

Classroom technology upgrades continue

by Tom Nylén

Several projects were completed during fall and winter quarters to improve the availability and quality of technology available in classrooms. There are a few pieces yet to be completed, but the following technology upgrades are essentially ready for use.

Chem 150 has a new projector to support computer presentations as well as the VCR and laserdisk player which were previously installed. We have also added one Macintosh and one Pentium PC computer with a network connection for each, and a third network connection is available for those who prefer to use their own computer for class presentations.

Chem 200 was completely remodeled last summer and we have installed the same equipment and network connections as described for Chem 150. Microphones are in place for use with the room's audio system and Chem 200 has hearing assist equipment for people who are hearing impaired.

In addition, a camera stand is on order which will provide the capability to project a view of instructors' demonstrations and documents onto the large screen.

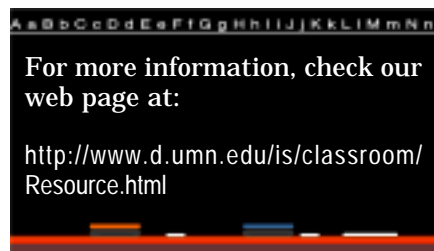
MonH 108 has been completely remodeled and equipped with two networked computers and two projectors. The projectors can be used with the computers and also with a variety of AV equipment, including a VCR, a laserdisk, a slide-to-video converter and a camera pad (similar in function to an overhead projector).

A network connection is available for faculty who prefer to use their own computer for their presentations. Eight network connections are in place for students to use with their personal laptop computers.

Finally, an electronic white board and laser printer are on order which will enable instructors to print their "chalkboard" presentations or copy them into a computer for future use.

We are beginning to work on creating operating instructions for most of the equipment in these rooms. We will continue working on this along with other classroom upgrades during the spring and summer.

In the meantime, watch for announcements of information and training sessions for these rooms. Faculty who teach in these rooms may call Tom Nylén (x8845) to arrange for individual assistance with the new classroom technology.



For more information, check our web page at:

<http://www.d.umn.edu/is/classroom/Resource.html>

Future of student computing at UMD

The Educational Policy Committee of the Campus Assembly has engaged in a long and thoughtful discussion of the future of student computing at UMD. Discussion has centered on two main options: shared computers or a computer for every student. The committee has weighed costs and benefits of these options and looked in particular at the impact on curriculum.



Chair Jonathan Conant presented a report on this discussion at the winter quarter Campus Assembly meeting. EPC plans a spring quarter forum on this issue with action at the spring quarter Assembly meeting.

For details of the discussion, visit the EPC web site and check the minutes of the meetings beginning with January 7, 1998. The URL for this site is <http://www.d.umn.edu/committees/Minutes/EDPOL/1997-1998/>.

Enterprise systems project approved

The University of Minnesota Board of Regents approved the Enterprise Systems Project Plan, including a \$42 million budget and financing proposal, at their December 12 meeting. Members of the UMD community recently received a newsletter called "Click Here for Information about the Enterprise Systems Project." I encourage you to read this newsletter if you have not yet done so. This project will impact all of us at the University.

This project is often referred to as the "PeopleSoft Project," because PeopleSoft is the vendor that will provide replacement software for the Human Resources and Student Services systems. But the project is much broader than this, as explained in the newsletter.

For more information, read the newsletter or visit these web sites:

- Enterprise Systems Project Web Site: <http://www.umn.edu/redesign/>
- Student 2000 Web Site: <http://www.umn.edu/s2000>
- Human Resources Web Site: <http://www.umn.edu/ohr/hrms>

INFO is a newsletter published by the University of Minnesota Duluth Information Services. Your comments and suggestions will be welcomed. Please direct them to the newsletter editor by phone at (726) 8856 or by electronic mail to sbradt@d.umn.edu.
The University of Minnesota, Duluth is an equal opportunity educator and employer.

New web server purchased

The main UMD web server averages about two requests per second from connections worldwide. Because of the increased importance and demand of web services at UMD, Information Services has purchased a computer to boost web system response time.

The new machine is a Sun Ultra-2 with two 200 MHz UltraSPARC CPUs and 256 MB RAM. (In contrast, the current machine is a Sun SPARCstation-20 with one 50 MHz CPU and 64 MB RAM.) The disk for web pages will also increase from 4 GB to 9 GB.

