

This formula implies that understanding what effect size means for linear regression is actually based on three components: the value of the linear regression coefficient, beta, and the sources of variation, σ_x and σ_y . This means you can increase the detectable effect size by enlarging the variation in the predictor value x (i.e., the experimental design), and by minimizing measurement error variation of the response variable, y.

With these power procedures you are no longer confined to the three levels of effect size (i.e., small=.2, medium=.5, and large=.8) that Cohen has made so popular (see Lenth, 2001). The tables in his publications are presented in terms of his specified effect sizes, not necessarily the actual values you need. With SAS you can now calculate

Power Calculations, continued...

power for any effect size, large or small, based on the values of the parameters of interest. (Examples of how to compute power to replicate Cohen's tables are available at http://www.uoregon.edu/~robinh/130_power.html). It is then a simple task to enhance the tables and graphs based on your chosen inputs.

Power as computed by SAS is prospective, that is, it is an 'a priori' concept. Power analysis should be directed towards planning a study, not doing a post-mortem review of the results. Variations in the parameters of interest to compute power under different scenarios should be explored *before* data are collected. None of the SAS procedures, including POWER and GLM POWER, provide retrospective (post hoc) power calculations. These computations have been shown to produce misleading and biased conclusions (even though routinely output with SPSS procedures and often requested by some journals). See Hoenig and Heisey, 2001, for reasons behind this fallacious thinking.

Allow Modern Computing Technology to Increase Power!

The primary goal of statistical power calculations is to provide insight into how many subjects are needed for a specific design and research objective. Recent advances in computing technology have made more powerful analytical techniques readily available, yet many researchers appear to be stuck in the 1970s and 80s in the way they apply statistics. Although it's necessary to know how to analyze data with the basic designs, the current trends in statistical computing indicate the importance of collaboration between researchers and statisticians from planning through analysis.

For example, with repeated measures data, statistical software can now work directly with the within-subject covariance matrix, which is much more realistic than the checks for the "sphericity" condition (including the out-of-date test by Mauchly from 1940) which are still routinely taught. This includes data collected over time or multiple conditions from each subject. Also, analyzing subject means collected from repeated trials is usually not necessary or even desirable!

Although statistical analysis should never be expected to rescue data from a bad design or other miscues, a wealth of modern study planning and data analysis techniques are currently available that can help you assess which statistical model is most appropriate to your study.

References

1. Cohen, Jacob. (1988) *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed., Hillsdale, N.J., L. Erlbaum Associates.
2. Cohen, Jacob, (1992) "A Power Primer," *Psychological Bulletin*, Vol. 112, No.1, 155-159.
3. Cortina, Jose and Nouri, Hossein (2000). "Effect Size for ANOVA Designs." Sage University Papers Series on Quantitative Applications in the Social Sciences, -7-129. Thousand Oaks, CA: Sage.
4. Hoenig, John M. and Heisey, Dennis M. (2001), "The Abuse of Power: The Pervasive Fallacy of Power Calculations for Data Analysis," *The American Statistician*, 55, 19-24.
5. Lenth, R. V. (2001), "Some Practical Guidelines for Effective Sample Size Determination," *The American Statistician*, 55, 187-193

« cybercrime in the news »

CardSystems Solutions Settles with FTC

The Federal Trade Commission has charged that confidential information of thousands of consumers was compromised because of the lax security practices of CardSystems Solutions, Inc., one of the major companies that process credit and debit card purchases. The company's proposed settlement requires CardSystems to meet strict security standards that are closely monitored by a third party for the next 20 years. In addition, the company faces potential liability from private litigation for losses related to the breach. See

http://ftc.gov/opa/2006/02/cardsystems_r.htm

Brazilian Police Nab 55 Suspected Phishers

In February, Brazilian police arrested 55 people thought to be members of a gang who phished millions from online bank accounts. The gang's leader is said to be only 19 years old. For details, see

<http://www.sophos.com/pressoffice/news/articles/2006/02/brphishgang.html>

Hacker Reveals His Methods

A network security hole in Microsoft Windows 2000 provides joyriding hackers an opportunity to spread a computer worm that enslaves all infected machines in zombie armies known as "botnets." One such hacker, who calls himself "Witlog," claims he created his botnet—which soon grew to an army of 45,000 computers, some of them on government networks—purely for fun. He downloaded the source code from another site, changed a few settings, and started it up. "You don't have to know many things to do a botnet like this," Witlog told a *Washington Post* reporter. For details, see <http://blog.washingtonpost.com/securityfix/2006/03/post.html>

Yet Another Nigerian Advance-Fee Scam

In the latest crackdown on global "Nigerian 419" Internet fraud, Dutch and American authorities arrested four conspirators who conned U.S. victims out of \$1.2 million with their advance-fee scheme. See

http://www.consumeraffairs.com/news04/2006/03/us_nigerian_scam.html

Time to Replace Obsolete Windows Systems!

