

oneonone

INFORMATION TECHNOLOGY SERVICES

Thanks for Enhancing Computer Security

Year long "encrypted authentication" change now in place

For much of the summer and fall semesters, faculty, staff, and students were alerted to an important campus computer security initiative called encrypted authentication (which encodes sensitive login information so it is less likely to be stolen). A quick update by users of e-mail, FTP (file transfer protocol), and telnet programs was required by January 2, 2003. Encryption is now in place and will help substantially strengthen computer network security on campus.

ITS wholeheartedly thanks the campus community for its help with this project. It would not have been successful without you. As of January 2, only a small percentage of faculty, staff, and students remained who had not yet made this security change. We realize that the process was just one more demand on your time and that it may not have always been apparent why you needed to do this.

Encrypted Authentication is part of a larger push by ITS to make the CU-Boulder campus network more secure. There are several reasons why the campus is working to improve security. Not only does it help protect our network from malicious computer attacks and stolen logins, passwords, etc., but also new federal grant rules require secure computer practices. If you have any additional questions about this project, or if you still need help completing the transition, please contact (303) 735-4357 (5-HELP from a campus phone).

Welcome to *oneonone* with Information Technology Services (ITS) at CU-Boulder! Once each semester, the *oneonone* will be delivered to all faculty and staff mailboxes on the CU-Boulder campus. In between editions of the *oneonone*, ITS will publish *oneonone updates*, an online version of the *oneonone* that gives updates on stories found in that semester's *oneonone*, as well as any news that may be timely and relevant.

We hope you find this issue useful. Please e-mail oneonone@colorado.edu if you have any questions or comments. Additionally, if there is anything you'd like to see covered in this publication, please let us know.

ITS Mission

Information Technology Services (ITS) is the primary information-technology provider on the CU-Boulder campus, with services for telephony, media, computing, and networking. Our mission is to provide and promote information-technology services that support the mission of the Campus and provide leadership for the changing information-technology environment.

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newsbriefs

Five Lecture Halls Set for Technology Conversions

When the spring semester begins, faculty and teaching assistants who teach in lecture halls on the CU-Boulder campus will notice a significant upgrade to Benson Geology 180, Cristol Chemistry and Biochemistry 142, Eaton Humanities 1B50, Sibell Wolle Fine Arts N141, and Ramaley C250. Classroom Support and Renovation divisions of ITS (Information Technology Services) plan to convert projection booths in those lecture halls to self-service media equipped rooms.

What this means for faculty teaching in these lecture halls is access to equipment with an improved, user-friendly interface. This interface was introduced into classrooms across the CU-Boulder campus with much success during the summer and fall 2002 semesters. It is anticipated that the transition to self-service lecture halls should be relatively simple because most instructors teach in other media-equipped classrooms and the operation of the equipment will be very similar to using other "Smart" classrooms.

The primary benefit of this conversion is that faculty teaching in these lecture halls gain control of the media equipment in the room, removing the need to rely on the projection booth operator.

Faculty who prefer assistance with using these media equipped rooms will continue to have ITS assistance on request. In addition, training is available to help instructors using these rooms

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oneonone

Editor

Holly Wiemers, Public Relations & Communications, Tier 1 Support

Feedback

Send feedback to oneonone@colorado.edu

Web Site

www.colorado.edu/its/oneonone/

From the Executive Director

Dennis Maloney



I would like to take this opportunity to welcome you to the January 2003 edition of the oneone, ITS' newsletter for CU-Boulder faculty and staff. I hope this edition provides you with a wealth of useful updates to help you stay abreast of information technology services and initiatives occurring on campus.

During the past couple of years, the national and state economies have seen an unprecedented downturn, resulting in reduced budgets on campus. The outlook for the immediate future is a flattening of budgets at a time when the demand for information technology services grows. Addressing this situation creates an opportunity to capitalize on our recent campus IT planning processes, and, to focus on developing an effective collaborative support to fulfill the campus role and mission.

The recently completed Information Technology Strategic Plan (www.colorado.edu/itplan) provides an effective framework to begin this discussion. As you may recall, CU-Boulder engaged in this campus-wide IT Strategic Planning (ITSP) process to determine and articulate the information technology priorities for the campus. This process, which included input from faculty, staff, and students, is the basis of the campus priority list for technological services.