In addition to hardware upgrades, the Apache web servers will be upgraded to the most recent stable versions. Information Services runs web servers on www.d.umn.edu for the main UMD web, for proxy web connections, and for authentication.

The old web machine will be used for the web-based TopClass course management system currently available on www.d.umn.edu. (For information about TopClass, please contact Tom Pollock (*tpollock*).

The anticipated rollout date of the new web machine and separate TopClass system is early spring quarter 1998. For additional information, please contact Scott Hollatz (*shollatz*).

New ftp file permissions set

We recently made a change in the way file permissions are handled when users ftp files to their www directory. This change should simplify the process for adding web pages to your account.

Previously, to add a web page to your account you would run an ftp client (such as WS_FTP or Fetch) and connect to ub.d.umn.edu to transfer your files. You then had to log onto [ub](http://ub.d.umn.edu) and use the `chmod` command to set

the permissions (755 for directories, 644 for files).

Now, you can simply ftp to www.d.umn.edu (instead of ub.d.umn.edu) and transfer files to your www directory - with the correct permissions automatically in place. This means you no longer need to use the `chmod` command to fix permissions for files you upload via ftp (if you ftp them to www.d.umn.edu).

It also means that you can do complete management of your www directory with WS_FTP or Fetch since these programs can create and delete directories, rename and delete files - all with the correct permissions for web viewing.

WWW directories changed

Until recently, if you had a www directory on your account it was just that - a regular unix directory named www located in your home directory. Last fall, in order to cut down on network bandwidth between the home directory disks and the web server, we created a system of "shadow" home directories for everyone on disks attached to the web server.

Each of these shadow home directories (which you don't own, by the way, and can't create any files in) has a www directory (which you do own). Back in your real home directory we created a symbolic link file, called www that points to the www directory in your shadow home directory on the web machine. All accounts are now set up this way.

Most people probably haven't even noticed this change. They just do a "cd www" as usual on unix and it looks like they're in their www directory.

However, if you then did a "cd .." command (to move back up one level) you'd find yourself in an empty shadow home directory instead of back in your real home directory as you might have expected. The "cd" command (nothing after the "cd") is best for jumping back to your home directory from any location.

Another problem we've seen happen is people deleting their "www" symbolic link file and then possibly even creating a new www directory and wondering why the web server can't find it. The fix for this is to use the `relink_www` command to reestablish a new www symbolic link file to your real

www directory on the web server. You could then move any web files you have on your account into your www directory (through the new symbolic link).

Gopher going away

Now that most information resources on the Internet have moved to World Wide Web servers, very little new information is being added to older, text-only information systems like Gopher. Accordingly, Information Services plans to "turn off" our UMD gopher server (gopher.d.umn.edu) at the end of spring quarter.

For the past year we have been working with various groups on campus to convert any remaining information available only on our gopher server to our web server. One example is the Closed Section Staus Reports, which are now available on the web at: <http://www.d.umn.edu/sss/registrar>

If you have any concerns about this service going away, or aren't sure of the status of information you are currently accessing through gopher, please contact Frank Simmons (x8849, *fsimmons*).

Web news

IS staff changes

Neal Oberg has resigned his position with UMD Information Services and has accepted a management position with Murphy McGinnis Media Inc. During the 11 years that Neal worked for UMD he provided support for telephone services, long distance student calling, and web page development.

MaryJo Langlee-Twight has resigned her position with Information Services after working at UMD for almost 24 years. Most recently MaryJo provided programming, consulting, and technology support for customers of Information Services. At this time MaryJo is undecided about her employment future but remains excited about her passion for computing and the technology industry.

Tom Lohman will be leaving UMD on June 10th after 11 years of providing outstanding computer maintenance service for Information Services and for the UMD campus. While working at UMD Tom has also been working toward a degree in Computer Engineering, which he will complete during spring quarter. He starts his computer engineering career in the Twin Cities area soon after leaving UMD, and we wish him much success in the future.

Andrew Manteuffel will begin working in our department March 23 as a User Services Specialist. He will provide support for customer web page design and web development for many of our campus administrative systems and departments. Andrew's office will be located in 15 Darland Administration Building.