Joe St Sauver, Ph.D.

Director, User Services and Network Applications
joe@uoregon.edu

Occasionally we run into UO users who may still be using obsolete versions of Microsoft Windows, such as Windows 3.11, Windows 95, Windows 98, Windows 98 SE, Windows ME, and Windows NT Workstation.

Because Microsoft is no longer supporting and patching those systems, those antique versions of Windows can no longer be safely used on the network. Those old systems need to get replaced or turned off.

Microsoft Support Dates

Microsoft has officially announced^[1] that support and/or critical security updates will no longer be available for those operating systems as of the following dates in the United States:

- Windows 3.11 Support ended 12/31/2001
- Windows 95 Extended support ended 12/31/2001
- Windows 98 Mainstream support ended 6/30/2002; critical security updates will not be provided after June 30, 2006.
- Windows 98 SE ditto
- Windows ME ditto
- Windows NT Workstation 4.0 Extended support ended 6/30/2004

Without vendor support to patch identified bugs and vulnerabilities, you simply cannot safely continue to allow those systems to be connected to the Internet. If you're running Microsoft Windows, you should be running Windows XP or Windows 2003 Server at this time.

Because of the hardware demands associated with current versions of Windows, and because basic replacement desktop systems running Windows XP are available for as little as \$300,^[2] and basic Windows XP laptop systems are available in the \$500-\$550 range,^[3] it is usually not

cost effective to try to upgrade an old system running an obsolete version of Windows. You're almost always going to be better off replacing that obsolete system outright.

If you've been holding off buying a new system until Microsoft's new version of Windows has been released, please note that Microsoft Vista will not be available for business users until November 2006, and the broad base of consumers must wait until January 2007.^[4]

Finally, you should also be aware that the Fall 2006 Windows Duckware and associated software distributed by the UO will not have support for obsolete versions of Microsoft Windows.

What about Windows 2000?

Microsoft ended Windows 2000 Mainstream support on June 30, 2005. Extended support will be available through 7/13/2010, but you should carefully review the Microsoft Support Life cycle Policy FAQ^[5] to understand what's available (and not available) for products in the Extended Support phase of the product life cycle. While migration from Windows 2000 is not as urgent as migration from other versions of Windows, systems running Windows 2000 should still be receiving replacement planning attention soon.

Notes:

^[1] "Microsoft Support Life cycle,"

<http://support.microsoft.com/gp/lifeselect/>

^[2] "Budget Desktop Systems, Are They Right for You?"

<http://cc.uoregon.edu/cnews/spring2005/budget.htm>

^[3] "Year of the \$400 Budget Laptop,"

<http://cc.uoregon.edu/cnews/winter2006/budgetlaptop.htm>

^[4] "Microsoft Updates Windows Vista Road Map"

<http://www.microsoft.com/presspass/press/2006/mar06/03-21WindowsVistaDeliveryPR.mspx>

^[5] "Microsoft Support Life cycle Policy FAQ,"

<http://support.microsoft.com/gp/lifepolicy/>

**New Mac VPN
Client Now
Available on
CC Public
Domain**

Good news! If you're a Mac user who regularly connects to UOnet via VPN (Virtual Private Network), you'll be glad to know that an updated VPN client for Intel-based Macs is now available on CC Public Domain (go to <http://ccpd.uoregon.edu/> and log in as "guest"). There is also a version of VPN for Mac OS prior to 10.4.

The VPN installer is located in Network Software—>VPN OS X folders.

- 4.9 is for Macintosh models running 10.4 or higher (including Intel based)
- 4.7 is for Macintosh models running Mac OS prior to 10.4.