The key for campus IT providers is to develop a strong collaboration that focuses our efforts toward institutional success. ITS, as the central information technology provider, has formalized the concept of the IT support community by creating the Tier 2 Computing Support Representatives (CSRs). ITS views these CSRs as vital IT partners who will help us maximize our collective efforts to service the campus.

In this issue of the oneone, you will find numerous topics that span the information technology services of the campus. I invite you to learn more about these topics with the thought of how you can be a contributing collaborator for the betterment of the campus. And how, during these tight budget times, we can invest our collective efforts behind the campus IT priorities as delineated in the ITSP.

Warmest regards,



ITS Now Supports Linux and FreeBSD

On January 1, two significant service enhancements occurred within UnixOps. UnixOps is now providing fee-for-service support for Linux (it already provides FreeBSD support, which hasn't been widely known). In addition, UnixOps is providing the campus with local RedHat and FreeBSD mirror sites (to make it easy for users not opting for UnixOps support to upgrade and stay current with patches) as well as a "best-practices" checklist.

Linux support

Linux has made significant inroads into mainstream use in recent years because of its ease of use, high security, and low cost. UnixOps and ITS have recognized the need for a Unix-like operating system for the Intel architecture and we are happy to announce we can now provide support. Although UnixOps and ITS recognize that there are hundreds of different flavors of Linux, we have chosen to focus on the RedHat Linux distribution for a variety of reasons, including but not limited to, its popularity on campus and in industry, its support structure, and because grants tend to specify RedHat.

Beginning January 1, 2003, UnixOps began fully supporting Linux for users wishing to leave the administrative tasks involved with Linux systems to others. UnixOps' services center around ensuring that each customer's Linux computing environment is stable, secure, and always up-to-date with the latest software. The UnixOps pricing structure can be found at <http://boulder.colorado.edu/services/index.html#PRICING>.

FreeBSD support

UnixOps has fully supported FreeBSD since August 2002. FreeBSD appeals to users looking for another variant of Unix to run on their x86 systems. Currently, we have several customers running FreeBSD who are quite pleased with its performance.

RedHat and FreeBSD mirror sites

UnixOps is also now maintaining official RedHat and FreeBSD mirror sites for the campus, at mirror.Colorado.EDU. This site allows campus users to quickly obtain the latest patch sets and new releases when they become available, without having to worry about competing with the high traffic of off-campus RedHat and FreeBSD mirror sites. The preferred method of access is FTP (file transfer protocol), although rsync (a way of keeping local files in sync or the same as files on the server) is available upon request for departments who have a need for it. We also run a cvsup (a way to keep your FreeBSD box up-to-date with the latest patches and ports) server so users of FreeBSD may download the latest source and ports.

UnixOps maintains a "best practices" checklist similar to our Solaris, Irix, and other Unices. Although they are written with a UnixOps support structure in mind, they can be used as a general guide for users not familiar with the install process. These checklists are available via FTP at: <ftp://boulder.colorado.edu/pub/Localization/LINUX> and cover both RedHat 7.3 and 8.0. For any questions regarding Linux or FreeBSD support, please contact Orrie Gartner at UnixOps by mailing trouble@colorado.edu. More information about Linux or FreeBSD support can be found at <http://boulder.colorado.edu/services/linux.html>.

news to use

Campus Web Portal Closer to Reality

A key recommendation from this year's IT Strategic Planning process was that the campus needs to provide excellent, unified web-based student services that are tailored to individuals based upon their affiliation with CU-Boulder; in summary, a campus student portal. This recommendation has generated a great deal of interest and has significant support from students, faculty, and administrators. A project was jointly commissioned by Vice Chancellor of Student Affairs Ron Stump and Associate Vice Chancellor for Academic and Campus Technology Bobby Schnabel to develop student portal services. The wide scope of this project includes informational and business transactions, as well as student programs like advising, student development activities, and instructional support.

Specific objectives of the project include: Provide a solution that meets student requirements as articulated by students and by those responsible for delivering services to students; Foster campus-wide cross-departmental collaboration for service delivery; Research, select, and implement a technical framework upon which portal content will be delivered; Develop campus-wide policies regarding web-based service delivery for students, content quality control, service continuity, integration of services, and adherence to technical framework standards; Develop a comprehensive implementation strategy for the delivery of web-based student services; Develop and implement a distributed model for standardizing content creation and delivery through the student portal; Develop an ongoing support

strategy for web-based student services; Develop cost models for Steering Team review; Ultimately, provide a comprehensive student portal, encompassing all student services and programs.