Andrew graduated from UMD majoring in Computer Science and Geology. While in school he worked part time for Information Services in the computer labs and the phone/network support team. Andrew is currently employed by the University of Minnesota, General College Tech Support Services Center where he provides support for a wide variety of technical areas including web page

composition, computer lab assistance and evaluation of new microcomputer software and hardware.

Bob Sand will begin working in our central systems area starting on March 23. Bob has prior work experience with Unix systems

administration, networking, Novell and NT systems. Bob is a graduate of UMD with a degree in Computer Science, so both his name and face might be familiar to you. Please watch for more information at a later date regarding his office location and phone number.

Spring Quarter 1998 Seminars

To register for the following seminars, contact Karlyne Holm (x7587, *kholm*). Please include your department name and address and your phone number. Seminars with fewer than 8 people signed up will be cancelled. There are no fees for any seminars this quarter. For more information about the seminars or to request a new seminar, contact Gordee Bennett (x8840, *gbennett*).

Mulberry - Email for Macintosh and Windows 95/NT

Demonstration on how to download and register your own copy of UMD's new Mulberry e-mail program, create addressbooks, and work with file attachments. No registration necessary - select one of the following dates:

Tues	March 24	2:00-3:00 pm	MonH 108
Wed	March 25	9:00-10:00 am	MonH 108
Wed	March 25	3:30-4:30 pm	MonH 108
Thurs	March 26	9:00-10:00 am	MonH 108

Internet File Formats - How to Deal with Them

When you surf the 'net using Netscape, you come across many different file types with extensions such as ZIP, HQX, AVI, etc. This seminar will tell you what software you need to handle these files and how to alert Netscape about them.

Wed	April 1	2:30-3:30 pm	MWAH 195
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Windows 95

An introduction to the features of Windows 95 with hands-on exercises.

Th,F	Apr 2,3	1:30-3:00 pm	CCtr 42
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Microsoft Access 97

Hands-on seminar will define and explain the functions of relational databases in general and Access 97 specifically. Learn the power of wizards in creating forms, queries, and reports on existing databases. Time permitting, create a very basic database with queries and reports to run against it.

M,W,F	May 18,20,22	9:00-11:00 am	CCtr 42
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Year 2000 Project at UMD

Recently we completed a survey of the major computer systems at UMD to determine which are impacted by the year-2000 problem. We listed systems that impact three or more people or cost \$3,000 or more to fix or replace.

The year-2000 problem affects computer hardware and software systems that use two-digit dates. Two-digit dates are a holdover from the past, when computer memory was very expensive and programmers reduced the date to save space. Computer systems that are not year-2000 compliant are unable to



<http://www.umn.edu/oit/year2000/>

determine the difference between 1900 and 2000, since they both appear as 00.

Now that we have an inventory of computer systems that might be impacted by the year-2000 problem, we will continue to track our progress as we work to correct problems. Although UMD does have some software that needs fixing, the

problem is minimal and will likely cost less than \$50,000 to repair.

The biggest problems in the UM system are with the large databases in Minneapolis. CUFS has already been fixed, and both the Student Systems and the Human Resource Systems will be replaced by the new PeopleSoft products.

If you have a computer system that should be listed in the campus inventory, please contact Linda Deneen (x7588).

How to create your own Year 2000 problems (without even trying)

by Joel Ness

Even though Macintosh and Windows operating systems and software don't have a problem with 4-digit years it's still possible to "create" a Year 2000-like problem in spreadsheet or database programs like Excel and FileMakerPro.

Here's the problem. Most databases and spreadsheet programs allow you to enter dates in a number of fashions, such as 3/9/1998, 3/9/98, 3-9-98, etc. These programs then recognize your entry as a date and convert it internally to a full 4-digit year — even if you only typed in the last two-digits of the year. For example, if you type 3-9-98 into a cell in Excel and press Enter, Excel will display your entry as 3/9/98. However, by taking a look at the formula bar you can see that Excel is now storing the date internally as 3/9/1998. The same type of thing happens if you enter a date using a two-digit year into a date field in a database such as FileMaker Pro.

The programs assume that any two digit date you enter is in this century. Thus, if you entered 3-9-02 into a spreadsheet cell it would be displayed as 3/9/02 but the spreadsheet would be storing it as 3/9/1902 — not at all what you wanted if you meant the date to be 3/9/2002.

