

# entials

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## Whaaassuuup?

One effort that keeps the system administrators occupied regularly is maintaining network security in the face of continual and an ever increasing number of network attacks. Most recently CSS installed a new SNMP (Simple Network Management Protocol) block and new versions of our email handling software. Since October we have been renaming potentially dangerous email attachments with the "virus-scan-me" extension; that preventative measure has been extremely successful in blocking email-borne viruses for those using the college email server.

We have added some new software on Windows NT computers in the lab. (See page 2, "Lab Software Update" for details.) The new installs include dia, a new drawing package, and GIMP, a new photo editor. Behind the scenes we have been busy working the kinks out of our configuration of the new Windows security environment called Active Directory. This new environment will be a part of Windows XP. (See on page 2 the article "XP to Replace NT This Summer" for information about CSS's plans to transition to XP.) We have also been learning how to use a whole new set of software installation and distribution tools from InstallShield to make the move to XP as clean as possible.

Since the installation of the second file server (in December 2001), we have taken the opportunity to deploy the latest version of SAMBA. SAMBA is software that allows Unix file servers (our file servers are both Unix machines) to provide disk storage for Windows clients. Most Windows users don't know that their files actually live on a Unix machine, and don't usually need to know. It is the SAMBA software that makes using Unix-

stored files from Windows appear seamless. Because of the new file server, you'll need to begin mapping network drives with a different path name. Read "You Asked. We Gave. Network Drive Mappings" on page 4 to find out about using new path names.

Students, faculty, and staff may have experienced some annoying glitches in the new electronics access control system in the Seamans Center. To improve this situation we have written a new access control database with a web interface that enables departments to control access to their departmental spaces. See the "Electronic Access Control" on page 5.

If you have questions about any of these projects or want to know about the status of other CSS efforts, please call me at 5-5751 or write email.

~ Doug Eltoft



	<h2>In This Issue</h2>
	Whaaassuuup 1
	Lab Software Update 2
	XP to Replace NT This Summer 2
	Before XP Comes to Your Desktop 3
	Looking for Patents? 3
	You Asked. We Gave. Network Drive Mappings 4
	DNS Change 4
	Electronic Access Control for Seamans Center 5
	Disk Usage 6

## Lab Software Update

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Recently CSS has installed several new programs on the Windows computers in the Hering and Elder labs and the 1245 classroom (named l-coexxx), and the general assignment classrooms (named clasrmtx).

### Engineering Software

Traffic 4 has been removed and replaced by Traffic 5. To run Traffic 5, go to

**Start | Programs | Engineering Software | Transportation | Trafficware**. The program is **Sim Traffic**. From that menu you can also get to Sim Traffic 5 Help, Synchro, and Synchro 5 Help.

B2 Spice, a circuit-modeling program, is a Windows GUI version of Spice that runs on the Unix workstations. Find B2 Spice at **Start | Programs | Engineering Software | Electrical**. The program is **B2 Spice Workshop**. You can also get to B2 Spice Help, Instructions.txt, and Parts Data.

Students should read the Instructions.txt file before starting B2 Spice the first time. That file tells you to download the file in Parts Data for use with the program. B2 Spice Help has been added to the menu so you don't have to locate the help from the B2 Spice Workshop menu system.

### Drawing & Graphing

A new section from the **Start | Programs** menu is **Drawing & Graphing**, which now contains Delta Graph (already installed) and two new programs: dia and GIMP.

**dia** - dia is an open source diagramming application, like Visio. dia lets you create and move objects, so it can be used to diagram circuits, make network drawings, and explain program execution paths, for example. The installation also includes a dia FAQ (HTML) and the manual in HTML and in PDF formats.

**GIMP for Windows** - GIMP (Gnu Image Manipulation Program) is an open source, Windows version of photo editing software, similar to Photoshop. Gimp is "software suitable for such tasks as photo retouching, image composition, and image authoring" (from the Win-GIMP FAQ page). It does raster image editing and does not produce vector images. The installation also includes links to the Win-GIMP FAQ web page and the Win-GIMP homepage.

