

Computing rooms

*By Mike Topliff, Director
of Academic Computing*

We've added new computer classrooms and upgraded a lot of the older processors.

Classrooms

These rooms have a workstation for every student, as well as an instructor's system with a projector, VCR, sound system, and an Ethernet connection for a laptop. Scheduling must be done through the Registrar.

Room	Type	Count
Speare 4	733 MHz PCs	35
Speare 116	633 MHz PCs (some 200 MHz)	21
Library 208	800 MHz PCs	7
MSEC 187	500 MHz PCs	9
Weir 128	800 MHz PCs	19
Weir 209	800 MHz PCs	19

Labs

Labs are open to all during our posted hours, and cannot be scheduled for regular classes.

Room	Type	Count
Speare 5	200 MHz PCs (some 800 MHz)	15
Speare 9	200 MHz PCs	13
Speare 14	Sun Sparcs	11
Speare 15	200 MHz PCs	14
Speare 137	Mac GS-3/4s	4/6
SAC	200 MHz PCs	3
SUB	200 MHz PCs	3
GOAL Lab	200 MHz PCs	1

Auditoriums

These larger rooms have a workstation for the instructor, projector, VCR, sound system, and an Ethernet connection for a laptop. Scheduling must be done through the Registrar.

Room	Type	Count
Jones 101	800 MHz PC	1
MSEC 103	800 MHz PC	1
MSEC 105	800 MHz PC	1
Weir 102	800 MHz PC	1
Workman 101	800 MHz PC	1

Projector training

If you would like to be trained on the classroom projector systems, contact Ray Piworunas at least 2 weeks in advance of the need (ray@nmt.edu, -5584).

Cleaning up your cobweb pages

*by John Shipman, TCC
Applications Specialist*

Have you been assigned to maintain Web pages that someone else built? Would you like to improve the usefulness or style of your pages? The TCC has a weekly free Web design seminar that is designed just for you. Every Thursday at 2:30pm in Speare 116, we run an open Web design workshop. In past sessions, we've talked about:

- General principles of good Web design.
- How to organize your content so people can find their way around your site.
- Some examples of ugly Web pages, and analysis of what is bad about them.
- Constructive criticism of existing pages.
- The conflict between the W3C standards and what browsers actually implement.
- How to use CSS (Cascading Style Sheets) to improve the style of your pages.

There is no need to register for these classes. Just show up. No fees, no pressure, just sympathetic help with your Web design problems.

The off-campus modem crunch

by Ray Piworunas, TCC Services Coordinator

Use of our off-campus dialup modem bank (835-4543) grew sharply early this year. More people are having difficulty connecting at times when all 120 modem lines are in use. Selfish behavior on the part of some users is, unfortunately, contributing to this problem.

When planning numbers of modems, the TCC's model assumes that modem users stay connected only long enough to do routine operations (like FTPing files, web browsing, reading email, editing a program or text file) and then disconnect after the operation to allow other people to share the resource.

We try to keep enough lines, and manage session timeout limits, to allow for eight users per line. Recent measurements show that this model is failing because people don't disconnect when they are done.

Our modem use statistics indicate that about ten people are usually maintaining a connection for over nine hours a day. That's about 10% of our modem pool.

The University of Pennsylvania recently retired its modem pool (over 1,000 modems) due to such problems. Their model was based on sharing a modem between 14 to 16 users, but they saw more people using longer connect times and hence less sharing.

They realized they could not keep up with the spiral of unreasonable demand (people wanting dedicated lines from a system designed, and funded, for shared use), so they opted out of the service and directed their users to local ISPs. It seems we're near the beginning of the spiral they saw.

We have several options:

1. The best solution, of course, would be voluntary cooperation—log out if you're not going to be connected for a while, and use diskettes and other removable media for file transfers.
2. The TCC could more closely watch the modem service logs to find out which users are grabbing the lines, and revoke their accounts if they don't stop.
3. We could charge for connect time, instead of the current flat-rate structure. This would help reduce the number and length of idle connections, while allowing for necessary long-term connections. I think it would also give a better picture of true demand and allow for better response when we need to increase the size of our modem pool.

We will implement options 1 and 2 and continue to monitor the situation.

