

Information Technology

Newsletter

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High-speed access,
another Techmart
discount!



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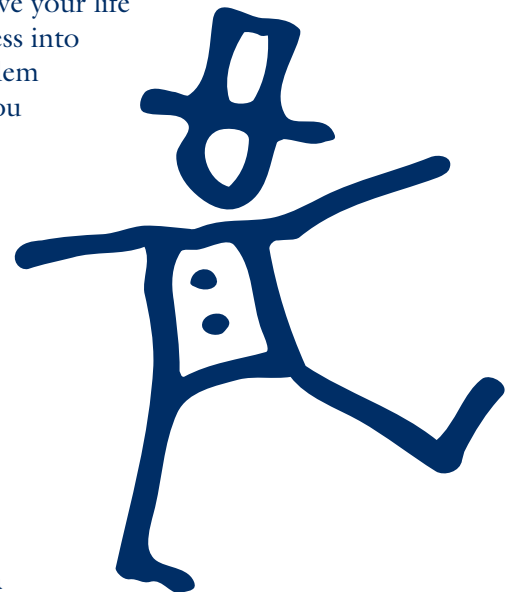
Get DSL or a Cable modem

High-speed Internet access from home

You've seen the TV and print ads leading you to believe your life will be better if you, too, get high-speed Internet access into your home. And faster appeals to you. Even with modem access bumped up to 56k (56,000 bits per second), you know why the Web is frequently called the World Wide Wait. But you wonder: is it worth paying for this service when you already have an account through your University affiliation?

We've put together information that may help you decide; and, perhaps equally important, set up University discounts for high-speed access. We even have a "What's it really like" story from one of our staff.

The University discounts are available through Techmart. You can use the table in this article to get a quick overview of the differences between the two high-speed offerings, and use Techmart's links to go to the vendors' Websites for more details on the services they're offering the University community. You access Techmart on-line at this Web address: <http://www.techmart.umn.edu>



Who's eligible?

Current faculty, staff and students who live in Minnesota can take advantage of the Techmart specials. Alumni accounts are not currently eligible.



Why get DSL or cable modem access?

The University discounts offered through Techmart are for Qwest's Megabit DSL (Digital Subscriber Line) and AT&T's Road Runner cable modem options. Both high-speed services offer these features:

- Instant gratification:** no need to dial up; no busy signals
- Freedom:** it's like an electric light; it stays on until you flip the switch
- Stability:** dedicated cables/wires mean more reliable service
- Reclaim your phone:** when someone's on-line, the phone is not tied up
- More mail boxes** for family members or projects
- Speed:** enjoy graphic, video and sound resources that are too much trouble to use over a modem

A note about speed: regardless of your connection, your speed can vary depending on Internet and local traffic congestion.



Supported Hardware

The Windows and Macintosh platforms are supported. If you've purchased a new computer within the last 2-3 years, you probably have a powerful enough computer to sign up for high-speed access. The exact system requirements for Road Runner (cable modem) and Qwest's MegaBit (DSL) are listed on each service provider's Web page, which is accessible through Techmart: <http://www.techmart.umn.edu>

FTP is supported

Both Qwest's DSL and AT&T's cable modem services support FTP (file transfer protocol), so you can

transfer documents to and from the FTP servers to which you have access, such as ones you use to back up files and documents on your personal computer.

DSL service provided by many ISPs

DSL service is provided over phone lines; and the telephone companies that own these lines are known as "common carriers," a status that requires that they share access to their lines. Consequently, there are many ISPs (Internet Service Providers) who can give you access to DSL service.

The University currently has agreements with Golden Gate and Qwest, two ISPs who can provide DSL Megabit service, to offer discounted rates to University faculty, staff and students.

Currently the University has no plans to meet Qwest's requirements for becoming an ISP for the Megabit DSL service Qwest offers.

Cable modems and ISPs

Your cable provider is also your ISP for cable modem services. (Cable lines don't have the "common carrier" status that telephone lines have.)

AT&T Road Runner note: "In June 2000 AT&T acquired MediaOne and assumed their ownership in Road Runner" – more information is available in the "Who We Are" section at this Road Runner Website: <http://www.rr.com/rdrun/>

The University's role

The University of Minnesota is an Internet Service Provider (ISP) that automatically sets up Internet accounts for employees and currently enrolled students. The basic options for University Twin Cities accounts include unlimited access through on-campus Ethernet connections and 50-hours a month of dial-up access through the 56k modem pool served by the telephone number 612-627-4250. There are no plans to change these arrangements.

FCC Consumer Facts

An additional source of information about high-speed /broadband access is the Federal Communications Commission. Their *FCC Consumer Facts – Broadband Access for Consumers* publication is available on the Web at: <http://www.fcc.gov/cib/consumerfacts/dsl2.html>

Table 1: Overview of Megabit DSL and AT&T Road Runner University specials that are available through Techmart

| Points to Consider | DSL (Digital Subscriber Line): MegaBit (Qwest DSL activation, installation and modem promotions end December 31, 2000.) | Cable Modem: AT&T Road Runner Residential Service (UM promotional prices are on top of prevailing market offers.) |
|---|---|--|
| <p>Location</p> <p>Do you live in an area that supports the service?</p> | <p>■ The Qwest MegaBit service area currently includes: Anoka, Blaine, Bloomington, Brooklyn Center, Burnsville, Coon Rapids, Cottage Grove, Crystal, Eagan, Eden Prairie, Excelsior, Fridley, Golden Valley, Hopkins, Maplewood, Minneapolis, New Brighton, North St. Paul, Plymouth, Richfield, Shoreview, Stillwater, St. Paul, Wayzata, West St. Paul, White Bear Lake.</p> <p>To see if your home phone qualifies, visit this Website: https://megawot.uswest.com/availability</p> | <p>■ AT&T Road Runner service is currently available in towns and cities ranging from Afton, Arden Hills, Brooklyn Park and Brooklyn Center through Vadnais Heights, White Bear Lake and Woodbury, including many St. Paul neighborhoods. It's not available in Minneapolis.</p> <p>For the complete list of over 60 Minnesota locations where service is currently available see: http://roadrunner.techmart.umn.edu/avail.html</p> |
| <p>A. Upload speed: send something from your computer to another computer or server.</p> <p>B. Download speed: access or copy something from the Internet to view, listen to or store on your machine.</p> <p>● kbps: access speeds are measured in kilabits per second.</p> | | |
| Upload speed. | ■ Around 128 kbps or faster | ■ Speeds of 300 kbps are possible |
| Download speed. | ■ Speeds up to 600 kbps | ■ Speeds up to 1500 kbps |
| Activation and/or installation cost. | <p>■ \$0: activation fee is waived. (\$69 fee is waived during the promotion.)</p> <p>■ \$0 to \$99 installation cost.</p> <p>1. \$0: use the MegaBit installation kit to install it yourself. (The service includes access to an 800-number for technical support.)</p> <p>2. \$99: pay to have a Qwest technician come to your residence and install it. (Regular price is \$149.00.)</p> | <p>■ \$0: cable modem installation is free for University customers.</p> <p><input type="checkbox"/> You don't have to be a current cable TV subscriber to add AT&T Road Runner cable modem service.</p> <p><input type="checkbox"/> If your residence is not already wired for cable and you need a typical installation, there is no charge for cable installation.</p> |