In order to accomplish these objectives, a project core team has been formed that includes representatives from UCSU, Libraries, Bursar's Office, Housing, ITS, Bookstore, Web Communications, Student Affairs, Administration and Finance, Academic Advising, Enrollment Services, and University Management Systems. Function and technology-specific subgroups are also working on the project. A steering team is overseeing the project. The membership of this team includes: Dennis Maloney (Executive Director, ITS, Steering Team Chair), Kevin Boyer (UCSU Tri Exec), Michael Grant (Associate Vice Chancellor), Bill Herbstreit (Executive Director, Financial Services) Dave Makowski (Assistant Vice President for Information Technology), Eleese Robbins (Associate Vice Chancellor and Dean of Students), Barb Schneider (Executive Director, Enrollment Management).

The immediate goal of the project team is to produce a portal prototype for testing and review during spring semester, 2003. Stay tuned for updates - or check our progress via our project web site at www.colorado.edu/studentaffairs/portalproject/ For questions and comments, feel free to contact Paula Vaughan, Project Manager at paula.vaughan@colorado.edu.

Resource Conservation at CU-Boulder, When Not In Use, Turn Off the Juice!

By Guest Contributor Ghita Levenstein Carroll, Program Coordinator, CU Environmental Center

As part of an ongoing effort to save energy on campus, the Campus Resource Conservation Committee (CRCC) has established a three-pronged approach to enlist everyone at CU-Boulder to help save energy. The first step was the creation of an energy hotline, through which faculty, staff and students can report suggestions and comments concerning campus energy use. "Students, staff, and faculty are the people that know the buildings best, and their input is invaluable," said Moe Tabrizi, Energy Conservation Officer for CU-Boulder. To contact the hotline, please e-mail energyconservationhotline@fm.colorado.edu or call (303)735-6202.

Next was placing "When Not In Use, Turn Off the Juice" stickers on all campus light switches. The hope is that this friendly sticker will remind the CU-Boulder community that it can make a difference in saving energy and the environment by simply turning off the lights when leaving the room for an extended period of time. Tabrizi explained, "If everyone participates and turns off the lights when not needed for only one hour per day, the campus would save \$150,000 per year in electrical costs."

The third step is enabling power saving features, or sleep mode, on all campus PC monitors by March 2003. A typical desktop PC uses 100-150 watts per hour. The monitor uses 70 percent of that energy. "These numbers explain why the committee has chosen to focus on enabling sleep mode for monitors. This campus has a total of 18,000 PCs. Therefore, this project would save the campus \$450,000 in energy costs," Tabrizi said. "Furthermore, by enabling sleep mode for monitors, the PCs still remain connected to the network. CRCC is requesting that all desktop PC users and IT support staff enable sleep mode on their computer monitors and PCs under their control. For instructions, please go to www.energy-solution.com/off-equip/configuring-monitors.html or call the ITS help line at (303) 735-HELP.

These three actions, along with community participation, ongoing outreach and education, and increased efficiency of campus facilities (capitol intensive projects), will significantly decrease campus energy use, and save dollars. For more information, please see www.colorado.edu/center or fm.colorado.edu/conservation.

New WebMail Available in January 2003

During the first two weeks of the spring semester, a new version of the WebMail software will be introduced on the ITS WebMail servers. The new version contains many new features and enhancements that the WebMail community should find useful. The first of the new features includes message filtering, which will be available at once. Additional new features will be turned on after they have been verified as compatible within the CU e-mail environment. Updates and additional information regarding the new WebMail will be posted at www.colorado.edu/its/webmail/new. Questions or comments regarding the new WebMail can be directed to the IT Service Center at 303-735-HELP (5-4357) or itsc@colorado.edu.

Have Laptop, Will Travel...Wireless Network Access on Campus

Don't forget that accessing the Internet is a snap, even if you aren't in your office. CU-Boulder has wireless network access in select locations, making it easier than ever to have anytime access with your laptop. Wireless is currently available in select areas of Norlin Library, floors 1-3; the Engineering Center; Leeds School of Business; Hellems, east basement; and Humanities, first floor. ITS plans to deploy wireless access this spring to the UMC and has completed installation of wireless equipment for the 10 largest lecture halls on campus. Deployment of wireless access to these lecture halls will be discussed and planned with faculty throughout the spring semester. For more information about how to access the wireless network or for up-to-date coverage maps, please see www.colorado.edu/its/wireless/ or call (303) 735-HELP.