For more information on using VPN at the UO, see <http://micro.uoregon.edu/vpn/>

Spotlight on Security

— Security Alerts —

Highly Critical RealNetworks Vulnerabilities: Make Sure You're Patched and Up-to-Date

Security researchers at Secunia have found that a number of highly critical vulnerabilities exist in multiple RealNetwork products, including some running on Macs and Linux boxes. These security holes can lead to buffer overflows and the execution of malicious code on a user's system. For details, including a list of the affected products, see <http://secunia.com/advisories/19358/>

Upgrade to Avoid Critical Flash Vulnerabilities

Flash Player 8.0.22 and earlier, Breeze Meeting 5.1 and earlier, and Shockwave 10.1.0.11 and earlier all contain flaws that allow malicious exploits. In mid-March, Adobe Systems issued patches and advised users to install them immediately. These updates are available from the Adobe website. For detailed information about these vulnerabilities, including instructions for updating and links to download sites for the latest versions, go to http://www.macromedia.com/devnet/security/security_zone/apsb06-03.html

Latest IE 6.x Vulnerability

On March 22, the security research firm Secunia reported a highly critical vulnerability in Internet Explorer 6.x. Until a patch is released, IE users are strongly advised against visiting untrusted websites. For details, see <http://secunia.com/advisories/18680/>

Recovery from Windows Malware Infestations Becoming Impossible

According to a Microsoft security official, the only way to deal with increasingly pernicious malware infestations on Windows systems is to wipe hard drives clean and reinstall the system from scratch. For details, see <http://www.eweek.com/article2/0,1895,1945808,00.asp>

Skype Design Flaw Could Be Exploited to Create "the biggest bot network ever"

European analysts recently warned of a serious flaw in the peer-to-peer program Skype, which enables users to make free calls over the Internet to other Skype

— Security Alerts —

subscribers. The team's tests revealed that Skype traffic could be maliciously manipulated, with the potential of creating "the biggest bot network ever." For details, see "Skype insecurities" at

<http://www.securityzero.com/2006/03/skype-insecurities.html>

Root Passwords Insecure in Ubuntu 5.10

In March a loophole was discovered in the "Breezy Badger" version of the free Linux-based operating system Ubuntu that allows administrative passwords to be exposed in the system's installation logs.

The vulnerability affects Ubuntu 5.10 packages `base-config` and `passwd`, and most users can correct the problem by doing a standard system upgrade. However, if you upgraded from ubuntu 5.10 to the current development version of Ubuntu 6.04 ("Dapper Drake"), you must upgrade the `passwd` package to version 1:4.0.13-7ubuntu2 in order to fix the installer log files. For more information on the security threat and how to remedy it, see the Ubuntu site at <http://www.ubuntu.com/usn/usn-262-1>

Lexmark Printer Sharing Risks Hacking

In February an NGSSoftware researcher discovered a highly critical vulnerability in the Lexmark Printer Sharing service that could allow a malicious hacker to execute arbitrary code on a system with Local System privileges. No official patch has been released. For more details on the Lexmark flaw, as well as a proposed workaround, see

<http://www.zone-h.org/en/advisories/read/id=8680>

Install Latest Apple Security Update to Protect Against Vulnerabilities in Panther, Tiger, Apple Safari, and Mac OS X Servers

In March, Apple issued Security Update 2006-001 to correct security problems with Mac OS X 10.3.9 (Panther), Mac OS X 10.4.5 (Tiger), Mac OS X Servers 10.3.9 and 10.4.5, and the Apple Safari web browser. To make sure you're up-to-date, run Software Update (Apple Menu -> System Preferences -> Software Update). You can also click Installed Updates in the Software Update menu to see what's already been installed.

TECH TRAINING:

• *RAA Web-based Training:*
<http://hr.uoregon.edu/training/>

• *Workshops-on-Demand:*
<http://libweb.uoregon.edu/it/>

• *Excel Mentor Group Meetings:*
Contact Nargas Oskui, not@uoregon.edu

• *New Horizons Computer Learning Centers:*
<http://hr.uoregon.edu/training/upcoming.html>

• *Dreamweaver I, II, III*
<http://hr.uoregon.edu/training/upcoming.html>

Spotlight on Security

— Security Products —

MS Updates Free AntiSpyware Tool

Microsoft recently released a newly updated antispyware tool known as Windows Defender (Beta 2). Windows Defender is designed to provide protection against pop-ups, slow performance, and security threats that are the bane of spyware buildup. The software is available free to Windows users, and may be downloaded from <http://www.microsoft.com/athome/security/spyware/software/default.msp>