<http://www.techmart.umn.edu>

Table 1, part 2
Overview of Megabit DSL and AT&T Road Runner specials

| Consider | DSL: Megabit Service from Qwest | Cable Modem: Road Runner through AT&T |
|---|---|--|
| <p>Initial cost for Modem and/or Ethernet.</p> | <p>■ \$0 to \$150; to use Qwest's Megabit service you must use specific DSL modems.</p> <p>■ When you place your order you will answer a series of questions and your answers will determine which of the two modem offerings you actually need.</p> <p>1. No charge for the internal Intel 2100 single user modem. You don't need an Ethernet card with this modem, which is compatible with Windows desktop machines. (Regular price is \$145.00.)</p> <p>2. \$150 for the external Cisco 675 modem which also requires an Ethernet card. This modem is compatible with Macintoshes and Windows laptops and is required for those who set up a LAN to share multiple PCs and a DSL connection. (Regular price is \$295.00.)</p> <p><input type="checkbox"/> Macintosh note: for MegaBit service to work properly, users of iMac G3 and G4 with USB ports must purchase a \$50-80 USB to DIN8 adapter cable.</p> | <p>■ \$0 modem cost. The monthly fee includes the cost of leasing a cable modem.</p> <p><input type="checkbox"/> You may need to upgrade your computer to give it Ethernet capability. Your computer must have a working Ethernet card with an RJ45 connector or an open slot for an Ethernet card. Other Windows and Mac options are:</p> <p>A. Windows: USB port but only for Windows 98, ME and 2000. Note open slot requires a free compatible IRQ.</p> <p>B. Macintosh: Open Transport v.1.1.1, but Open Transport 1.1.2 is recommended.</p> |
| <p>Cost per month.</p> | <p>■ \$33 to \$45 per month.</p> <p>■ To get DSL service you must select two things: (1) a DSL option and (2) an ISP (Internet Service Provider).</p> <p>■ 1. Select a DSL Megabit option</p> <p>A. An always on connection: Standard/Deluxe Megabit service has no time limit and is \$29.95/month.</p> <p>B. Not an always on connection: Select Megabit service, where Internet access is <i>limited to 2 hours at a time</i> but there is no limit to the number of daily sessions, is \$19.95/month.</p> <p>■ 2. And select an ISP</p> <p><input type="checkbox"/> Note: because DSL is a Federally regulated service, the University's discount is only in the ISP portion of the charge.</p> <p>A. Golden Gate's fee is \$13.00/month</p> <p>B. Qwest's fee is \$14.95/month</p> | <p>■ \$34.95 per month, which includes the cost of leasing a cable modem.</p> <p><input type="checkbox"/> There is no separate ISP charge; your cable provider is also your ISP.</p> <p><input type="checkbox"/> The UM promotional price is on top of any special offers for new customers that are currently offered in your area.</p> <p><input type="checkbox"/> if you have cable TV service, you can watch cable TV and use your cable modem at the same time.</p> <p><input type="checkbox"/> You can sign up for 2 hours per month of mobile access, an option that lets you access the Internet when you're away from your cable modem. This option won't work in every location.</p> |

Table 1, part 3
Overview of Megabit DSL and AT&T Road Runner specials

| Consider | DSL: Megabit Service from Qwest | Cable Modem: Road Runner through AT&T |
|---|--|--|
| <p>Sharing</p> | <p>■ You get one dynamic (variable) IP (Internet Protocol) address. Although there is no additional charge to let more than one computer use that IP, to share a connection you must purchase an external adapter and a hub.</p> <p>□ You can lease static IPs for an additional cost.</p> | <p>■ Cable modem service is tied to a specific computer so you cannot share the connection.</p> <p>□ For a fee you can purchase additional IPs.</p> <p>□ Note: if you change computers you must contact your service provider.</p> |
| <p>Sign-up</p> <p>To get the discount you must sign up through the Techmart Website.</p> | <p>■ The phone bill must be in the name of the person who's eligible for the discount.</p> <p>■ If you already have Qwest MegaBit DSL service, do not cancel your current DSL service and resign up under the University plan. Until Qwest has a system in place to switch from their regular charge to the University's discount, you must call the University Technology Helpline, who will contact our Qwest representative on your behalf asking that you be given the discount.</p> | <p>■ If you are a new subscriber or already have AT&T Road Runner service, you can sign up for the UM discount via the Techmart website.</p> |

Current Libraries drawback

Some licensed e-journals that the Libraries have purchased restrict access to those who connect via a “.umn.edu” address, that is, those accessing the Libraries from an Ethernet connection on campus or those who dial in through the University’s modem pool.

“Some of our journal publishers and vendors – understandably nervous about putting their valuable content up on the Web where non-University affiliates could access it for free – place restrictions on access to their e-journals and limit their use to University of Minnesota-Twin Cities users whose computers are on the campus network. Such e-journals restrict access based on the IP (Internet Protocol) address that your computer is currently using. Think of it as your computer’s fingerprint. These e-journals screen all users against a list of all IPs on the University of Minnesota-Twin Cities

campus (computers in campus offices or computer labs, or connections to the campus modem pool)...We have applied a software fix to some of our e-journal collections, which should let them be accessible (to current students, staff, and faculty at the University of Minnesota-Twin Cities) from non-U of M-TC Internet connectivity software. You will still need to log in with your U of M Internet ID and password. For more information, see our Electronic Journals page (<http://www.lib.umn.edu/articles/ej.phtml>).