Fighting Spam at CU: ITS Brings in an Assassin

We all hate spam. As several studies have shown, the amount of spam received by the average user continues to increase radically each year, so the problem keeps getting worse. This influx of unsolicited commercial e-mail is not only annoying; it decreases production and costs a lot of money. A conservative estimate for the

To help campus e-mail users fight this increasing problem, ITS has done a great deal of research on various anti-spam solutions and recently deployed a spam-detection program.

CU-Boulder campus shows that the time each employee must waste dealing with spam adds up to nearly \$200,000 in staff time per year. Add in the system resource cost to process, deliver, store, and back up those messages — as well as administrator efforts to fight spam — and one can easily see how enormous campus resources are wasted each year just dealing with unwanted junk e-mail.

The question is what to do about it. One thing you can do is never respond to spam in any way. Each time you click on a URL contained within an unsolicited commercial e-mail message, even to “unsubscribe” from the list, you only confirm your legitimate e-mail address, increasing the value of your address, and consequently, the amount of spam you receive. On a campus-wide level, however, more proactive solutions are necessary. As administrators have come up with ways to block or filter spam, spammers have come up with ways to get around these solutions. Thus the job of stopping spam is continuous.

To help campus e-mail users fight this increasing problem, ITS has done a great deal of research on various anti-spam solutions and recently deployed a spam-detection program. Beginning November 18, all incoming mail on the six main e-mail servers has been analyzed by a program called SpamAssassin and scored with a spam rating, which allows users to filter suspicious messages out of their inboxes and potentially even delete spam without ever having to look at it.

SpamAssassin scans each message, uses an extensive collection of rules to determine the likelihood that the message is spam, and then assigns a numeric spam score. The higher the number, the more likely the message is spam. Because any message with a score of five or more is generally spam, SpamAssassin flags these messages with the words POTENTIAL SPAM at the beginning of the subject line. Once the incoming message is scored, SpamAssassin's job is done. From there, you decide how to deal with the potential spam you receive. Because legitimate messages may sometimes appear to be spam and therefore get marked as such (these messages are called false positives), ITS cannot automatically set up filters to delete flagged messages. However, you can watch the patterns of spam and false positives to determine how to best filter messages for your particular mail patterns.

Although SpamAssassin is not the perfect solution to spam, none currently exists, nor is likely to as long as spam remains a highly profitable enterprise. Just as spammers are determined to keep using e-mail as a marketing tool, e-mail providers must be determined to offer solutions to their users. Because of the evolving nature of spam tactics, ITS will continue to develop methods of fighting spam on campus. Please visit the ITS spam web site www.colorado.edu/its/email/spam.html for more information about how to fight spam.

faculty focus

Faculty Purchase Program News

The Faculty Computer Purchase Program has been placed on hold for one year because of the current budget shortages. The program will resume on a four-year cycle beginning July 2003. ITS will provide maintenance for faculty who purchased their computers during the 1999-2000 year and would have been eligible for the program this year. Contact Alex Pearson (5-0159 or alex.pearson@colorado.edu) for more information.

Faculty Technology Support at Your Door

ITS, working in conjunction with various schools and colleges at CU-Boulder, has a group of very talented people to assist faculty in the use and development of technology-related resources for teaching, research, and creative work - with the emphasis on teaching. These Distributed Academic Technology Coordinators (DATCs) are located within the schools they serve.

- Mark Werner, Arts and Sciences, Humanities 1B60 (the Technology Experimentation Center), 2-8018 or mark.j.werner@colorado.edu
- Steve Gabbard, Engineering, 2-4166 or stephen.gabbard@colorado.edu
- Kristeen Burkhardt, College of Business, 5-3590 or kristeen.burkhardt@colorado.edu
- Dennis Dube, School of Journalism and Mass Communications, entry in the Tech Coordinator program, Armory, 2-1835 or dennis.dube@colorado.edu
- Jan Kabili, School of Law, Law 208, 5-2540 or jan.kabili@colorado.edu
- Judi Dressler, Music, Music N1B-74, 5-2997 or judith.dressler@colorado.edu
- Kirsten Anderson, Education, Education 316, 2-4331 or kirsten.anderson@colorado.edu

Alex Pearson of ITS Faculty Computing Services is the Coordinator for the Distributed Academic Technology Coordinator program and can provide general or specific information about the program. Alex can be found in the Stadium, room 365, Gate 11, at 5-0159 or alex.pearson@colorado.edu.

