

essentials

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Computer Systems Support
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Conference Phone Calls in 3210 SC

There is a conference phone in 3210 SC; the number is 335-6406. To set up a conference call, you must get an authorization code from ITS. Send a requisition to the ITS Help Desk, 15 LC, requesting an authorization code to use with the phone line 335-6406. On the requisition, specify the date and time of the call.

If your call is with two or more other people, the campus operator, 335-3618, will connect all the people involved in the call at the scheduled time.

If the conference call involves only the caller and 1 or 2 other people, you can make the call yourself. Dial 9 and then the phone number of the first person. You'll hear fast busy tones. Then enter the authorization code. If there is a second person to connect, follow those same steps.

Call Brenda Carey, 335-6262, if you have questions.

~Sheila Britton



Videoconferencing with ViewStation

3M has donated a Polycom ViewStation 512 for Internet videoconferencing. It is located in 3220 SC, which you can reserve using CorporateTime. The VS 512 can place or accept a two-way videoconference connection to another station compatible with the H.323 protocol. Call CSS, 335-5751, to arrange an introductory demonstration to learn about the ViewStation and using the remote to control the unit. Videoconferencing users must check out the remote from CSS, 1253 SC, prior to their conference.

The videoconferencing room incorporates a 42" plasma monitor to display the remote site. The microphones have voice-activated switching that focuses on the speaker, no matter where the speaker is in the room. Address book dialing and a simple on-screen menu make it easy to call other Internet videoconferencing locales.

~Christopher Fomon



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Wireless Upgrade



CSS has just installed new, more capable wireless access points (APs) to support wireless networking in the Seamans Center. (APs are the devices in the covered area that transmit signals between the computer and the network.) We have not yet tuned the new APs for best coverage; that is a task for the summer. The new Orinoco APs are currently configured for the standard 802.11b protocol. 802.11b runs at 2.4GHz with a channel speed of 11 mbit/sec; throughput rate is about half the channel rate. We have dropped the requirement to register your wireless card's MAC (Ethernet) address. If you need a wireless card, Orinoco wireless cards are available in the Engineering Electronics Shop, 2018 SC, for \$40.

To get to the Internet you need an SSH client or a browser that supports Java so you can download a Java version of SSH. Since there is no native security and the wireless is a shared network, everyone using the wireless network can detect all of the traffic from all wireless users. The SSH clients encrypt the authentication you need to enter the network and connect to the Internet. The wireless network ID for the Seamans Center is "engrwl0" (all lower case; the last two characters are the letter "el" and the number zero). We do not use a WEP key, because that key is easily compromised. See also the on-line page about using the wireless network in SC at <http://css.engineering.uiowa.edu/tools/etudes/wireless.html>

Let me restate that there is **no** native security on the wireless network in the Seamans Center. Unless your traffic is encrypted by the program you are using, after you authenticate, all communication goes over the wireless shared network in clear text. Anyone else using the wireless network can capture and read what is transmitted. Never use a password over the wireless network without using an encrypted channel like SSH or HTTPS.

We have enhanced the authentication so you can use either your Engineering computer account ID and password OR your Hawk ID and password to connect. Note that there are still a few accounts that have an Engineering ID different from the Hawk ID. If your Hawk ID is not the same as your Engineering computer account ID, please come to the CSS office, 1256 SC, so we

can work to make those two IDs the same.

Please note that the campus wireless network supported by ITS requires using a proprietary Cisco protocol called LEAP. To use the wireless network on campus but outside of the Seamans Center, you must use a Cisco wireless network card. See the ITS wireless page for more information: <http://www.its.uiowa.edu/cs/helpdesk/networking/wireless> The Cisco card will work in the Seamans Center by turning off the LEAP protocol and changing the wireless network ID.

Don't forget that the campus has reserved the 2.4GHz and the 5 GHz spectra for wireless communications. No devices (cordless phones, most commonly) that use these spectra can be used on campus.

~Doug Eltoft



Screen Lock for Windows

CSS has installed new screen lock software on the all L-COExxx Windows computers (Hering and Elder labs, Henry computer classroom). Beginning Monday, 7 April 2003, when a Windows machine detects no activity for 10 minutes, the screen lock software activates. If there is no activity for the next 30 minutes, the current user is logged out. When you move the mouse of a screen-locked computer, you'll see a dialogue box in the middle of the screen and the length of time left before logout at the bottom left. Any user can log off a screen-locked computer, but we suggest that you not do so unless the screen has been locked for at least 10 minutes. (The counter at the bottom will show 20 minutes or less remaining.)