We hope to enable remote access to the rest of our e-journals in the near future. Thanks for your patience and understanding.”

From Library FAQ, record 103 (in the troubleshooting and e-journals section) available at: <http://faq.lib.umn.edu>

What's it really like?

To get a better understanding of what it's like to do something, many people want to talk to someone who has already done it. We have a staff member who's in a good position to offer a comparison because that staffer's home has both cable modem and DSL service. Read on for a quick comparison and a personal perspective.



I am now in a bizarre position of living with both sorts of services. Yes, I really have two independent broadband connections into my house right now... this means I'm well covered if one provider's service has problems, but so far both have been quite reliable. That I am continuing to use both services is a good illustration of the differences between DSL and cable (and how much we use the Internet at my house).

How did it all begin? That I started with DSL service was partly a function of what was available in my neighborhood and what I wanted to do with the connection.

Location is important because the distance of your home from the telephone company's central office plays a crucial role in what DSL services are available. For my house, US West is not currently providing DSL services because I am more than 3 miles from the nearest US WEST central office. However, even in the dark ages of DSL US WEST was not the only game in town. Other companies provide DSL service using different technologies, and it was possible to purchase a somewhat slower form of DSL service (called iDSL) from Onvoy, which I did.

DSL: sharing and speed

However, even given the limitations of iDSL, buying DSL was one of the

best computer investments I have ever made. Why? First, the connection is always live, so you don't have to wait to be connected. Second, even though iDSL is the slowest form of DSL available, at 144 Kbps upstream and downstream, it is much faster than the fastest reliable modem connections I could get. Working at home feels almost as fast as the network connection at work for most things other than large file uploads and downloads. Even though moving a large file is not quite as fast as in my office at the University, it is at least feasible.

Note that most DSL service today is much faster than iDSL: you can expect to see downstream data rates around 600 kbps with upstream data rates of around 128 Kbps. These sorts of asymmetric data rates are fine if what you're primarily interested in is visiting Websites. If you are thinking of sending large amounts of data (like running a server), then you want to look into a service that provides fast upstream and downstream connections.

Another thing I like about my DSL service is that it is possible to share the connection among a couple of computers using a technique called NAT (Network Address Translation). The iDSL router that was installed in my house supports NAT, so after spending some time reading the manual, I figured out how to share the DSL connection among all computers in my house. So, not only was the connection to the Internet faster than via modem, but by setting up a small network inside my house, everyone at home (except the cat) could share the connection and the telephone was not always busy.

Since I was interested in running a server, I was very interested in a

service that would provide at least one static IP address. Some services are designed primarily for browsing the Web; and for this sort of use, it does not matter what IP address your computer gets when you connect. However, if you are running a server, you want the server to be at a known address, and a service that provides static IP addresses is important.

Installation in the dark ages

The actual installation of the iDSL circuit was an exercise in frustration since back in the dark ages (last year), US West was not doing very well with installing phone lines for competing DSL providers. Things should have improved since then, given the change in US West (they are now Quest) and other changes that allow for DSL providers to share existing phone lines in many cases. To be fair, I was a worst-case installation since a new phone line was needed (unusual), and the phone box is located inside my house, so someone had to be home on a couple occasions as US WEST brought in the new phone line, and then Covad's tech visited to install their equipment. On the other hand, I did end up with a nice router installed on the wall in the basement, and I can work from home a lot more effectively. In spite of the hassles involved in getting the service installed, I would not willingly give up DSL service. Once the DSL router was in place, using the service was a simple matter: connect the Ethernet interface of my computer to the Ethernet connector on the DSL router. My DSL router even came with a couple spare Ethernet spigots, so until the number of computers at home went over 4, I didn't have to buy an Ethernet hub. More computers at home is an

unintended consequence of a DSL connection.

What about a cable modem?

So, if DSL is so great, why would you consider getting broadband Internet access via cable modem? In my case, the answer is to get much faster downloads.

So, several months ago, I got a cable modem connection from the cable company called MediaOne, but now called AT&T Broadband. Over the last year and a half, MediaOne replaced its old cable system so that they would be able to offer better TV, phone service, and high speed Internet access. While the wiring infrastructure MediaOne uses is different from DSL, what you see in your home is an Ethernet connection (just like my DSL service). Once the cable modem is installed, you connect the Ethernet interface of you Mac, PC, or Linux machine to the cable modem's Ethernet port, configure your PC's network connection, and you are set.

Speed and dynamic addresses

The most dramatic difference between cable modem and DSL is speed. On good days I can see speeds in the range of 380 kbps upstream and 1100 kbps downstream. However, these speeds are somewhat variable because the cable system is set up so that you share bandwidth with others in your area. If someone else is doing a lot of downloading at the same time you are, you may see the speed decrease. You can also see some broadcast traffic from other computers on your segment of the cable system. This is a consequence of how the cable people have built their system. Rather than having a router filtering traffic in the basement (which is what I have with my iDSL service), the router is located somewhere upstream of me in MediaOne's world. In any case, the speed difference is significant,

especially when viewing videos and downloading audio (such as MP3 files). I make it a point to use the cable modem connection whenever I plan to do large downloads.

The downside to the cable modem service is that it is set up with a dynamic address, and the dynamic address is not tied to a specific computer. That is, whenever the computer configured for use with the cable modem is turned on, it asks MediaOne's server's for the IP address to be used for the session. This is a drawback if you are planning on running a server, since the server needs to be at a predictable address. If you change your computer, you need to call MediaOne to tell them the Ethernet hardware address of you new computer, since they use Ethernet hardware addresses to control who gets IP addresses (and limit access to specific machines).

Another downside to the cable modem service is that the cable modem does not have the built-in firewall and NAT capability that my iDSL router has. MediaOne does offer relatively inexpensive additional network addresses so you can share the network connection with other computers in the house. On the other hand, the built-in NAT and firewall in my DSL service was one less thing to sort out. Firewall capability is a consideration for the security it can provide. If you have an always-on connection to the Internet, you also have an always-on avenue for the curious to probe how secure you computer is.

