

# Essentials



## Wireless Network Working

As announced by email last year, the College of Engineering is installing a wireless network. It is now operational. Like all University wireless networks, this one runs on the 2.4 GHz band. The University has designated that the 2.4 GHz band gets priority for networking. If you have a cordless phone, a web camera, or any other device that runs in the 2.4 GHz spectrum, you must replace it. Replace existing 2.4 GHz devices with a 900 MHz model, and do not purchase new equipment in the 2.4 GHz band.

This wireless network is available from the 2nd floor entry foyer, the Engineering Student Commons and the Engineering Library, the 4th floor outdoor terrace, the Dean's Offices, all rooms of the 000, 300, and the 500 hallways, and all 200 rooms south of the atrium. (The 000, 300, and 500 hallways run east west in the Seamans Center; rooms with a "0", "3" or "5" as the 2nd digit of the room number are in those hallways. The 200 hallway runs north south; rooms with a "2" as the 2nd digit of the room number are in the 200 hallway.)

To use the wireless network, you must have an Engineering computer account, a computer configured to use DHCP, and a wireless network card that has been registered with CSS. You can special order a wireless network card from the Engineering Electronics Shop, 2018 SC. Wireless cards that meet the 802.11b wireless standard should work. So equipped you connect to any of the several access points in the building and on the outdoor plaza and terrace.

*"Wireless..."continued on page 2*

## Acceptable Use

CSS has noted an increase in the use of some non-class related, resource-intensive programs that can degrade both network and individual machine performance. Examples of such programs include seti@home and genome@home. We know it can be fun to participate in any world-wide project; therefore, we have crafted a policy ([http://css.engineering.uiowa.edu/policy/acceptable\\_use\\_policy\\_0102.pdf](http://css.engineering.uiowa.edu/policy/acceptable_use_policy_0102.pdf)) that we hope will address the need for students, faculty, and staff to get their work done while allowing others to participate in such non-academic endeavors.

Running these programs is expressly prohibited while classes are in session. However, permission to run these (or similar) programs during breaks may be granted on a case-by-case basis. Contact CSS to explain your use of such programs and request permission to run them.

~ Susan Beckett



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## Why use SSH

All connections to the wireless network must be made with SSH (Secure SHell), a secure way of talking on the network. Consider that using a wireless network is sharing publicly accessible airwaves. Using an SSH connection gives you privacy.

## Follow These Steps

1. Set up your computer to use DHCP (Dynamic Host Configuration Protocol). See the instructions for your Windows computer on the DHCP page at <http://css.engineering.uiowa.edu/support/wireless.html>. Begin at **Start | Settings | Control Panel | Network | Configuration**.

If you have a Linux laptop, contact the Linux vendor for information on setting up DHCP. If you have a Macintosh laptop, from the Apple menu, go to **Control Panel | TCP/IP | DHCP** then click **OK**.

2. Start your SSH client (SecureCRT is an SSH client). If you don't have an SSH client on a Windows computer, go to the CSS download page (<http://imap.engineering.uiowa.edu/download.html>) to download SecureCRT. Linux and Mac users must also have an SSH client installed.

Connect to **gatekeeper.engineering.uiowa.edu**. There is information on the gatekeeper server at <http://css.engineering.uiowa.edu/support/gatekeeper.html>. Enter your Engineering account login ID and password to authorize getting beyond the gatekeeper. This connection turns on the port you are using and lets you into the Engineering Computer Network (ECN).

Or

If you don't have an SSH client, start a browser that has Java enabled. You'll be connected to a web page on the gatekeeper machine. Click on

Use the [Java SSH client](#) to authenticate.

You get another screen with software copyright information, below which is:

```
SSH Server/Alias:
gatekeeper.engr.uiowa.edu
```

The cursor is at the end of "edu". Press Return. Enter your login ID after the prompt, press Return, then your password when prompted. Now the screen displays a message telling you to minimize (not close) the screen. The connection you have just established is good for 10 hours.

## Once connected

Once connected to the network, you'll have access to web servers in the college and beyond and you can read your email. You can map your home directory, but we advise against that for security reasons; no wireless network is secure.