These programs aren't doing anything "wrong", they're just making best guesses based on your typing shortcuts. If you only need to print and view these dates on the screen it doesn't really matter that the actual date stored internally in the program is different than what's displayed. But it very much does matter if you try to do any calculation, sort, or find operations on these date cells or fields.

The way to avoid this problem is to enter dates using the full four-digit year — 3/9/2002, not 3/9/02. Although you only need to do this with dates starting at year 2000 it might be easiest to get into the habit of doing this with all dates.

For spreadsheets or databases that you are already using, you may want to change the format of the date cells or fields to force them to display the entire 4-digit year. This will help you more easily spot incorrectly entered dates.

Test your older computers

by Roger Petry

The Year 2000 issue includes PC hardware to the extent that older model IBM compatible PC's may not properly store dates later than 12/31/1999. Various computer chip manufacturers used similar schemes when the chips which retain the date and time were designed and programmed.

The University of Minnesota Year 2000 Project web page contains a section (PC & Workstation Validation Process) which addresses the hardware issues and provides a series of tests you can make in order to determine if your PC can accept dates later than 12/31/1999.

If you are not planning on replacing PCs with 80486 and older processor chips before 2000, we recommend that you visit the web site and review the suggestions and testing procedures. There are some cautions provided there as well, so please read through the section before you perform the suggested tests.

If you are using a Pentium-level PC, you do not need to perform these tests because these computers have been designed to properly store and recall dates after 12/31/1999.

Lab surveys reviewed; changes implemented in campus labs

by Jason Davis

For several years, Information Services has surveyed students who use the computer facilities. The data from these surveys is very important;

Faculty input requested on UMD computer labs

by Joel Ness

The Information Services Lab Team would like to gather suggestions for changes and improvements to the UMD computer labs for next year. These might include suggestions for additional software or software upgrades, hardware improvements, and changes or issues with lab procedures.

We have just put our computer lab software request form on the web (<http://www.d.umn.edu/is/labs/software/request.html>) to make it easier to submit requests for software or software upgrades in the labs. We are also hoping to hear from faculty via e-mail or phone about their needs.

We particularly need to find out about any plans or changes departments may be making that would affect use of the labs next year. Looking ahead to the year after that we'd like to find out as early as possible what affect the conversion to semesters would have on faculty use of the computer labs.

We are also very interested in meeting with representatives of departments, especially those that make extensive use of the computer labs, to discuss lab-related issues and ideas. If possible, we would like to schedule these meetings during our regular Lab Team meetings Thursdays at 11:00 a.m..

Faculty input is a vital component to our being able to offer quality computer lab services for students. If you have questions, please contact Gordee Bennett (x8840, gbennett)

it is used in our policy and purchase decisions. During spring quarter 1997, Information Services enjoyed the largest number of completed lab surveys to-date. Following are the most often cited concerns.

Lab environment

The majority of responses were about the temperature in Lib 165, with many students wondering why we have not implemented air conditioning in this lab. Our latest cost-estimate for air conditioning in Lib 165 was over \$80,000, which is not a cost-effective way to use computer lab funds. The new chiller being installed in the Lund building may offer a much cheaper solution. When the chiller is operational, we will re-examine this issue. In the mean time, we have increased the number of fans in Lib 165 and elsewhere.

Hardware upgrades: Most of the hardware requests were for faster Macintosh or Pentium computers. There were also requests for more scanners, faster SunStations, larger monitors, more zip drives, and a better color printer.

With the exception of the Suns, we have addressed all of these issues. The PC labs have been upgraded to Pentiums and we have added 10 PCs to Lib 165. SBE 17 has been upgraded to 7300 Power Macs with 64 Megabytes of RAM and 15" monitors. The 6100s formerly in SBE 17 have been used to replace older Macintoshes in Lib 165. We have added scanners to Engr 204 and H 470. Zip drives are available in every Full Access lab. A new color printer has been installed in SBE 17 which offers higher-quality printing than the color printer we had in the past but the cost per page has remained the same.

There were some requests for faster Sun-stations, but the cost per station is very high, and the usage pattern has been fairly low, so we will not upgrade the Suns at this time.

Software upgrades: Software requests included Windows 95, Microsoft Office 97, a newer version of Netscape, web development software, and a newer version of Mac OS.