Installation of the cable modem went fairly smoothly, although the cable tech had to climb the pole in my backyard and tighten the connections for the cable feed to my house (which had the side effect of improving the TV signal). The tech also replaced the filters in the coaxial cable feeding into the house. This was necessary because the Internet access uses frequencies that

are not used by the cable TV service. So, my Jurassic home cable plant was slightly upgraded. Since the coaxial cable inside the house did not run all the way to the basement where I have my local area network hub, I ended up making an Ethernet cable to run from the cable modem to the hub that serves the house's local area net.

Home network infrastructure

Whichever sort of broadband connection you get, high-speed network access at home will raise the issue of network infrastructure in the house. This becomes a real issue if there is more than one computer user who wants to share the connection. At a minimum, you may end up connecting the computer with a local area network. I ultimately ended up buying a 24-port Ethernet hub and running Ethernet cable up the laundry chute. I am gradually pulling Ethernet into each room of the house. I know other people who have purchased wireless Ethernet hubs so that they could share the network connection without pulling cables through the house.

You do want to give some thought to securing your computer from the inevitable probes by script kiddies. Visit the www.dslreports.com Website for some pointers on network tuning and security; this site also has tools to measure the speed of you network connection.

For many people, the DSL vs. cable modem decision is already made because of where you are located or what sort of service you want. For others, speed or the availability of static IP addresses are considerations that will influence your decision. In either case, you should get more reliable service than dial-up modem over analog phone lines. There are no busy signals, and you have a fast enough connection that streaming media (audio and video) is feasible to access from home.

■ Office of Information Technology

Secrets Revealed! The Top 10 “Hidden” Resources of the University Libraries

Nancy K. Herther, University Libraries, <http://www.lib.umn.edu>

Is the library hiding something? Not really, but you’d think so given the number of high-quality, yet underutilized, resources awaiting the curious explorer on campus! Here’s a list of ten I’d consider essential gold mines for the inquisitive intellectual.

“There it was, hidden in alphabetical order.” Rita Holt

1. Want a cutting edge experience? Make your own ebook!

Located in Room 179 Wilson Library, near the general reference collections, the Electronic Text Research Center (ETRC) provides help with specialized full-text files and analysis software. It also conducts various digitization projects to demonstrate how texts can easily be made computer-readable for teaching and analysis. The center specializes in materials in the humanities and social sciences. Currently the center coordinates three text conversion projects. Two of them (“Early Modern French Women Writers” [EMFWW] and “Women’s Travel Writing, 1830-1930”) are part of our Women’s Studies Digitization Project. The third deals with “Early 19th Century Russian Readership and Culture.”

Each semester the ETRC also sponsors a series of e-text training sessions. Usually held in Wilson Library, the sessions are informal with plenty of time for questions, and are open to all faculty, students and staff. This semester eight sessions were held, including one on the ETRC’s EMFWW Project. This project recently received an unsolicited Internet award. The site was selected as a Links2Go “Key Resource” in the Women’s Writers category. Each quarter, Links2Go samples millions of Web pages to determine which pages are most heavily cited by Web pages authors.

If you would like more information, especially if you have a text-based project that you would like to digitize and mount on our server as a separate collection for easy Web access, please call the ETRC at 612-624-6370 or check out their Website at: <http://etrc.lib.umn.edu>

“A good book is the precious lifeblood of a master spirit, embalmed and treasured up on purpose to a life beyond life.” John Milton

2. Need some numbers to crunch?

The Machine Readable Data Center (MRDC) serves the University and the State of Minnesota through its dual role of providing social science data services and as the coordinating agency of the Minnesota State Data Center network. Wendy Treadwell and her staff will be happy to help you plan your project and get the data you need. Their Website is at: <http://www.lib.umn.edu/mrhc/>

Social science data services of the MRDC to the University include: providing access to specialized social science statistics in electronic format and empirical data sources; research support for access to and appropriate use of statistics and data sources; and instructional support for statistical literacy from novice user to researcher level.

The MRDC is also the University’s home site for ICPSR data. ICPSR stands for the Inter-University Consortium for Political and Social Research and is located at the University of Michigan in Ann Arbor. ICPSR promotes and facilitates research and instruction in the social sciences and related areas by acquiring, developing, archiving and disseminating data and documentation for instruction and research, as well as conducting a related instructional program.

“Seize the moment of excited curiosity on any subject to solve your doubts; for if you let it pass, the desire may never return, and you may remain in ignorance.” William Wirt

3. Free learning opportunities. No tuition? No grades?

The University Libraries offers a variety of in-depth training opportunities targeted to our user populations. This Fall we offered special graduate student orientation programs, tours of our facilities as well as specialized sessions on particular research databases – the citation indexes, dissertation abstracts and others – as well as

sessions on how to use the Internet for research and how to use citation/reference database software packages. All the sessions are free, and the comments from attendees have always been excellent. If you want to check this out, go to our orientation and education Web page at: <http://www.lib.umn.edu/research/instruction/>

"You can use all the quantitative data you can get, but you still have to distrust it and use your own intelligence and judgment."
Alvin Toffler

4. A cure for the common cold? Health and medicine in the news

Imagine you're driving into work and on the news is a brief report of some new wonder drug or cancer cure. Not only is it difficult to get the full story in the popular press, it can be impossible to even figure out the meaning of their quick 'sound bites.'

Never fear! When it comes to helping you find out what is *really* being reported, our Bio-Medical Library has created a database to save you time and energy in the pursuit! Health and Medicine in the News is a database accessible from the library's Web page at: <http://www.biomed.lib.umn.edu/hmed/>

Each day's *StarTribune* is scanned for relevant articles that mention or discuss journal literature and meeting abstracts on health and medical subjects. The first priority for inclusion in this resource is newspaper articles that announce new research findings or refer in some way to current or forthcoming scholarly publications.

Each entry in the database briefly describes the contents of each article, giving you the citation to the newspaper article. If possible, the complete citation to the cited article is given and sometimes you will even find an abstract if one is available. The articles themselves may be available through the Bio-Medical Library or Inter-Library Loan. There may be some delay in getting the link to the original scholarly work since press releases and newspaper coverage may precede our receipt of the journal.