When you first run GIMP, you must proceed through the user installation. When you get to the GIMP Performance Tools step, you can define a Swap Directory. Navigate to E:\Temp so that temporary files created by GIMP will be put there. Allow the defaults for the rest of the installation. You should, of course, save GIMP files in your home directory (H:\), not in the temporary space of the local computer.

For help starting these or other programs, see the consultants in 1253 SC, 5-5055.

~ Christopher Fomon

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## XP to Replace NT This Summer

Everyone likes to get something new, right? Well most of the time we like new stuff, too, but there are times, like when you get new shoes, that the new stuff may pinch a bit before you break it in and get used to the new feel. That is how it will be when we upgrade from Windows NT to XP. The current Windows NT operating system and software environment is out of date and vendor support is no longer available. The time has finally arrived to upgrade the Windows operating system this summer. Even though we plan to do this transition with a minimum of individual disruption, the transition will be more difficult because we must upgrade many applications at the same time. For example, the Microsoft Office suite will be upgraded to the XP release. Any new release has differences and new bells and whistles to learn or turn off.

The student computer labs will be updated in half-lab increments. Faculty and staff computers will be upgraded by appointment. CSS staff will spend time with each faculty and staff member following their upgrade, allowing time to learn a few things about the XP environment. CSS will provide support for students, faculty, and staff on line and from the consulting office. We are also creating classes to help users move comfortably to the new environment.

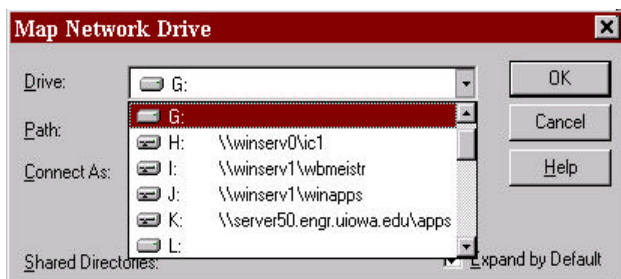
Our target start date for the transition to Windows XP is May 28<sup>th</sup>.

~ Doug Eltoft

## Before XP Comes to Your Desktop



CSS will install for faculty and staff a computer with Windows XP operating system before the end of summer 2002. At the time of installation, CSS staff will spend time orienting you to the XP interface and will map all shares you used before. (See the article “You Asked. We Gave. Network Drive Mappings” on page 4 of this issue.) This means that you must tell us what drive letters you have access to now and what those drive letters point to. Here’s how to do that. From the desktop, right click on the **My Computer** icon, select **Map**



**Network Drive...** You’ll see a window that begins with the field Drive. Click the down arrow to the right of that field to get a listing of the drive mappings you have now. (See illustration.) For each letter, record the letter and the information that follows. You do not need to record the information for the H: drive or the J: drive because CSS will set those for everyone. In the illustration, I have the I: drive mapped to \\winserv0\wbmeistr.

Be sure to scroll down the alphabet to see all of your drive mappings. The first illustration shows mappings only for drive letters F-L. Be sure to scroll to see drives M-Z.

You can start now preparing for your switch to XP by recording your current drive mappings.

~ Diana Harris



## Looking for Patents?

Here’s something you should look at just because it might be interesting and it definitely contains volumes of information. From the Engineering Library web page (<http://www.lib.uiowa.edu/eng/>), go to Other Electronic Resources (<http://www.lib.uiowa.edu/eng/ctndx2.htm>), a link near the bottom of the listings. From there go to Standards, Regulations and Patents (<http://www.lib.uiowa.edu/eng/srch2a.htm>), the first link on that page; and to U.S. Patents Index (U.S. Patents and Trademark Office) [<http://www.uspto.gov/patft/index.html>], also the first link on that page.