In the past CSS staff with the administrator's password had to unlock locked computers. Now anyone can do that.

New Windows Software

Recently CSS has installed new Windows software. The screen lock software is described in the article, "Screen Lock for Windows." The new archive manager, WinRAR, replaces WinZip. TextPad is a powerful text editor.

WinRAR

WinRAR is a powerful archive manager. It can backup your data and reduce size of email attachments, decompress RAR, ZIP and other files downloaded from the Internet, and create new archives in RAR and ZIP file format. WinRAR provides complete support for RAR and ZIP archives and is able to unpack CAB, ARJ, LZH, TAR, GZ, ACE, UUE, BZ2, JAR, ISO archives.

WinRAR lets you split a large archive into smaller files, called volumes. This feature will be useful if you need to email a large file but even the archive file is too large to send. (Most mail servers limit the size of a single message. The mail server here will not handle files larger than 15MB. The limit on the Blue computers at ITS is 10B. You can unpack volumes and put them all into the same folder and begin extracting the files with the first volume. (www.rarlab.com)

TextPad

This text editor is a replacement for NotePad. The information below comes from the web site www.textpad.com, the company that sells the program. TextPad is easy to use; the GUI will look familiar.

In-context help is available for all commands, and in-context menus pop-up with the right mouse button. The Windows multiple document interface allows multiple files to be edited simultaneously, with up to 2 views on each file. Text can be dragged and dropped between files.

You can correct the most common typing errors with commands to change case, and transpose words, characters and lines. Other commands let you indent blocks of text, split or join lines, and insert whole files. Any change can be undone or redone, right back to the first one made. Visible bookmarks can be put on lines, and edit commands can be applied to lines with bookmarks. Frequently used combinations of commands can be saved as keystroke macros, and the spelling checker has dictionaries for 13 languages. It also has a customizable tools menu, and integral file

compare and search commands, with hypertext jumps from the matched text to the corresponding line in the source file (ideal for integrating compilers).

Email Server Fix

No jargon summary: *we fixed a subtle problem with the new mail server. You should no longer notice long pauses to get or send mail caused by this bug. You will still see pauses due to network traffic.*



One of the winter break changes was to replace the aging email server hardware with an Itanium-based server. Itanium is the name of the new processor family from Intel and HP. The old mail server used a 32-bit HP CPU. The Itanium processor is a 64-bit CPU. The operating system remained HP-UX, but because of the CPU change from 32 to 64 bits, many hardware-specific parts of the operating system (OS) had to be rewritten. Whenever code is rewritten, bugs can be introduced. HP found and corrected many of these bugs as patches that we applied before we put the server on-line. There was, however, a bug in the memory mapper that did not get fixed before our deployment. The problem was subtle and deep within the kernel of the OS, so it was very hard to characterize from the observed problems. Finally, using a diagnostic tool from HP we were able to observe the problem as it occurred and discovered a hint that, in the end, led us to the problem. Normally unused processes are rolled out of real memory into virtual memory (disk). When they are needed the OS is supposed to recall the process and move it back into real memory so it can execute. The action of rolling processes from virtual memory to real memory was taking up to an hour, thus blocking real time communications with the server. HP put out a fix and we patched the server.

The new server with its greater resources (memory, speed, etc) is now handling the increased demands on the IMAP email service with ease. When this problem occurred we postponed replacing the web server with a similar computer. We will now move ahead with that upgrade after final exams.

~Doug Eltoft

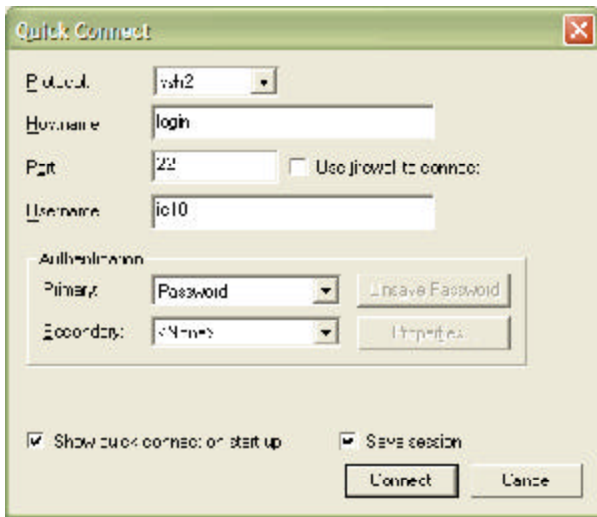
SSH2



No jargon summary: SSH (Secure Shell) is a program to log into another computer over a network, to execute commands on that remote computer, and to move files from one machine to another. It provides secure communications over insecure channels.