MS Offers Free Online “Full Service Checkup”

Microsoft also recently released another new free beta product that scans your PC and promises to check for and remove viruses and spyware, improve your PC’s performance, and get rid of junk on your hard disk—all in one full service operation. This service is available from the Windows Live Safety Center at <http://safety.live.com/>

Caveats:

1. Like other online point-check system security checkers, this product is not a replacement for routinely running antivirus products such as McAfee.
2. To run the service, you’ll need to use IE rather than an alternative browser such as Firefox or Opera.

MS OneCare Antivirus Goes on Sale in June

For \$49.95 a year, Windows users will soon be offered the convenience of a new Microsoft maintenance product that promises to keep their PCs updated, maintained, and patched with the latest security software. The new service, dubbed Window OneCare Live, is slated to go on sale in June; it is currently available in a free test version at <http://www.windowonecare.com/> For more details, see http://seattletimes.nwsources.com/html/business/technology/2002791208_msftsecurity08.html

LAMP Open Source Security Leads the Pack

A recent study by Stanford University, the Coverity security analysis firm, and Symantec antivirus researchers found that LAMP has the lowest bug density of all open source software in use today. The so-called LAMP stack of open source software includes the Linux operating system, Apache web server, MySQL database and one of three scripting languages (PHP, Perl, or Python), and it is currently rivalling Java and Microsoft’s .Net as the software of choice for mainstream corporate computing. The weakest LAMP component was found to be PHP, which had greater bug density than the baseline. For details, see “LAMP lights the way in open source security” at <http://www.zdnetasia.com/news/security/0,39044215,39315781,00.htm>

— X Windows Security—

[**Note:** The windowing system described here is **not** related to the familiar windowing systems that run on your Microsoft Windows system or your Mac. This notice is only for those using Unix/Linux systems, an X terminal, or an X Windows emulator.]

MS Windows users and Mac users can safely disregard this article. The security vulnerability it describes doesn’t pertain to the graphical user interface you’re using.]

Most Unix/Linux computers run a graphical user interface (GUI) or “windowing system” known as “X Windows” or “X11.” The X Windows display, or “X server” is the program that accepts input from the computer’s keyboard and mouse, as well as from other X11-aware programs. Access to that X server is normally controlled by one of two security mechanisms:

- the xhost program, which provides coarse-grained access control at the level of individual hosts (if you’re not connecting from an authorized host, you won’t be allowed to connect)
- MIT Magic Cookies, a secret token-based system which provides fine-grained per-user access control (if you don’t know the required “magic cookie,” you can’t connect to the X server)

Unfortunately, if neither of those mechanisms are employed, essentially anyone, anywhere, can connect to the insecure X server and do things like:

- intercept or inject keystrokes
- capture the screen contents or display output of their choice
- lock the screen (denying user access to the X server)

Miscreants are actively searching for insecure X servers which they can abuse using this vulnerability. Because of the risk that private data may be exposed—potentially including passwords or other sensitive data—we strongly recommend that you always use MIT Magic Cookies authentication if you’re running X Windows (this is generally handled for you automatically if you connect to a remote Unix server using ssh).

You should also confirm that xhost access control is enabled. To check, enter the xhost command. You should see output that looks like:

```
% xhost
access control enabled, only authorized
clients can connect
```

You may also want to enter the xlsclients command to review the list of clients currently connected to your display.

SpamAssassin Available for All uoregon.edu Accounts

Joe St Sauver, Ph.D.

Director, User Services and Network Applications
joe@uoregon.edu

Uoregon.edu accounts have traditionally relied on source-based spam filtering to block spam from known spammers, compromised hosts, and similar unwanted mail sources. While that type of filtering has kept spam levels manageable over time, occasionally legitimate senders have been blocked by those source-based filters, at the same time that unwanted spam has still slipped through.