When you are ready to disconnect, open the minimized screen and exit. You'll have to verify that you want to disconnect from [gatekeeper.engr.uiowa.edu](http://gatekeeper.engr.uiowa.edu) by clicking on **Yes**.

The web page about using the wireless network (<http://css.engineering.uiowa.edu/support/wireless.html>) includes these directions as well as illustrations of the various computer screens and prompts.

~ Diana Harris



## Student Design Contest

The Mentor Graphics Higher Education Program and SUN Microsystems, are sponsoring the 2001-2002 Student Design Contest. This contest promotes innovation and excellence in education for designers at participating colleges and universities. Go here for more information about the contest. Entries are due by May 31, 2002. Go to:

<http://www.mentor.com/partners/hep/designcontest.html>

## Awards and Prizes

Printed Circuit Board Design \$2000  
IC / Analog Mixed Signal Design \$2000  
HDL Design \$2000  
SOC Design \$2000  
Overall winning design of the four design categories - \$5000

Please visit <http://www.mentor.com/partners/hep/sig.html> to subscribe to the Mentor Graphics University SIG email group.

## CSS at Work

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The CSS staff has been busy over the winter break putting the finishing touches on several projects. The most visible one is the public network port project. These public ports are identified by a bright green dot next to the jack. They can be found under the atrium bar in the 2<sup>nd</sup> floor entry foyer, as well as in the seminar and conference rooms. Refer to the article "Look for the **Green Dots**" on page 4 on how to use one of these ports. Or if you just do not have time to read further, plug in your portable configured for DHCP to a port with a green dot and fire up a browser.

The companion project to the public ports is a wireless network sponsored and paid for by the Electrical and Computer Engineering Department. Detailed coverage and operational information can be found in the article "Wireless Network" on page 1. The wireless network is exhilarating but this thrill is paid for by a significant loss of security. The wireless network is a shared environment: all users share the bandwidth and the channel. When you use the wireless network, you should use encryption communication software to protect your information. These two projects are joined at the hip by a special router we have named "gatekeeper" that allows only authenticated users to connect to the Internet. Gatekeeper has some nifty code to do this special routing task written by a talented CSS student employee, Chris Weis. Gatekeeper is also our first production server to use the Linux operating system.

The file and application server upgrades were going well until we tried to install the server rails in the existing equipment racks. We were surprised and annoyed to find out that our old racks are obsolete and could not accept the new rails. The new, twin, high-performance file servers (server00 & server01) currently have a temporary home on top of the tape jukebox until a new rack arrives. Luckily both of the file server hard drive arrays fit into the existing racks, so only the CPUs are out in the cold. Check out the increased home directory drive quotas; from a Unix command prompt, type **quota -v** to see your new quota.

Currently the majority of the system administrators's time is being spent on developing a production environment for an upgrade to Windows XP. We are currently working on several fronts including: the OS configuration

and patching, password synchronization with our existing environment, a new authentication service using Active Directory, a new software delivery and update system, a new application installation process, new documentation, and training classes for all of this.

The 1245 classroom has a new look this semester. The keyboard and mouse are now on a lectern so they can be easily used when standing up. The screen has been replaced with a large-format, touch-screen display. You can use your fingers as a mouse or use the display as an electronic chalkboard.

- Doug Eltoft



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## Ansys Upgrade

Ansys 6.0 was installed over the winter break. It is now the default (production) release. The initial interface is different than release 5.6. When you first invoke Ansys, you see a dialogue box containing 5 buttons shown vertically in the Ansys Launcher window. Click on the first button, labeled **Ansys Now**, to run an interactive session, which looks very similar to release 5.6. To run Ansys 6, type **ansys** at a shell prompt or select **Comm Apps | Ansys | Run Ansys**.

For more information about the new release, see the online documentation by selecting the button labeled with a "?" (third from the top). Select the link **Table of Contents** to view all available document collections. Also check the Unix Software page for information specific to running Ansys at our site:

<http://css.engineering.uiowa.edu/support/software/unixsoftware.html>

Release 5.6 will be available until March 1, 2002. To run the old version, type **ansys56** at a shell prompt, or select **Comm Apps | Ansys | Other Versions | Prior release**.