And that isn't all! The Web page will link you to other complementary services. These include the Biomedicine and Health in the News from the University of Connecticut Health Center that covers articles from the *New York Times* and news-related health and science sites such as the New York Times Syndicate: Your Health Daily, Newswise's SciNews and MedNews, Reuters Health Information and ScienceDaily.

"Too much of a good thing is wonderful." Mae West

5. Become a true map-maker!

Christopher Columbus could only dream of the advanced tools available in the Map Library! Have you ever dreamed of being able to represent a dataset in full-color maps rather than long lists of numbers to be crunched by some computer? Do you share Edward Tufte's goal of visualizing information? Then you will want to check out the Automated Cartographic Information Center (ACIC). The ACIC is a ten workstation GIS computer lab equipped with the latest hardware and software for use in making computer generated maps. Located in the John R. Borchert Map Library in the subbasement of Wilson Library, the center has trained staff on hand to help you get started on your research. Call Brent Allison and his staff in the ACIC at 612-625-9024 for more information, or check out this Website: <http://map.lib.umn.edu/>

"I have an existential map. It has 'You are here' written all over it." Steven Wright

6. Home-grown databases help you find the forests and the trees

If you've never been to the Forestry Library on the St. Paul campus, you have missed a fine collection of books, journals, government documents, maps and pamphlets relating to the subjects of forestry, forest products, outdoor recreation, range management, wood and paper science and remote sensing. These collections serve not only the College of Natural Resources' faculty and students but also the University community at large and the general public. For more information on the Forestry Library, check out this Website: <http://forestry.lib.umn.edu/>

However this is only one aspect of their service to the University and the world: Jean Albrecht and her fine staff have assembled a suite of four unique, invaluable research databases used by researchers worldwide.

● Social Sciences in Forestry

This database indexes publications in 41 subject areas relating the social sciences to forestry. Among them are: legislation, policy and planning, management, economic development, investment and finance. The database covers 1985 to the present and is updated weekly.

- **Trail Planning, Construction, and Maintenance**
Indexed publications relate to the planning, design, construction and maintenance of all types of trails. Trail use studies are included. The database covers 1984 to the present and is updated weekly.
- **Tropical Forest Conservation and Development**
Subjects indexed include: Tropical forest resources; deforestation; conservation; indigenous peoples; management; policy; trade and industrial development; non-timber forest products; research, education, and training; and history. The database covers 1992 to the present and is updated weekly.
- **Urban Forestry**
Indexed publications relate to the history of urban forestry; urban forest legislation; the benefits of urban forests; selection and planting of trees; maintenance of the urban forest; planning and management; and urban forestry programs. The database covers 1982 to the present and is updated weekly.

“Curiosity is the very basis of education and if you tell me that curiosity killed the cat, I say only the cat died nobly.” Arnold Edinborough

7. “A billion here; a billion there; pretty soon it adds up to real money”

Senator Everett Dirksen said it. If you’re interested in ‘real money,’ here’s a treasure you need to explore! The Business Reference Service (BRS) in Wilson Library provides a comprehensive reference collection of electronic sources, printed sources, and other library materials on all traditional business subjects. Emphasis is placed on subjects taught in the Carlson School of Management. However, this collection is an essential one for anyone interested in managing their finances, planning their investments or retirement or hoping to keep up with economic trends – <http://busref.lib.umn.edu> – And isn’t that all of us?

Judy Wells, Caroline Lilyard and the fine staff in BRS have earned the reputation as one of the Library’s most accessible, friendly reference staff. And this is only *one* reason to stop in. The electronic collections include some of the most critical tools for examining industries, companies, products and trends. One essential research tool available to researchers in the reference room is the Bloomberg service.

The Bloomberg service includes current and historical price data on all kinds of securities, including stocks (equities), bonds, currencies and others. Also included

are news stories, indices, charts and technical indicators. You can use the system to quickly look up ticker symbols and basic up-to-the-minute stock information on publicly-held companies worldwide; locate consumer price index data for some segment (say housing), going back some specified time period (let’s say six months); find recent news stories on the gold market or even watch the ups and downs of today’s market.

Launched in 1982, Bloomberg provides its services to over 300,000 clients in over 100 countries around the world, with integrated services (news, analytics, research and pricing) for such market segments as: government, corporate, mortgage, money market, municipal, preferred equity, commodities, indices, currencies and derivatives. For general information on the database, check out the Bloomberg Website at: <http://www.bloomberg.com/>

To access the database itself, you’ll need to visit the Business Reference Service in Wilson Library. While you are there, check out some of these other premier business databases: BNA Tax Management Portfolios, Computer Select, First Call, Info Tech Trends, RIA Checkpoint for information on companies and industries worldwide.

8. Michelangelo’s Pieta visits Wilson Library

What? Yes, the Pieta is visiting the University Libraries! Thanks to state-of-the-art multimedia technology you can get the best look at this masterpiece ever without travelling to Italy! IBM has donated the interactive kiosk-based presentation to a select group of museums and libraries – and we are one of them! Housed on the first floor of Wilson Library, the goal is to make significant works of art, such as the Pieta, more accessible to all people. In addition to giving the Libraries the kiosk, IBM has donated an additional \$10,000 to the Libraries to support this project.

Test your cultural IQ or just spend a few minutes in reflective retreat. Michaelangelo himself is quoted as saying: “Trifles go to make perfection, and perfection is no trifle.” Seeing our Pieta is well worth a trip to Wilson!

*“The beginning of knowledge is the discovery of something we do not understand.”
Frank Herbert*

9. The AP photo archive

The Associated Press (AP) Photo Archive is now available to UM faculty, staff and students of the Twin Cities

campus. What can you use this archive for? Just about anything you can think of that might contain a graphic image: science, engineering, history, political science, communications and even art. You can use the date search to narrow a search to a particular year or span of years to capture the pictures of the Depression years or the summer of love. You can use a key word search to find portraits of famous and the infamous, from Mark Yudof to Bill Clinton to the Mayflower Madam. You can also find pictures of the unknown but news worthy: from the image of Kim Phuc fleeing a Vietnamese village, her body on fire from napalm, to a picture of the Beatles first US tour, to a shredded Firestone tire, to a humble worm used in the human genome project.