Our spam filtering has now improved with the addition of a new weapon in the war on spam, SpamAssassin. SpamAssassin looks at a variety of characteristics associated with each message, including known spamvertised websites and message formatting characteristics associated with known spamware, and combines all those rules to give each message a SpamAssassin spam score. (You can see a full list of SpamAssassin tests at <http://spamassassin.apache.org/tests.html>)

By default, messages with a SpamAssassin score of 5 or higher are considered to be spam, while messages with scores below 5 are not. Although all uoregon.edu messages receive SpamAssassin scores automatically, nothing gets filtered based on those scores unless you enable SpamAssassin filtering for your account by visiting <https://password.uoregon.edu/spam/>

Most users will want to use the default values on that page, which will result in mail with a SpamAssassin score of 5 or higher being put into a spam folder on your account. Periodically check that folder to make sure wanted mail hasn't accidentally been scored as spam.

Recommendation Summary

1. Most Users:

Visit <https://password.uoregon.edu/spam/> and set up your account

to use both Source Based Spam Filtering and SpamAssassin filtering using the default values.

2. Users who have had problems with wanted mail being blocked:

Visit <https://password.uoregon.edu/spam/> and *disable* Source-Based Spam Filtering. *Enable* Filtering With SpamAssassin (optional).

3. Users having problems with SpamAssassin flagging wanted mail as spam:

Visit <https://password.uoregon.edu/spam/> and change the threshold value from 5 to some larger value (you'll see more spam slip through, but there will be less chance of a real message being erroneously scored as spam).

OR... List the email addresses you'd like to whitelist at <https://password.uoregon.edu/spam/whitelist.html> (note that this whitelisting affects *only* SpamAssassin filtering; it does *not* affect source-based spam filtering).

4. POP users:

We'd encourage all POP email clients to consider migrating from POP to IMAP. However, if you're using a POP email client and want to use SpamAssassin, you should be aware that your POP mail program only recognizes one mail folder, your default inbox. Thus, if you set SpamAssassin to move spammy looking mail into a separate spam folder, you'll need to periodically use some other mail program (such as the UO's web email interface) to see what's in that folder.

As an alternative, some POP users may prefer to change their SpamAssassin Delivery Option to deliver spam to the normal inbox, relying on the SPAM tag and SpamAssassin score to help manage any unwanted email.

Miscellaneous Questions

Q. Do I need to manually create my spam folder?

A. No. SpamAssassin automatically creates the spam folder when you receive spam.

Q. Do you automatically empty the spam folder?

A. No. You will need to manually delete any unwanted mail from the spam folder yourself.

Q. If I receive spam and SpamAssassin tags it, do I still need to report it to you?

A. No. If SpamAssassin is tagging the unwanted mail, we consider it handled.

Q. I'd like to see the SpamAssassin scores that result in a message receiving the score it got. How can I do that?

A. If you enable full headers (<http://micro.uoregon.edu/fullheaders/>) you'll see the raw SpamAssassin headers, including the score the message received on each triggered test.

Q. I'm comfortable editing my SpamAssassin configuration. Can I do so?

A. Yes. If you're comfortable editing your SpamAssassin configuration you're welcome to do so. However, we recommend that most users use the web interface instead.

Q. Is Bayesian filtering enabled?

A. We won't be able to do Bayesian filtering until we complete decommissioning the old legacy Darkwing Solaris server due to software incompatibilities. We expect to have completed that migration work by this summer.

Q. I tried SpamAssassin but I don't like it! How do I turn it off?

A. Visit <https://password.uoregon.edu/spam/> and deselect the filtering you don't like. Please allow up to an hour for the changes to take effect.

If you're a UO faculty member, student, or staff person and you have any questions about the new SpamAssassin spam filtering service, feel free to contact me at joe@uoregon.edu or 346-1720.

FYI: The UO has renewed McAfee antivirus & antispyware license for 2006-7

« sites worth seeing »