- Susan Beckett

## Look for the **Green Dots** (Public Computer Ports)



We thought we'd jog your memory, in case the announcement of the public computer ports in the Seamans Center slipped your mind. There are ports in some public areas — the bar in the 2<sup>nd</sup> floor entry area and in the Engineering Student Commons — as well as in all conference and seminar rooms, the 3123 Business Visitor's Center, and the third rows of the 2217, 2229, and 3505 classrooms.

To use the ports, you need a computer, a network card and cable, and an engineering computer account. Active ports are labeled with a green dot. CSS may add more public ports in the future; all will be marked with a green dot when the port is activated.

### To use the public ports

1. Set up your computer to use DHCP (Dynamic Host Configuration Protocol). See the instructions for your Windows computer on the CSS Support page (<http://css.engineering.uiowa.edu/support/genhelp.html>). Begin at **Start | Settings | Control Panel | Network | Configuration**.

If you have a Linux laptop, contact the Linux vendor for information on setting up DHCP.

If you have a Macintosh laptop, from the Apple menu, go to **Control Panel | TCP/IP | DHCP** | then click **OK**.

2. Find a public port marked with a bright **green** dot, plug in your computer, and turn it on.
3. Start your SSH client (SecureCRT is an SSH client). If you don't have an SSH client on a Windows computer, go to <http://imap.engineering.uiowa.edu/download.html> to download SecureCRT. Linux and Mac users must also have an SSH client installed.
4. Connect to **gatekeeper.engineering.uiowa.edu**. Enter your engineering account login ID and password to authorize getting beyond the gatekeeper. This connection turns on the port you are using and lets you into the Engineering Computer Network (ECN).

### Or do this

If you don't have an SSH client on your computer, you can connect to a public port and start a Java-enabled browser. The browser connects you to the Gatekeeper computer. You can run the Java SSH client from that page to connect to the Gatekeeper.

### Finally

Once connected to the ECN, you'll have access to web servers in the college and beyond, you can map your home directory, and you can read your email.

## Pro/E Survey Results

Recently I participated in a customer satisfaction survey from PTC, the company that markets Pro/ENGINEER. The results of that survey are on our Pro/E web pages (<http://css.engineering.uiowa.edu/support/software/unixsoftware.html#Proe>), but a summary of the survey follows.

Survey results from more than 5000 customers world wide show that our customers strongly agree that PTC is an innovative market leader with global reach, but also that some areas need improvement compared to similar vendors. Areas identified as needing immediate improvement are now the focus of a range of improvement programs. Significant initiatives include:

\* Increased customer participation in product testing - (in progress)

- Usability workshops
- Pre-production test program and early adopter program for post-release optimized deployments

\* Enhanced product documentation - (available in first quarter 2002)

- Print-on-demand concept guides for Pro/ENGINEER
- Revised context based help functions

You can visit the Customer Focused Initiatives section of [www.ptc.com](http://www.ptc.com) for more information.

~ Susan Beckett

## Software Acquisition

The College is modifying the current academic software funding model. Until now, software funds have been allocated to CSS. These funds have covered the annual maintenance and renewal costs for system software (operating systems, compilers, backup software), utilities (X-WinPro, Ghostview, Acrobat), non-engineering productivity tools (Visual Basic, Microsoft Office), and commercial educational software (Pro/E, Matlab, ChemCad). For this fiscal year, CSS spent approximately \$26,000 on license renewals and maintenance contracts for commercial educational software.

The new model will allocate these funds directly to departments, who will then be responsible for making software acquisition and removal decisions. Under the new plan, the College will implement a cost-share model. CSS will provide 100% of purchase costs for new commercial educational software and contribute 25% to annual maintenance renewal costs. The department share for new software purchases is 75% of the annual maintenance cost the first year and each successive year. One or multiple departments might pay the department share.

The new funding model will put software decision-making where it should reside— with the faculty. It has several advantages over the old model:

- 1) faculty are more familiar with the software in their discipline than CSS staff;
- 2) faculty are in a better position to determine how to spend effectively allocated software dollars;
- 3) there is an implicit annual evaluation of current software for relevancy and centrality to the educational mission; and
- 4) departments have an incentive to retire aging or broken packages to free up funds for new, more productive or state-of-the-industry software.