The SSH2 protocol is now available on all Unix machines. SSH1 has been available since the mid-90s and continues to be used and useful. SSH2 is a more secure and efficient version of SSH that includes SFTP, secure file transfer protocol.

When you use SecureCRT to login to connect to a computer in the computer labs, you can now use either SSH1 or SSH2. If you want SFTP, select SSH2. In the **Quick Connect** dialog, select “ssh1” or “ssh2”, depending on your need, from the protocol list. Using the hostname **login** or **login.engineering.uiowa.edu**, as shown below, connects you to the fastest Unix machine with the lightest load. If you want to specify a machine to connect to, in the Hostname: field, use a machine name l-ecn000 through l-ecn030.



Not in SC?

If you are working on a machine that is not college administered, you may need to install SecureCRT software, which supports SSH connections. The University has purchased a site license for SecureCRT. Go to our download site,

<http://imap.engineering.uiowa.edu/download.html> or the ITS download site, <http://www.its.uiowa.edu/cs/helpdesk/software.htm> to get SecureCRT.

If you would like help getting SecureCRT properly configured, contact the CSS consultants at 335-5055.

~Diana Harris



Fluent Contest

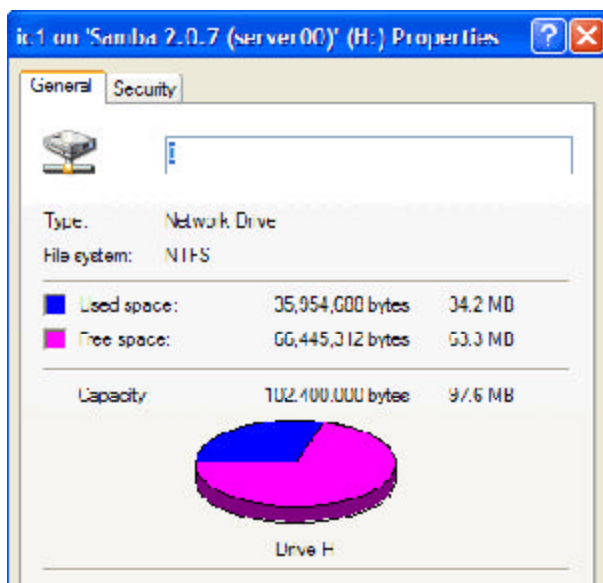
We are pleased to announce the 2003 North American Fluent Student Contest! Any undergraduate or graduate student in North America is eligible to enter. Students can submit their papers on the use of Fluent’s computational fluid dynamics (CFD) software (FLUENT, FIDAP, POLYFLOW, or FlowLab) in any of the following areas: Research, Design, Education/Teaching.

Students should submit their papers by June 16, 2003 and they will automatically be eligible to win one of two \$1000 Grand Prize grants. The grants will be used to cover expenses to present the winning papers at an engineering/scientific conference of the student’s choice.

All contestants will have their papers and resumes posted on the Fluent University Program website, where prospective employers can view your work.

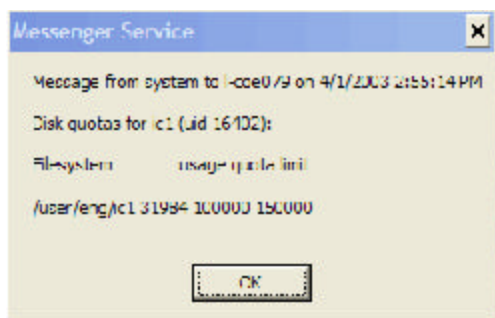
Find out more about the full contest rules at: <http://click.topica.com/maaaU1faaWDcEbdoh1Qb/>

Now you can see your account quota (not mail quota) by getting the properties of your H drive on a Windows computer. From **My Computer**, right click on your **H:** drive, and select **Properties** from the menu. You'll see a graphic like the one here:



This account has used 34.2MB of the 100MB quota. If you like colors better than numbers, notice that the blue area of the pie chart represents the disk space used and the magenta the unused area.

You can still find your disk quota in a non-graphical pop-up window from **Start | All Programs | COE Tools | Disk Quota**. Here's what you see:



We are pleased to announce that The MathWorks will be conducting training courses for beginner, intermediate, and advanced users of MATLAB, Simulink, and Stateflow in Minneapolis, MN this May and June.