1. **Overview of 2006 Faculty Support Programs for the Advancement of Teaching through Instructional Technology...** Find out what instructional technology workshops and fellowship awards are available to UO faculty. Application forms and eligibility information are also available on this site: <http://oaa.uoregon.edu/itif/>
2. **Macsupport, the UO's Mac-specific email list...** This campus listserv offers a forum for the university's Mac technical support staff to discuss Apple news, products, problems, and solutions. To subscribe, visit: <http://rowell.uoregon.edu/mailman/listinfo/macsupport/>
3. **"Wireless Networking in the Developing World"...** A good intermediate-level book on wireless networking. You may download single chapters—or the entire book—for either screen viewing or printing: <http://www.wndw.net/download.html>
4. **Linux information online...** Useful web resources for anyone looking for an introduction to Linux RedHat: <http://www.tldp.org/>
<http://www.redhat.com/docs/manuals/enterprise> (caution: some of these files are *large!*)
5. **UO Scholars' Bank...** A digital archive for UO research, including preprints, technical reports, working papers, student terminal projects, datasets, and more: <http://scholarsbank.uoregon.edu/>
6. **"Effectiveness and Enforcement of the CAN-SPAM Act..."** The Federal Trade Commission's report to Congress on efforts to counter the rising threat of malicious spam: <http://www.ftc.gov/reports/canspam05/051220canspamrpt.pdf>
7. **Anti-Spyware Coalition workshop...** You can watch videos of this public workshop, which was held in Washington, D.C., last February. Topics include a discussion of spyware's impact on business and individuals, as well as proposed solutions to the growing problem: <http://www.antispywarecoalition.org/events/feb2006agenda.htm>
8. **"SiteAdvisor blog..."** A forum on web safety for webmasters and developers: <http://blog.siteadvisor.com/>
9. **AJAX topics...**
 - "**Accessibility of AJAX Applications.**" Learn about some of the accessibility issues you may encounter when designing websites with Asynchronous Java Script and HTML (AJAX): <http://www.webaim.org/techniques/ajax/>
 - "**AJAX Security...**" Stewart Tynham's article discusses some of the security risks of AJAX coding and offers five important security tips: http://www.it-observer.com/articles/1062/ajax_security/
10. **Blackboard news at the University of Oregon...**
 - Current status of Blackboard and other key UO computing systems: <http://status.uoregon.edu/>
 - Blackboard news source: <http://blackboard.uoregon.edu/>
11. **"Mac OS X Hints..."** A troubleshooting resource for Mac OS X: <http://www.macintoshhints.com/>
12. **"Amazon S3: Simple Storage Service"...** A new product with a simple web interface that can be used to store and retrieve data. See <http://aws.amazon.com/s3/>
13. **"Macs do Windows, too"...** Mac's new operating system lets you install Windows XP on your Mac. See <http://www.apple.com/macosx/bootcamp/>

Looking for a current map of wireless coverage on campus?



Go to:

<http://geography.uoregon.edu/infographics/wireless/>

This dynamic online map shows you the big picture. You can zoom in and out, scroll to a specific spot on campus, or search by entering a building name. The map is updated periodically as new wireless coverage is added.

COMPUTING CENTER GUIDE

UO Website

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

Computing Center Website

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

Microcomputer Services

(151 McKenzie Hall)

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

346-4412

microhelp@lists.uoregon.edu

- microcomputer technical support
- help with computing accounts, passwords
- help with damaged disks, files
- system software help
- Internet connections, file transfers
- public domain software, virus protection
- software repair (carry-in only, \$80/hour, 1/2 hour minimum)

Documents Room Library

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

(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)

346-1758

consult@uoregon.edu

- Unix
- email, multimedia delivery
- scientific and cgi programming
- web page development

Statistics Consulting

Robin High

219 Computing Center

346-1718

robinh@uoregon.edu

Electronics Shop (151 McKenzie Hall)

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

346-3548

hardwarehelp@uoregon.edu

Computer hardware repair, upgrades

Network Services

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

346-4395

nethelp@ns.uoregon.edu

Central data communication and network services

Telecommunications Services

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

346-3198

Local and long distance phone service for UO campus.

Administrative Services

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

346-1725

Programming support for campus administrative computing.

Computing Center Hours

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

McKenzie Building Hours

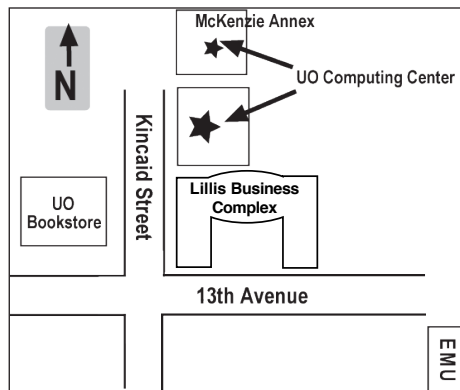
Mon - Thu 7:30 A.M. - 11:30 P.M.

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

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

Sunday 9 A.M. - 9:30 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