CSS will continue to facilitate the license negotiation and install, maintain, and support purchased software.

- Susan Beckett



## Saving Outgoing Email Messages

Now and again someone asks me how to save copies of outgoing email messages. I updated a couple existing documents and added information about how to do that in Eudora. There is now an e-tude called Email: Saving Outgoing Messages. Go to the e-tudes page ([http://css.engineering.uiowa.edu/e-tudes/email\\_outgoing\\_messages\\_1101.pdf](http://css.engineering.uiowa.edu/e-tudes/email_outgoing_messages_1101.pdf)) for the original. The highlights are below

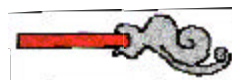
**Eudora** - saves outgoing messages by default. To change that setting, go to **Tools | Options | Composing Mail**. Uncheck **Keep copies** to discontinue keeping those copies; check it to have a copy of each message stored in the Out box. Because the Out box is stored on your H: drive, as it grows it uses up account (not mail) disk quota.

**Netscape** - does not save outgoing messages by default. To save messages, go to **Edit | Preferences | Mail & Newsgroups | Copies and Folders**, **Place a copy in folder: 'Sent' on ...** Mail saved in the Sent folder counts against your mail quota, so if you keep copies, you should regularly delete messages in the Sent folder.

**Pine** - does not save copies of sent messages by default. To change the Pine configuration to keep messages, from the inbox screen, press **M** (Main menu), then **S** (Setup options), then **C** (Config). Scroll down to highlight the field named `default-fcc` and press **C** (Change), and type the word **Sent** as the mail folder name to store these messages in. Press **Enter** then **E** (Exit). As with Netscape, mail saved in the Sent folder counts against your mail quota, so if you keep copies, you should regularly delete messages in the Sent folder.

**WebMail** - by default keeps copies of messages in the folder called "Sent" though WebMail refers to this folder as the Outbox Folder. As with Netscape and Pine, mail saved in the Sent folder counts against your mail quota, so if you keep copies, you should regularly delete messages in the Sent folder.

- Diana Harris



## CSS User's Guide

If you didn't know about it, you should check out the CSS User's Guide. All nine chapters have been updated recently (the oldest update is from 3/00). This guide was originally written when most of the computers CSS (then ICAEN) managed were Unix workstations and Unix was an operating system and environment most incoming students, faculty, and staff were not familiar with. Over the past three years or so, the computing environment here has changed. The number of Windows machines has increased as the Unix numbers have decreased. There are no longer Macintosh computers in the computer labs. Several applications that ran only on Unix workstations have been ported to the Windows platform. Everyone uses email. The updates to the nine chapters of the User's Guide take those changes into account.

Each of the chapters covers a specific topic (the Unix environment, printing & scanning, email, Internet services), so you can read the chapter or parts that are relevant to the task at hand. You can find them all at <http://css.engineering.uiowa.edu/usersguide/>

Now that the massive update is accomplished, I am planning to reorganize all the CSS publications and documentation so that it is easier to find it on the web. CSS will no longer publish a user's guide, but all that information and more will be available on-line.

- Diana Harris

### December Software Survey

No report yet on the results of the second software survey done in December 2001, but 30 faculty responded. Results will be available in the next issue of *Essentials*. We reported on the results of the first survey in the August 2001 issue of this newsletter ([http://css.engineering.uiowa.edu/news/essentials/aug\\_01.pdf](http://css.engineering.uiowa.edu/news/essentials/aug_01.pdf)).

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#### This issue:

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**Jargon Rating:** 0-2 tongues. No tongues means there is no jargon and it should be easy to read and understand. Two tongues mean lots of jargon. One tongue falls between. All 2-tongue articles include a no jargon summary at the top.



Images: © 1999-2002 [www.barrysculpt.com](http://www.barrysculpt.com)

#### Hours

Computer Labs — The Hering (1220 SC) and Elder (1231 SC) labs are open 24 hours/day, 7 days/week. With an access card, you can enter the building and the labs after the building closes.  
Consulting, 1253 SC — M-Th 8am - 5pm, 6-9pm; F 8am - 5pm; Sun 6pm - 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/nl/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.