Macs upgraded to OS X

*By K. Scott Rowe, TCC Systems
Programming Manager*

The TCC upgraded its Macintosh machines in Speare 137 to OS X over spring break. OS X is Apple's latest operating system, a complete rewrite from OS 9. It has a new interface, a new API, and is built on top of BSD Unix, making it more secure and stable than ever.

This new operating system should make the machines in our Mac lab faster, easier to use, and more reliable. There are, of course, a few changes you'll need to deal with.

Since OS X is built on a Unix operating system, it requires a login. Under OS 9, we had a third-party program that would require a login. With OS X, it is built into the system. Logging in is similar to any other TCC Unix or Windows machine: use your normal TCC account name and password.

Due to the way OS X does printing, we are unable to produce a header page for printouts. This means you will need to get your printouts quickly so they are not confused with others, or taken to the "unknown" bin in the printout boxes in Speare 14.

The best new feature is that it is actually a multi-user system and your desktop will look as you want. That means no more annoying desktop backgrounds, moved applications, or hundreds of Instant Messenger windows on login.

We also have a brand new, cpu-cycle-intensive, special-effects-filled version of Microsoft Office right next to xfree86 and emacs. Sadly, Clippy has been removed, but now you get cool genie effects when you close toolbars!

Your desktop settings and documents are served over NFS (the network file system), and not the old Mac server running on Solaris that made accessing your documents so slow under OS 9.

TCC Upgrading to Windows 2000

*By K. Scott Rowe, TCC Systems
Programming Manager*

The TCC has been running Windows 95 on its Intel machines since the summer of 1997. After five years, it is becoming more and more necessary to upgrade to a more recent version of Windows. We plan to upgrade to Windows 2000. We decided on Windows 2000 because of its NT kernel, which is more stable and secure than Windows 98 or ME.

When we started working on this project, Windows XP was not available, and now is not a good time to change gears.

When we finally get Windows 2000 installed, the change to the user should be minimal. You will still log in with your TCC account name and password. Most of our current applications will be available, but we hope that many of the current bugs will be fixed.

The big improvement is that you shouldn't get a bunch of Yahoo Messenger and other such windows popping up when you log in: with Windows 2000, normal users won't be able to modify the system to install their own programs.

CADKEY news

By K. Scott Rowe, TCC Systems
Programming Manager

CADKEY is the Computer Aided Design software of choice at the TCC. It has this distinction mostly because of cost. CADKEY costs about three thousand dollars a year for 50 licenses. It would cost ten times that to get as many AutoCAD licenses, and then at least six thousand per year after that.

Unfortunately, CADKEY is not perfect. Many students have had problems in the past, most commonly with printing. We have done a lot of testing and cannot determine why CADKEY fails to print from time to time. We have reported the problems to CADKEY and they have confirmed that there is a problem with their program. We can, however, offer some workarounds.

The most common problem is that a student will print a figure created in CADKEY and will get an "illegal instruction" error. The simplest solution so far has been to simply save the figure, quit CADKEY, restart CADKEY and print again.

Most of the time this solves the problem. The vendor recognizes a problem similar to this with a Technote (<http://www.cadkey.com/support/technotes/cadkey/1411.asp>). In our experience, only generated figures have printing problems, and not the examples that ship with CADKEY, so this Technote may apply.

We usually receive a new version of CADKEY every summer. A newer version may address this problem, but we won't know for sure until it arrives. Until then, please report any such problems to the Help Desk in Speare 5, or file a ticket (see the *Report a Problem* link at <http://www.nmt.edu/~uc>).

Using the vacation program

By K. Scott Rowe, TCC Systems
Programming Manager

If you are not going to be reading your mail for a while, you can use the vacation program to send automated replies back to people who send mail to you. These replies notify them that you are not currently reading your mail.

To set up the vacation program:

1. Read the man page:

```
man vacation
```

2. Delete any stale vacation files:

```
rm ~/.vacation.*
```

3. Put a message in file `~/vacation.msg`. This file must contain a complete mail message with headers. A precedence header is important for preventing bounce loops (a bounce loop is where your mail gets forwarded and re-forwarded endlessly). Example:

```
From: yourusername@nmt.edu
Subject: I am on vacation
Precedence: bulk
```

```
I am on vacation until I get back.
```

```
--Me
```

4. Add forwarding. Edit your `~/forward` file to include `'\'` and yourusername on one line, and `"|/usr/bin/vacation yourusername"` on another line. Example:

```
\yourusername
"|/usr/bin/vacation yourusername"
```