It is all here. The earliest photos I found were by Matthew Brady in the 19th century. There were many photos from Humphrey's presidential bid in the late 60s, Martin Luther King's freedom walks, the 'Big Three' at Potsdam after World War II and over 250 on the Gulf War. You can follow the U's academic fraud investigation or the ascent of Jesse Ventura. Pictures can be downloaded into student papers or teaching segments for class use.

The archive contains well over 700,000 photos; and if a picture is worth a thousand words, imagine the value of this collection! Most of the images date since late 1995, but there is a significant selection of older pictures from the fifty million AP image library. The archive grows daily, adding both current and older images.

"Truth, like gold, is to be obtained not by its growth, but by washing away from it all that is not gold." Leo Tolstoy

The Photo Archive is organized into two sections: The International Photo Archive, which features state, regional and national photos from North America and international sources; and a Euro/Asian Photo Archive, which features regional photos from Europe and Asia. Each database contains identifying dates and location information as well as captions that describe the content in detail. All of the descriptive information is searchable, and you can download just the image, or the image as well as the accompanying text. There is also a graphics database, dating from late 1999, which contains AP-created graphics including maps, graphs and charts on a wide variety of topics from the hazards of smoke to the Montana wildfires to the steps of cloning a cow or sequencing DNA. You can find charts for the stock market or a map showing areas of drought in the United States.

Need to add a little multimedia magic to your presentations or papers? Give this database a good look!

"Curiosity is one of the permanent and certain characteristics of a vigorous mind."

Samuel Johnson

10. Beilstein makes reactions

As someone who can truly be described as chemistry-challenged, this is a database that I haven't had the need to use. I am just happy we have the talents of science librarians like Ann Eastham on staff to handle these topics. However, for those who are able to deal with the complexities of chemical compounds, Beilstein is a heavenly addition to our campus resources. Beilstein CrossFire Plus Reactions database includes information on over seven million organic compounds. Covering 1779 to the present, this database contains critically evaluated properties and reactions of organic chemical compounds. Citations to the original articles are included. For the more recent references (since about 1996), abstracts are included for most citations.

The database is searchable by chemical structure, chemical reaction, formulas and keyword. It is based on the well-respected print resource, Friedrich Konrad Beilstein's German masterpiece, *Handbuch der Organischen Chemie*. The electronic version also includes much of the data found in Beilstein's inorganic/organometallic twin, Leopold Gmelin's *Handbuch der Anorganischen Chemie*. Together, the two portions constitute the largest collection of chemical data in the world.

Current faculty, students or staff members at the University of Minnesota, Twin Cities campus, can download the client software to their own computer and search from there. Otherwise access is available from the Science & Engineering Library temporarily housed in Norris Gym, Magrath Library and a few other selected campus libraries – allowing you to get advice and assistance from talented experts as you navigate the database.

Undiscovered yet not lost

If these examples aren't enough to lure you into one of our campus libraries, then consider this: these are the musings of only a single librarian here on campus. Imagine the priceless treasures that the librarians in your nearby campus library have to share with you! And they are all here-and-now, free for the asking! For more information on these and other fine treasures in our libraries, ask at any reference desk on campus or feel free to contact me.

■ Communications about this column should be addressed to: Nancy K. Herther, Social Sciences Bibliographer, 170b Wilson Library, West Bank; 612-624-2020, n-hert@umn.edu

Teaching, Learning, and Technology

An Emerging and Contextual Faculty Support Model

Linda A. Jorn, Director, Digital Media Center

As institutions of higher education face limited financial resources and unlimited requests for resources, we are increasingly reminded to develop strategic plans that provide cost effective and collaborative services, improve the quality of teaching and learning and provide greater learner access to higher education. While developing strategic plans, deans are increasingly identifying the need for students to have access to technology enhanced learning (TEL) experiences. As a result, deans and directors of central instructional technology units are looking for exemplary faculty support models that can support the specific mission of colleges, promote cross-unit collaboration and adapt to changing environments.

One such faculty support model was presented at EduCause 2000 on October 11, 2000 by Kashif Asdi, Instructional Multimedia Consultant, Digital Media Center (DMC); Dr. Dan Detzner, Associate Dean for Academic Affairs, College of Human Ecology (CHE); Linda Jorn, Director, DMC; John Sonnack, Director, Information Technology, CHE; and Dr. J. D. Walker, Instructional Multimedia Consultant, DMC.

Presenters described a TEL faculty support model that:

- Focuses on strong collegiate and university-wide strategic objectives
- Builds on the strengths of collegiate and central instructional technology support units
- Adapts to contextual collegiate needs and emerging faculty /student/technology needs
- Includes a comprehensive programmatic evaluation

As they discussed the model, presenters discussed major areas. Linda Jorn highlighted the size of the University

of Minnesota campus; the Office of Information Technology (OIT) and collegiate information technology expenditures; the Digital Media Center mission, staffing and faculty support services. (Figure 1)

Dr. Dan Detzner discussed the College of Human Ecology (CHE) vision for faculty use of learning technologies and for CHE TEL support services. He emphasized his belief that TEL experiences can be transformative and create learning communities; and he explained how CHE TEL support services practice the following: collaboration with other units to provide services, emphasis on faculty training, continuous evaluation of services and sustainable services.

John Sonnack described CHE's Technology Learning Center (TLC) mission, staffing and services. He also discussed how, in 1997, the need developed for CHE week-long 'Web Camp' faculty training, how the CHE/DMC collaboration started and how the Web Camps were funded and faculty recruited. Kashif Asdi and Sonnack provided details of how CHE staff and DMC/ADCS staff collaborated to design the Web Camp curriculum (this curriculum taught the process for developing course Websites); develop training materials; provide trainers and training assistants; and support hardware and software. Sixty-three faculty and staff members attended the Web camps and fifteen course Websites were developed soon after the camps. (Currently more than 100 CHE courses have Websites.)