Three Classrooms to be Renovated this Summer

Faculty Input Encouraged

Beginning this summer, three CU-Boulder classrooms are slated for renovations by the Classroom Support and Renovation divisions of ITS (Information Technology Services). Those classrooms are Ramaley 1B31 and C250 and Stadium 135. Faculty who wish to comment or offer suggestions about what the renovations will entail or what technology will be offered are encouraged to do so. The deadline for input is February 14. Please contact Brian Koberg at brian.koberg@colorado.edu or (303) 492-6889 with any questions for input about the renovations.

newsbriefs

Five Lecture Halls, cont. from page 1 become familiar with the self-service arrangement. Ring down phones, a direct line to the IT Service Center, will also be available for emergency situations.

For assistance, additional information, or to set up a training session, please contact the IT Service Center at (303) 735-HELP (5-HELP from a campus phone), weekdays from 8 a.m. to 7 p.m.

Retirement of dino.colorado.edu

Due to limited use and budgetary considerations, the ITS research and computing server known as dino.colorado.edu will be retired July 1, 2003. The services and software currently offered through dino will not be provided on any other central server provided by ITS. ITS regrets the impact that this reduction in services will have on our computing community. dino is the end of an era of centralized cpu and software services offered by ITS. As additional information on this retirement becomes available, it will be provided at www.colorado.edu/its/dino. Comments or questions regarding the retirement of dino may be directed to trouble@dino.colorado.edu.

Technology Experimentation Center

The Technology Experimentation Center is a facility for faculty to try and experiment with technology in a non-threatening environment. The Center is located in Humanities 1B60 and is open for drop-ins from 10 a.m. to 2 p.m. each day. During these times, a Technology Coordinator is available to assist in learning or working with digital media, multimedia, PowerPoint, or any other technology interests. Please contact Alex Pearson, 5-0159 or alex.pearson@colorado.edu for more information.

Getting Started with Campus Technology

To request copies of ITS' beginner's guide, *Getting Started with Campus Technology*, for either Faculty/Staff or Students, contact itsdocs@colorado.edu.

training time

Brown Bag Seminars

- Lecture and demonstrations on computing topics
- Topics include WebCT, SkillSoft, Writing for the Web
- Wednesdays from noon to 1 p.m., UMC 247
- Drop by and bring your lunch!
- No registration necessary

For Brown Bag seminar topics and calendar go to www.colorado.edu/its/brown.html.

Hands-on Workshops

- Hands-on computing workshops in a lab
- Topics include web page creation, effective Internet searching
- Various times and locations
- No food please!
- Register online at www.colorado.edu/its/workshops

For hands-on workshop topics, dates, times and locations go to www.colorado.edu/its/workshops.

SmartForce is now SkillSoft

SmartForce CBT (computer based training) recently became SkillSoft. Do not be surprised if you visit the training site (or call the support number) in the future and you hear the name SkillSoft mentioned. Also, the new CBT titles have been selected and now include training on Adobe and Macromedia products. Be sure to check the site out at www.colorado.edu/its/cbt CBT offers an innovative approach to learning and a unique - and free - training opportunity for all current CU-Boulder students, faculty, and staff. Please visit the login page for specific access qualifications.

Academic IT Support Program

Current information technology (IT) strategic planning at CU-Boulder (current plan can be found at www.colorado.edu/its/ITplan) is focused on how IT, specifically its educational technology component, supports the University's academic mission of teaching, research, and public service. Subsequently, a major focus of change within ITS is how we utilize IT resources to effectively and efficiently support that mission.

One of the primary initiatives derived from these processes is the theoretical development, pilot testing, and early implementation efforts of the Academic IT Support Program. The Program's fundamental principles are central management, local positioning (each IT support person is targeted to a defined audience and specifically prepared to meet the IT needs of a limited part of the academic community), and joint commissioning (central support organization and specific academic community agree upon and have ownership in the support plan).