The following courses will be offered.:

MATLAB Fundamentals and Programming Techniques — May 12 - 13, June 9 - 10

A two-day course that provides a comprehensive understanding of MATLAB as a programming language. Topics covered include working with matrices, data manipulation, graphical visualization, and programming.

Advanced Programming Techniques in MATLAB — May 14

Extends the programming techniques acquired in the MATLAB Fundamentals and Programming Techniques course. Expands upon MATLAB programming capabilities, including performing error checking of code and vectorizing code to make it run faster. Demonstrates techniques for creating functions with increased flexibility. Explains the concept of object-oriented programming in MATLAB for creating and implementing your own data types. Demonstrates how to solve ordinary differential equations. Explains concepts for using the Optimization Toolbox.

Modeling Dynamic Systems with Simulink — May 15 - 16, June 11 - 12

A two-day course that covers the basics of using Simulink, an interactive, graphical environment used to model and simulate dynamic systems. Explores all aspects of system modeling with Simulink, including creating a model, simulating the system, and analyzing the results. Demonstrates how to design your own algorithms and blocks. Explains the use of MathWorks blocksets and extensions, such as the Dials and Gauges Blockset, Stateflow, the DSP Blockset, the Communications Blockset, and xPC Target.

...*“Matlab Courses” continued on page 6*

System Modeling with Stateflow — June 13

A one-day course that covers the basics of using Stateflow, an interactive design tool for modeling and simulating complex reactive systems. Explains how to use the Stateflow graphics editor and related user interfaces, build and run Simulink models that include Stateflow diagrams, and create and view events and data. Covers using extended Stateflow notation, such as hierarchy, parallelism, and history. Briefly discusses creating graphical functions, calling MATLAB and C functions, and using event broadcast and temporal logic.

These classes are taught in an interactive, hands-on setting by an experienced MathWorks engineer. Our instructors provide individualized attention in a classroom setting and are able to customize the curriculum to reflect each student’s learning style and abilities.

For more details on course content and to register online visit

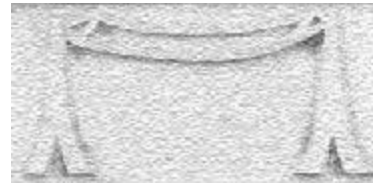
www.mathworks.com/training

To register by phone call 508-647-7000 and select option 3.

Recently with some file server problems, people have called to say that when they get back into CorporateTime, they get a message about the off-line agenda. This message indicates that the local files CorporateTime creates so that you can work off-line when you choose, have been corrupted. Here’s what to do:

1. Close CorporateTime.
2. Go to H:\windowsdata\ApplicationData\cst
3. Delete these two files in the cst folder: XTMLOCAL.NDX and XTMLOCAL.DAT.
4. Re-start CorporateTime.

~Sheila Britton



Essentials is a publication of Computer Systems Support (CSS) in the College of Engineering at the University of Iowa. Essentials is published during the year whenever there is sufficient news to report to the user community. You have permission to reprint all or part of this newsletter for nonprofit purposes if you 1) acknowledge this source, and 2) send a copy of your publication with the reprinted material to: Newsletter Editor, Computer Systems Support, 1249 SC, University of Iowa, Iowa City, IA 52242.

This issue: Editor: Diana Harris. Contributors: Susan Beckett, Sheila Britton, Doug Eltoft, Christopher Fomon, Diana Harris



Jargon Rating: 0-2 ++. No image means there is no jargon and it should be easy to read and understand. Two plus signs mean lots of jargon. One plus falls between. All 2 plus articles include a no jargon summary.

Images: © 1999-2002 www.barrysclipart.com & panels from exterior Seamans Center

Hours

Computer Labs — The Hering (1220 SC) and Elder (1231 SC) labs are open 24 hours/day, 7 days/week except for maintenance. With an access card, you can enter the building and the labs after the building closes.

Consulting, 1253 SC — M-Th 8am – 9pm; F 8am – 5pm; Sun 5pm – 9pm

CSS Main Office, 1256 SC — M-F 8am – noon, 1-5pm

Web Sites

This newsletter is published first to the CSS web pages at

<http://css.engineering.uiowa.edu/news/essentials>

The CSS pages are found at

<http://css.engineering.uiowa.edu>

The College of Engineering pages are at

<http://www.engineering.uiowa.edu>

The University of Iowa pages are at

<http://www.uiowa.edu>

CSS mission: to provide a secure and productive computer environment that supports the ability of the College of Engineering to achieve its educational mission.