We have upgraded all PC labs (including the web labs) to Windows 95. All of the components of MS Office 97 are available (including Word). Netscape 3.01 is running in all of the labs, and we are in the processing of upgrading Mac OS to 7.5.5 in all of the Mac labs. We have just recently rolled out Adobe PageMill to address the web development requests.

Hours: There were some requests for later hours, earlier hours, and more weekend hours. Facilities Management and the UMD Police Department pointed out security issues that prevent us from keeping any labs open after midnight.

These security issues, as well as operating costs, rule out twenty-four-hour labs. We have kept a few labs open until 11:45 p.m. most week nights during the second half of winter quarter. We have also extended Friday and Saturday hours for the second half of the quarter, so that some labs remain open until 10:00 p.m. We try to stay in sync with usage patterns and will continue to reassess this issue.

Consultants

There were many comments, both positive and negative, about the consultants in the labs. It is impossible for our consultants to know everything about every application. It is more realistic to expect consultants to know something about most of the software and hardware in the lab where they are working. Consultants will also know where to look for more answers. We are committed to offering the best customer service we possibly can in the labs. Helping the lab consultants to be in a position to help the students remains a top priority within Information Services.

New office server ready

by Sally Bradt

The new Novell office server, UMD_IS3, is set up and ready for use. IS has begun to add new users to this server (rather than UMD_IS1 or UMD_IS2) and plans to begin moving existing users over to the new server at the end of the month.

The new server is a Pentium-based computer with over 40 gigabytes of hard disk space and 1000 Novell user licenses. This configuration should eliminate the problems with disk storage and denial of service we have seen in the past.

All of the software currently available on both IS1 and IS2 will be available on IS3, as well as several new Windows 95 packages such as FileMaker Pro 4.0 and PageMill.

Moving existing users over to the new server will be done in two steps. The first step involves moving the

"bindery" information from IS1, which includes the account information, user rights and privileges. No users can be logged into any of the servers while we complete this process, which means all software and print services will be unavailable for the duration of this step. We have tentatively selected Sunday, March 29 as the day for this move.

The second step involves moving the individual users and their files to the new server. This may include upgrading the Novell client and reinstalling application software on the user's computer. For this step, we plan to move department by department and to provide on-site staff assistance. We will work with each department to set up a time for their move.

If you have questions about the new server or the move, please contact Sally Bradt (*sbradt*, x8856) or Paula Pollock (*ppollock*, x6190)

Laptops & projector available for off-campus

by Judy Kurschner

Are you planning to make a presentation at a conference or meeting?

Information Services, in conjunction with the Learning Technology Development Team, has a Micron PC and a Mac Powerbook laptop available for off-campus, University business use. A computer projector in a wheeled case is also available for University-related presentations at on off campus site.

Equipment may be checked out for a maximum of five work days to accommodate a week-long conference.

Equipment can be reserved and checked out from Karlyne Holm (X7587) 176 MWAH. You will need to read the policy and sign an off-campus equipment use form before the equipment can be checked out.

A copy of the policy and form is available in 176 MWAH and will soon be on the WEB at www.d.umn.edu/is/classroom/equipform.html.

Denial of service attack hits campus NT machines

by Sally Bradt

On March 5, a rash of denial of service attacks hit a number of sites on the Internet, including UMD and the Twin Cities campus. The attacks caused many Windows NT workstations and servers to crash.

The cause was determined to be a known vulnerability in unpatched Windows 95 and Windows NT TCP/IP stacks. The primary fix is the "NewTear/Bonk/Boink" update (teardrop2) that was released in January.

Since UMD was included in the attack, IS recommends that Windows NT 4.0 users install the teardrop2 patch. Note that users must have previously installed Service Pack 3 and that after installing this fix users will need to restart their NT system.

You can download a copy of the patch locally at:

<http://www.d.umn.edu/is/software/dist/nt4-intel>

For additional information on the attack or on Windows NT patches in general, please see:

<http://www.microsoft.com/security>

Equipment Configurations

LitePro projector

Wheeled carrying case

PC (Micron) laptop

Windows 95
Office 97 Professional (Access, Excel, Powerpoint, Word)
Netscape
UMD communications software
CD-Rom drive
Modem

Mac Powerbook 3400

OS 7.x
Microsoft Office 4.2 (Excel 5, PowerPoint 4, Word 6)
WordPerfect 3.5
Netscape 3.01
FileMaker Pro 2.0
UMD communications software
CD-Rom drive
Modem/Ethernet

Updated IS web pages

IS has recently added or updated the following web pages with information for the campus. If you have comments or concerns about the information on these pages, please send them to Linda Deneen (x7588, *ldeneen*).