That link gets you to the United States Patents and Trademark Office web site [<http://www.uspto.gov/patft/index.html>]. Click on **Quick Search** under either Patent Grants or under Patent Applications. You next see a screen in which you enter keyword(s) and click the **Search** button. After the search is completed and assuming you chose a search term that can be found in the text of the patent, you’ll see a list of patents that contain your keywords. From that list, click on the patent number or the title to see all the text of the patent. The wait for the patent information to appear may be more than a few seconds. Be patient. If the patent includes drawings, above the text of the patent are buttons for options including **Images**. Click on **Images**.

Before the image(s) appears, you are asked to register to use the TIFF browser plug-in necessary to view the images. The information you use to register is not verified, but this one time you must fill out the required areas of the form. After you register, you can see the images for any patent.

CSS installed the TIFF plug-in on all lab and classroom computers so that you can see all of the patent information on that web site.

# You Asked. We Gave. Network Drive Mappings



People always want more disk space, and so CSS bought and installed a second file server to store user files. One result is that when we install XP (see all the various articles about that event in this issue), you will need to change your drive mappings. Why?

Because before there was only one file server and all user files were on that server. Now there are two files servers for user files. So that you don't have to know which server your files are on, CSS here introduces the new way to map network drives.

## New disk quotas

With the new file server, CSS will be able to increase quotas by about 50%. You may remember that we just increased quotas over winter break; we are glad to be able to increase quotas yet again due to the increased capacity of the new file server. The new quotas will be 200MB for engineering students, 325MB for staff, and 600MB for faculty; the quotas will be implemented by April 30, 2002.

## New drive mapping

There is no reason to change your drive mapping until CSS installs Windows XP, the updated Windows operating system, on your computer. Beginning in late May, if you use a computer from home or outside the Seamans Center, you can start using the new mappings. You must be using them by August when the fall 2002 semester starts. The new mappings are:

on campus (in SC)  
`\\engr-loginID.drive\loginID`

off campus (not in SC)

`\\engr-loginID.drive.engineering.uiowa.edu\loginID`

shares on campus

`\\engr-sharename.drive\sharename`

shares off campus

`\\engr-sharename.drive.engineering.uiowa.edu\sharename`

where *loginID* is your engineering account ID and *sharename* is the name of a share (files or directories that you and others have access to).

## Who must do what

When CSS installs XP on faculty and staff computers, the CSS staff will also set your drive mappings. See on page 3 "Before XP Comes to Your Desktop" to know what to do to prepare for that event. Students will see that mappings to the home and applications directories will be

set; students using shares must add those mappings.

## Parsing the new mappings

If you are curious about the components of the new drive mappings, here is our explanation. Sometimes knowing the logic helps make sense of the use.

**engr** this prefix is something CSS added for Active Directory to use when we become part of the UI forest

**loginID** identifies which user

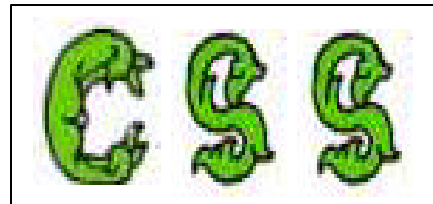
**sharename** identifies the share (there are many)

**drive** to remind you that you are mapping and using a disk drive

**engineering.uiowa.edu** identifies the engineering network

If you have questions about using the new drive mappings, talk to the consultants in 1253 SC, 5-5055.

~ Diana Harris



## DNS Change



If you are reading this article, you must know what DNS (Domain Name Service) is and care about knowing that a change has been made. If you manage your own Windows computer or use a Windows machine from outside the Engineering Computer Network, you may need to configure DNS servers. CSS now has two DNS servers: **dns1.engineering.uiowa.edu** and **dns2.engineering.uiowa.edu**. If you want to use IP addresses for those machines, DNS1 is 128.255.17.19 and DNS2 is 128.255.17.20

## Electronic Access Control for Seamans Center

During the recently completed addition and remodeling to the Seamans Center, electronic locks were added. Computer-controlled electronic locks, opened by a proximity card, offer many advantages to both room users and college administration. Users can carry a single card in their wallet or on a key chain. It is easy and quick to add and remove access to rooms appropriate to the cardholder. The main advantage is the savings in keying door locks when creating multiple-room keys and when keys are lost. Another advantage is that it is easy and quick to generate reports of who entered rooms or was denied access to rooms in the case of misuse of a room. Also, an individual's access after leaving the college or after abusing their access privileges can easily and quickly be shut off, whether or not the individual returns the card and no one needs to retrieve keys from the person.