Sonnack highlighted a few findings from a 1998 CHE Technology Needs

Assessment Survey of faculty which showed faculty believe:

- Formal technology support is very important, is often understaffed and is best delivered in individual and small-group settings
- Students need to be assured they have access to technology
- Powerful computers and classroom technology infrastructure is needed
- They receive inadequate recognition for TEL efforts

Sonnack also discussed how the survey results, along with the Web Camp experiences, day-to-day requests, changes in technology and changes in student needs, has resulted in a long-term partnership between CHE and the DMC. For example, CHE technology staff continue to provide training to CHE faculty and attend DMC/ADCS training courses for their own professional development. In 1999 CHE and DMC/ADCS staff again collaborated to provide customized WebCT camps to CHE faculty. Up to 1999 this partnership focused mainly on faculty training. Since 1999, the partnership has emphasized collaboration on a CHE TEL evaluation project.

J. D. Walker discussed the CHE TEL program evaluation. CHE wants to collect longitudinal data that will help improve technology-related faculty services, provide information about technology successes and difficulties, show results of spending on technology and assess effectiveness of faculty's use of technology in undergraduate classes. In order to collect data CHE/DMC de-

College of Human Ecology, Technology Learning Center (TLC)

The TLC is both a learning center where training and learning materials are available, and a project development laboratory where faculty and administrative staff can partner on projects with technical experts to produce electronic media and learning materials.

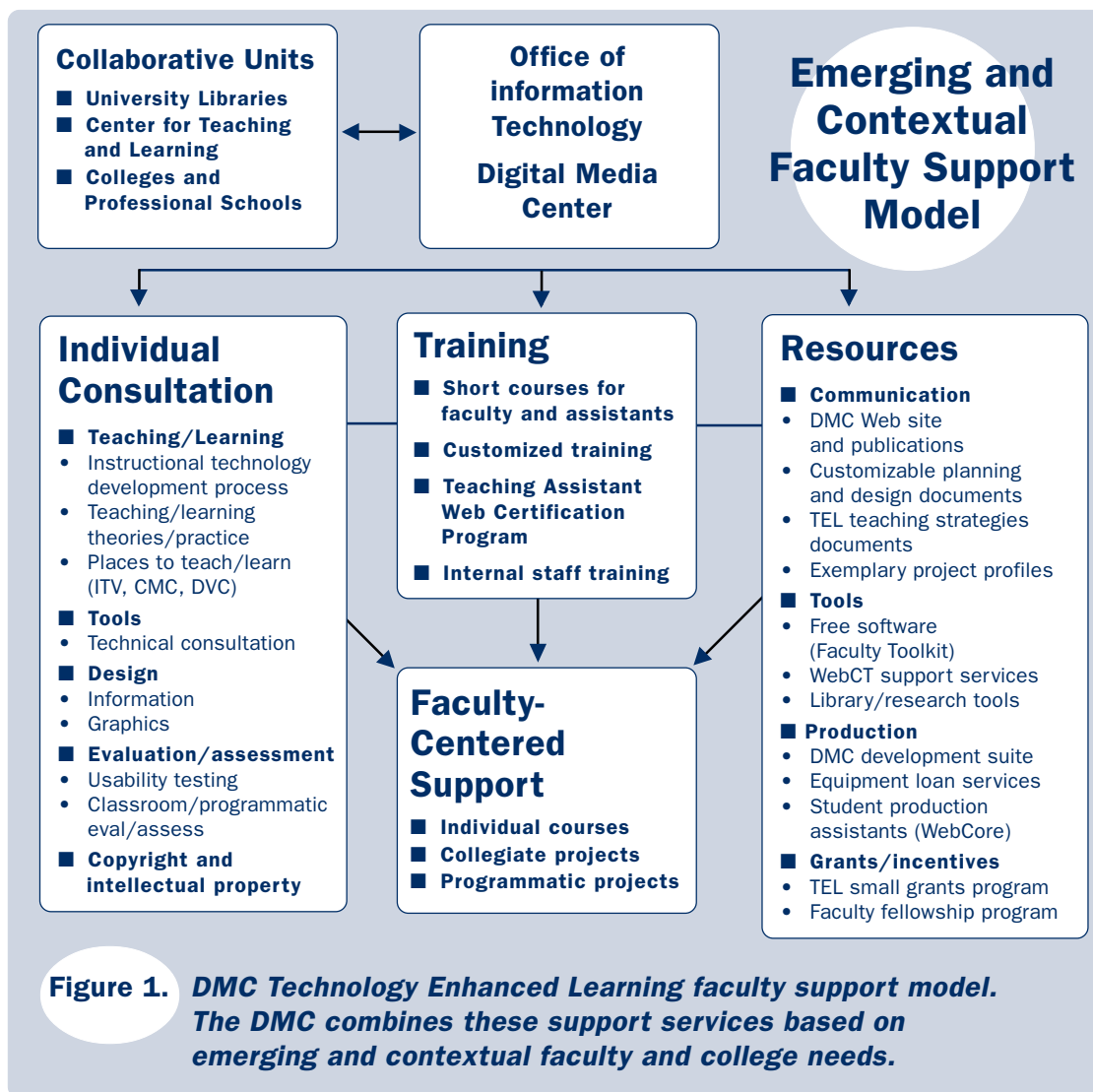
cided to focus on evaluating TEL training programs, CHE and University facilities and infrastructure, technical support, and TEL courses taught by CHE faculty. Data collection tools consisted of a faculty survey, faculty focus groups and a student survey. (Student focus groups are pending.)

Walker highlighted a subset of issues investigated:

- What do faculty see as major barriers to their use of TEL?
- How do faculty prefer to learn about new educational technologies?
- Do faculty believe that technology can be educationally beneficial?
- How can we reach faculty who have never used TEL?
- How have students changed their work habits as a result of TEL?
- In what ways have educational technologies made learning easier? More difficult?
- Are student age, gender, and other factors correlated with attitudes towards technology? With comfort levels?