This type of model was first established in 1999 in a limited scope through the Distributed Academic Technology Coordinator (DATC) program, which has become highly successful. The DATC program placed an IT resource in each of the Boulder campus based schools and colleges, including three in the college of Arts and Sciences, and was jointly funded by ITS and each school or college. The Program is now leveraging the success of that DATC model in other IT support

Statistical Computing Workshops

Hands-on Workshops on Statistical Computing

Advice on statistical computing and data analysis is available through ITS to CU-Boulder students, faculty, and staff. We are located in the Muenzinger Psychology Building, Room E312 (303-492-3879). Additional information is available at stripe.colorado.edu/~oliver.

The ITS Statistical Computing Office will hold several workshops on SAS, SPSS, and S (S-PLUS/R) this semester. The workshops are free for CU-Boulder students, faculty, and staff. Each workshop is three hours long. No previous experience with the software is assumed. Topics include how to import and export data, how to visually explore data, how to transform and recode data, and how to carry out statistical analyses to obtain descriptive and inferential statistics. For more information about the workshops, including locations, dates, times, and how to sign up, please visit www.colorado.edu/its/workshops.

areas. Those areas include support of desktops, technology equipped classrooms, computing labs, and servers. The intent of the Academic IT Support Program is to establish teams of IT support resources in each school or college that will be cross-functional in nature and specific in commission.

Individual components of the IT support team within each school or college are the DATC, Desktop Support Technician, Education Technology Facility Support Technician, and Server Support. Some schools and colleges have already invested in their own local support personnel for some aspects of the Program. In those instances, ITS will endeavor to partner with the existing support personnel to ensure that unit's needs are completely met and that ITS is prepared to respond to escalated service requests when necessary.

Academic IT Support Memorandum of Understandings (MOU's) are currently established in the schools of Law and Education, the College of Music, and, pending final details, the College of Arts and Sciences. Early reports are very encouraging. The Spring 2003 semester will be used to establish our Education Technology Facilities Support offering and to continue discussions with schools and colleges with whom we have yet to establish MOU's. If you have further questions about the program, please contact Ken Schuetz at ken.schuetz@colorado.edu or (303) 492-1283.

projects in process and on the horizon

WebMail and New E-mail Server for Faculty and Staff

ITS will soon be offering an exceptional e-mail alternative to CU-Boulder faculty and staff. Beginning February 2003, CU employees will have the choice to migrate to a high-availability e-mail server which will provide improved backend services behind the same IMAP e-mail clients currently supported on spot, stripe, and rintintin. In addition, users will have access to the much-requested WebMail interface, as well as to numerous other system advantages.

The new e-mail server, called buffmail.colorado.edu, will in reality be a cluster of servers working together to provide nearly constant uptime. Cluster software allows two or more hosts to perform the functions of one, thereby increasing the availability of services. If one server crashes, the other server(s) in the cluster can immediately take over that machine's functions until it comes back up, all of which should be transparent to the user.

In the long term, buffmail will become the designated e-mail system for employees and the only host providing faculty/staff WebMail services. WebMail has historically been available only to students on mail.colorado.edu, but recent funding for the necessary equipment and software has opened this service to all campus e-mail users. WebMail offers the best remote access solution for campus users who travel and want to

check campus e-mail without paying long-distance charges for dialing directly into CU and is a good solution for anyone who prefers a web-based e-mail client. Although the server will require access via IMAP, WebMail is only one of the supported means of accessing a buffmail.colorado.edu inbox. Those who prefer a different IMAP client, such as Outlook or Eudora, will still be able to use that client to access buffmail, as long as the connection is made with IMAP. POP connections will not work. Another benefit of this new server is the substantial increase in mail quotas. On the current mail servers, employees must adhere to a 10 MB quota. On buffmail, however, that limit will increase to 100 MB. This in itself will significantly improve the quality of service for the many users who have found the 10 MB quota difficult to work with.

With the latest hardware and networking solutions, buffmail will provide the fastest service available to faculty and staff campus e-mail users. Stripe users in particular will notice a striking performance improvement, since stripe is the slowest of the three faculty/staff mail servers. The following website will provide updates to the faculty/staff e-mail server project as new developments occur: www.colorado.edu/ITS/email/buffmail. If you have questions that are not answered on the web site, please call the IT Service Center at 303-735-HELP (5-4357) or send an e-mail to: itsc@colorado.edu.