The locking system chosen, Millenium, was researched and chosen by staff in the UI Facilities Services Group -Access Control (FSG-AC) department. However, for use in the College there were some serious shortcomings to the basic Millenium system's functionality that could be addressed only by additional software and programming.

From the start CSS planned enhancements that would extend the system's capabilities to allow Engineering departments to grant and revoke access, issue cards, and track and report room access. Our solution: using custom-written applications, card and access information is entered into a Card database (CardDB) that then automatically transfers the appropriate information to FSG for entry into the Millenium system. The CardDB contains the same information as Millenium, as well as additional information that provides a comprehensive card and access issue and revoke history. For example, the CardDB contains information about who authorized cards for non-Engineering people (e.g., contractors and visitors) and with what departments those cardholders are affiliated. It also allows departmental representatives to rapidly generate sophisticated reports.

In 2001 I designed, developed, and implemented the CardDB and the additional software that

provides enhanced access control capabilities. First, I created a relational database for card and room access information using our Informix Database Management System. Access policies and procedures fell into two categories: card issues, and granting and removing access. The Engineering Electronics Shop (EES) (<http://www.engineering.uiowa.edu/~eshop/home.html>) was given sole responsibility for issuing and selling cards. EES already uses an Informix-based point-of-sale application; I modified that program to include a routine that, upon sale of a card, automatically creates a record in the CardDB. Creating this record immediately triggers an automated email message to FSG-AC containing the information so that Millenium can activate the card for access to the building's perimeter doors and to the student computing labs.

Next, I wrote a secure web site and application so that appropriate staff, known as access representatives, could easily add, remove, or view card access and cardholder information. This application controls which departments can authorize access to each room and which departments each of the access representatives can grant access for. The resulting web form presents only the rooms for which the representative has authority. This form also produces reports of rooms an individual has access to and of all people with access to a specified room. There are also web pages to send authorization to the EES to issue and revoke cards for non-Engineering persons or to report access problems to FSG-AC. The electronic access web site also contains information available to everyone: links to lists of which rooms have electronic access, who can grant access to each, hours that the building and classrooms are unlocked, and policies and procedures for both cardholders and for representatives.

In October 2001 CSS opened the new access control system to the departments. It was so heavily used at first that there was a huge, unacceptable backlog of access changes at FSG-AC. CSS stepped in and arranged with FSG-AC to have a slave copy of the Millenium application installed at CSS. Now CSS enters access and card information, and the lag between requesting a

...*"Electronic Access"* continued on page 6

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change of access and the change being made is tolerably short.

We plan additional programming to allow the SC access changes to be electronically transferred from the CardDB directly into the Millenium system, removing the need for an individual to enter any data. This change will also remove hand-entry errors, remove the possibility of a backlog of entry requests, and will achieve 100% synchronization between the data in the CardDB and the Millenium database.

Please visit the web site at <http://css.engineering.uiowa.edu/card-access> for more information.

~ Jim Cramer

## Disk Usage

Disk usage statistics collected from September 2001 through March 2002 indicate a growth in the total monthly usage from about 90 GB in September to 140 GB in March 2002. For a more detailed look at the monthly disk usage statistics, check out all the disk usage charts at <http://css.engineering.uiowa.edu/info.html>. The most recent charts are at the top of the listing. And look at the January - October 2001 chart already published on that same page.

~ Susan Beckett



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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.

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### 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 SG— 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.