To learn more about the preliminary data results and how you might adopt and adapt the CHE/DMC evaluation project to your college:

- view the EduCause PowerPoint slides: <http://www.umn.edu/dmc/portfolio/educause00.shtml>



- look at the CHE/DMC evaluation project: <http://tlc.che.umn.edu/evaluation>

After Walker highlighted several findings from the faculty surveys, focus groups and student surveys, Linda Jorn emphasized how the CHE/DMC partnership has emerged and focused on contextual needs – CHE’s vision, information technology staff size and knowledge, faculty and student needs and technology changes. Jorn closed the presentation by identifying eight criteria for a successful central/collegiate partnership:

- Focus on faculty centered support
- Understand deans’ commitments to a TEL vision and funding

- Emphasize project management – goals, roles, and evaluation
- Provide access to a robust/reliable technology infrastructure
- Plan/budget for local and central support infrastructure
- Work on long-term relationships
- Promote the scholarship of teaching
- Challenge and retain instructional technology professionals

Jorn also briefly highlighted other central/collegiate partnerships by describing specific faculty needs and project team members and detailing the various central/collegiate services that were provided. For more details, please visit <http://www.umn.edu/dmc/portfolio/educause00.shtml>

UCS is moving in January

When?

When this was written in mid-November, we hadn't heard an "official" January date yet. The UCS Website will be updated frequently as moving details become available.

Where is it?

The building is located at the intersection of Huron Blvd. and University Ave. SE. The Peking Garden is across the street on the east side of the building. See the UCS Website for a map.

Why?

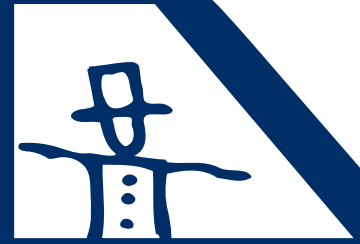
- The new building will be a more convenient East Bank location and customer parking will be available.
- This new building will proudly display a bigger and better used computer showroom for your computer shopping needs.
- The building will house various units from the Office of Information Technology (OIT). This will enable us to provide more of a complete technology service.

Moving Sale!

Since we'd like to move as little computer equipment as possible in the cold month of January, UCS is offering a Used Computer moving sale!

**New Address:
2218 University Avenue
on the East Bank**

**For moving updates and
the used computer list,
visit the UCS Website at
<http://www.umn.edu/ucs>**



Receive **30%** off the regular price during the week of December 11.



Receive **40%** off the regular price during the week of December 18.



The **Wild Wednesday** discount of an additional 20% off still applies!

For example, on Wednesday, December 20, you will receive a total of 60% (40% + the Wild Wednesday 20%) off the regular price! *

** With exception to the Moving Special discount and Wild Wednesday discount, no other discounts will apply. In fairness to others, we will not be able to put computer equipment on hold.*



Visit the UCS Website for a list of the used computer equipment in stock:
<http://www.umn.edu/ucs>



UCS is currently located at
2331 University Avenue, Suite 152, Minneapolis, MN (on the east side of the Minnesota Daily).

Current business hours

are Monday–Friday,
8:00 a.m. to 4:30 p.m.

■ Renee Wright, University
Computer Services

Did you know?

The Libraries can help you with your other New Year's resolutions, too!



Believe it or not, one hour's worth of reading in a comfortable chair (in your home, office or here at the library) will burn 117 calories for the average 150 pound person. Walking an hour at a leisurely pace to your nearest campus library will burn 207 calories!

Compare that to washing the dishes for a comparable time period to burn 153 calories, or shoveling snow for an hour to unload 405 calories!

"Now, when I read constantly about the way in which library funds are being cut and cut, I can only think that the door is closing and that American society has found one more way to destroy itself." Isaac Asimov

Would you rather help the spouse rearrange the furniture for an hour to burn 450 calories?

So, pull up an easy chair, grab a good book and enjoy. Feed your soul and avoid frostbite. For more examples of things to do (or avoid doing) check out this Website: <http://www.personalhealthzone.com/caloriesburned.html>

■ Nancy Herther, University Libraries

"The important thing is not to stop questioning. Curiosity has its own reason for existing. One cannot help but be in awe when he contemplates the eternity of life, of the marvelous structure of reality. It is enough if one tries merely to comprehend a little of this mystery every day. Never lose a holy curiosity."
Albert Einstein

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▼ Help

Phone: Area Code = 612

Computer Misuse or Abuse (also see Procedure 2.8.1.1)

- Emergency Network Help Line 625-0006
- Non-emergency, e.g., spamming: abuse@tc.umn.edu

1 Help • 7/24/365, unless otherwise noted 301-4357

■ CCO: central systems, PeopleSoft

- Web: <http://www.umn.edu/cco>
- by email: x-help@cafe.tc.umn.edu

■ Internet, Email, Microcomputers, Distributed Systems

- call-in Monday–Thursday • 8 am–11 pm
- call-in Friday • 8 am–5 pm
- call-in Saturday • noon–5 pm
- call-in Sunday • 5 pm–11 pm
- walk-in 8 am–5 pm, M–F:
152 Shepherd Labs; 93 Blegen; 50 Coffey Hall
- Web: <http://www.umn.edu/adcs>
- by email for U of M: help@tc.umn.edu

■ Passwords: new and forgotten ones

■ NTS-TAC: Technical Assistance Center

- Web: <http://www.nts.umn.edu>

▼ Dial-in Computer Access

Internet/PPP/SLIP: up to 53kps if v.90 612-627-4250

(56k K-flex, Flex56, X.2 protocols are unsupported)

Modem Usage (current activity on your account)

www.nts.umn.edu/services/modemusage.html

▼ Web and Internet Addresses

Quick Guide

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

Internet/Email account management/validation

<http://www.umn.edu/validate>

MNCAT/LUMINA (Library) – <http://www.lib.umn.edu>

Office of Information Technology

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

Onestop Services – <http://onestop.umn.edu>

Techmart – <http://www.techmart.umn.edu>

UM News Server – news.tc.umn.edu

▼ General

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Threats, UM Police Department 911 on campus

- off campus 624-3550

Technology Training Center 625-1300

- Web: <http://www.umn.edu/adcs/info/training.html>

Computer Accommodation Program – voice/tty... 626-0365

U Computer Services/Computer Repair Serv 624-4800

Digital Media Center 625-5055

Statistical Software Support:

- including SAS and SPSS 624-3330

Associate Vice President and

Chief Information Officer, Steve Cawley 612-625-8855

Newsletter subscription information and archives at <http://www.umn.edu/oit/newsletter>

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Twin Cities campus address label trivia: the 2nd number after the Rec# is the Campus Mail delivery code, <http://umn.edu/lookup>

Dec. 2000 [pantone295,1205]

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