Customer Service Goals

Information Services has set goals for our services to the campus. These goals include expected response times, billing expectations, and guidelines for consulting work. We hope that setting out these goals in writing will make it easier for our customers to determine when our services are timely, to know what services will be billed, and to understand our constraints with regard to consulting. Please visit our new Customer Service Goals web page at <http://www.d.umn.edu/is/about/csgoals.html>

Recommended Solutions

The latest version of Information Services' Recommended Solutions (formerly Support Standards) is on the web at <http://www.d.umn.edu/is/policies/solutions/index.html>. This document is intended to provide advice to the campus regarding acquisition of hardware and software. If you are thinking of buying something, or if you are wondering whether to upgrade, look here for our advice.

E-mail services from page 1

we currently have and at the same time minimize the time between when an e-mail message is sent and delivered into the recipient's mail box.

This change should speed up on-campus mail delivery to and from services administered by Information Services. It will probably not have much of an impact to other systems, especially systems on the Internet.

Learning Technology Center Spring Quarter Hours

Mondays:	
Open:	8:00 am - 9:00 pm
Staffed:	10:30 am - 6:30 pm
Tuesday:	
Open:	8:00 am - 9:00 pm
Staffed:	9:00 am - 4:00 pm
Wednesday:	
Open:	8:00 am - 9:00 pm
Staffed:	10:30 am - 4:30 pm
Thursday:	
Open:	8:00 am - 9:00 pm
Staffed:	9:00 am - 6:00 pm
Friday:	
Open:	8:00 am - 4:00 pm
Staffed:	10:30 am - 4:00 pm

Mulberry from page 1

sage or to save to your hard disk e-mail attachments you receive.

- Drag-and-drop capabilities simplify message management.
- Multiple windows allow you to easily switch between viewing and composing messages in multiple folders.

Mulberry is not a free or shareware program. Information Services has purchased Mulberry licenses and is making them available to UMD faculty, staff, and students.

If you have an e-mail account at UMD you will be able to download a copy of Mulberry and obtain your own personal serial number and registration key. This registration key is valid during your affiliation with UMD; if you leave UMD and want to continue using Mulberry you must purchase your own license. While at UMD, you can use your copy of Mulberry on any computer you work with (at school and at home) but can't share your copy with others.

If you have questions relating to Mulberry or other e-mail software, contact Joel Ness (x8841, *jness*). You may also want to stop by one of our Mulberry demonstration sessions planned for Spring quarter (listed in the seminar schedule on page 4).

Rates from page 1

- Monthly network charge up to \$2.25 from \$2.
- Novell print-only services down to \$4.50 from \$6.00 per month.
- Novell full service down to \$7.50 from \$10 per month.
- Sun workstation charges up to \$55 from \$54 per month.
- SGI workstation charges up to \$76 from \$63 per month.
- Disk storage down to \$0.006 from \$0.01 per mega character day.
- CPU charge down to \$0.31 from \$0.40 per CPU minute over 8.
- Printing down to \$0.05 from \$0.06 per page.

Information Services has also proposed changes in the student computing fees for the coming year. These are:

- Basic Access up to \$2.50 per credit from \$2 per credit, with a minimum of \$15 and maximum of \$45.
- Full Access up to \$36 per quarter from \$30 per quarter.
- Printing is no longer included in the fees, but will be paid separately by the students at the rate of 5 cents per page.

In addition to changes in IS rates, we are also carefully monitoring the proposed rates of Networking and Telecommunication Services (NTS) in the Twin Cities. NTS has completed the first year of their ISO rate study this year and is reviewing with central administration the impact of their proposed rates. One rate that may affect this campus is the cost of Internet services provided to us by NTS. This rate is \$1.88 per month per network connection for all campuses. There is some hope that this rate will be centrally subsidized, but if not, then we should anticipate this additional fee on our campus network connections.

For details, see our web page at <http://www.d.umn.edu/is/>. Look for *Billing and Rates* under *About IS*. Listed here are both our current rates for 1997-98 and our proposed rates for 1998-99.

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