Pay For Print to be Implemented

CU-Boulder will be implementing a Pay-for-Print (PfP) system in campus computing facilities. Implementing a cost-recovery system will benefit the campus, but it will also impact users of campus computing facilities, and departments that maintain their own systems.

Printing volumes and their associated costs have risen to very high levels. It is estimated that 11 million pages are printed each year in the ITS student computing labs alone. There are several factors contributing to the increased volumes, including the greater availability of course and research materials online. While much of the printing in labs is in direct support of teaching and learning activities, there is also a great deal of frivolous printing and waste. This is evident in the amount of unclaimed output and the disparity in printing volumes between lab users. The University of Indiana at Bloomington reported that prior to implementing a PfP solution, 15 percent of their students produced 46 percent of the printed output. It is the University's hope to curb wasteful printing with minimal impact to legitimate use of these facilities.

In response to the growing concern over printing costs and waste, the IT Council convened a Pay-for-Print task force in October 2001. The task force was charged with identifying an appropriate print management solution for the campus. A recommendation was made to pursue a cost-recovery system for print resources, with the following goals: Provide fair and equitable access to print services for users; Preserve the convenience, quality and reliability of print facilities; Reduce waste by providing a financial incentive to conserve resources; and Reduce printing costs for the campus.

Many of CU's peer institutions have already implemented PfP solutions with good results. CU-Boulder has recently completed a competitive bid process to identify a vendor that will provide the best solution for the campus at the lowest cost. The Department of Imaging Services is currently developing a detailed implementation plan. Imaging Services will be responsible for overseeing the campus PfP operation. The deployment is scheduled for summer 2003 in order for the system to be fully enabled for the fall semester. The deployment sites identified for the initial deployment include ITS labs, Housing labs, and computing sites in Library facilities and the Law Library.

PfP represents a significant change to printing on campus. The solution will support both black & white and color printing, and be charged at different rates. Pricing has not yet been established. Faculty, staff, and students will use their BuffOne Cards as the method of payment, by way of a declining balance. Public library patrons will use vended cards, which will be available for purchase at select sites across campus. Imaging Services is looking at options to allow departments to pay for users' print jobs when desirable. Departments should recognize that users might shift their printing to departmental printers, if those printers are not secured. Departments that are interested in implementing PfP for their own resources should contact Imaging Services directly. There may be a cost to the department if the site doesn't generate enough revenue to cover the cost of the system.

ITS and its service partners are concerned about disruptions in the labs resulting from the implementation of a PfP solution. These concerns arise from the system's need for additional user credentials, increased complexity and potential failure points, additional equipment in confined spaces, and a greater potential for theft and fraud. ITS will continue to work closely with the Imaging Services team to ensure that the needs of lab users are met. Additional information and updates will be available at the PfP project website, when it becomes available, and through notifications in this publication.

tips from techies

CU Remote Access Offerings

ITS offers CU-Boulder faculty, staff, and students three ways to remotely access the campus network and Internet. DSL and Modem options are funded by student fees and can offer substantial savings, compared to regular consumer access to an Internet Service Provider (ISP).

1. **Modems.** ITS provides 869 off-campus modems and 46 on-campus 56k dial-up modems. You will need your own personal or departmental computer, a modem and telephone jack, and an IdentiKey account. Please see modems.colorado.edu for more information.

2. **DSL (Digital Subscriber Line)** is a high-speed Internet technology that uses your standard Qwest telephone line and is up to 10 times faster than a regular dial-up modem. You purchase DSL service from Qwest and select CU-Boulder as your ISP. For more information, please see dsl.colorado.edu.

3. **VPN (Virtual Private Networking)** provides a secure encrypted tunnel from your current network connection back to CU-Boulder's network. Your computer then assumes a CU IP address and acts as if it were directly connected to the campus network. This allows your computer to access campus network resources from other networks. ITS began offering this service November 11, 2002. For more information, including supported clients, VPN installation and operation information, or to download VPN client software, please see vpn.colorado.edu.

the small print

oneonone is published twice a year in hardcopy and is also available online at www.colorado.edu/its/oneonone.

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IT Service Center

- Phone: 303-735-HELP (5-4357 from an on campus phone), Monday -Friday, 8 a.m. - 7 p.m.
- Walk-in: First floor, Telecommunication Center (located two buildings east of the UMC), Monday-Friday, 8 a.m.-5 p.m.
- E-mail: help@colorado.edu

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