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Computer and Information Services Newsletter

This newsletter is an information resource for the University of Minnesota.

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▽ Computer Store News

Williamson Hall: 625-3854

The WordPerfect Site License program for departments is in place; call the hotline at 626-1782 with questions.

We carry the GN Netcom telephone headsets and accessories. These headsets are compatible with the University phone system and come with a two year warranty. Several models are available for \$145.

Free E-mail Updates

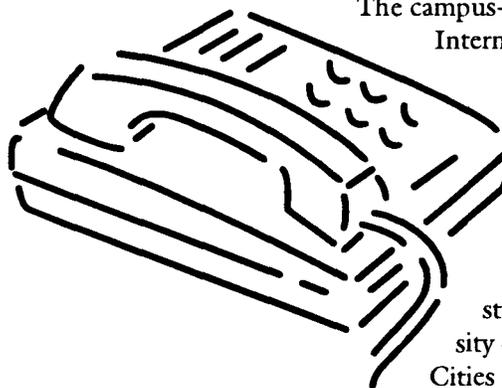
To get product and price change bulletins sent to you electronically, subscribe to the *Bookstore prices* list by sending E-mail to:

request@boombox.micro.umn.edu

Campus-wide E-mail and Internet Access

Donald Riley, Professor, Associate Vice President and Associate Provost Academic Affairs

It Began in 1992



The campus-wide E-mail and Internet access project was introduced in the fall of 1992. This project provides free electronic mail and Internet access for all faculty, staff and students at the University of Minnesota Twin Cities campus.

When we introduced this project, we also initiated dial-up SLIP access; thereby providing for network connections from off-campus telephones, such as home and dormitory, with an initial pool of 32 modems.

Explosive Growth

Since that time, we have experienced explosive growth in the use of these facilities. On the central E-mail machines, "maroon" and "gold," we are now delivering 800,000 messages per week with a growth rate of around 5-10 percent per week. The dial-up SLIP access has been experiencing similar growth of around 20 percent per month. On a typical day, users make between 12,000 to 15,000 SLIP connections.



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Cheshire labels are recyclable.



Best wishes in the New Year

As of this writing the SLIP modem pool stands at 400 modems; by the time you read this it should have about 600 modems.

This kind of growth has been difficult to accommodate, both from a financial and human resources standpoint, given University budgets of recent years.

Lost Funding

The University's supplemental budget request last year, vetoed by Governor Carlson, included funds for expanding the E-mail systems and increasing the number of modems in the SLIP modem pool. Enhancements and expansion have occurred through reallocation of funds and staff from other projects, but it has not been easy. The loss of the vetoed funds forced us to develop alternative, less expensive plans for enhancing the E-mail system and delayed the implementation schedule until right around the start of classes this fall.

The timing was of major concern to Computer and Information Services' staff. Since projected growth rates in use of E-mail indicated that the E-mail system would not be able to handle the expected fall load, the decision was made to go ahead with the acquisition and installation of the Sun Microsystems multiprocessor units.

Temporary Slowdown

Unfortunately, we immediately hit an undocumented problem in the software supplied by Sun Microsystems, which only appears when you try to handle more than 125-130 simultaneous interactive users. It took over a month — working closely with Sun software engineers — to find and correct the series of problems associated with this phenomenon. During this time period, users experienced E-mail delivery delays of up to 12 hours. However, even during this difficult period, the volume of E-mail delivered was significantly higher than last year at this time (as shown in the *Busy Signals* article in our December issue).

We believe we are past these difficulties, and we are delivering E-mail at record levels of approximately 800,000 messages per week. During the peak busy period, which occurs around 3:00 p.m. each day, the maximum delay time for mail to be delivered through the "maroon" and "gold" mail systems is no more than 30 minutes.

Expanding the SLIP Modem Pool

To accommodate the growth in demand for dial-up services, we are expanding the SLIP modem pool by an additional 200 modems. Here again, in our planning we encountered a dilemma. We knew we needed to add additional modems, and newer, faster modems were supposed to be on the market this summer. We had hoped to add more modems by the fall; however, delivery schedules of the modem vendors and subsequently the terminal server vendors were delayed. Given the limited resources available to invest in the modem pool, we thought it prudent to delay until we could install the newer, faster modems, rather than going with the older technology.

We have been testing the newer terminal servers and plan to have the new modems and servers in place around the first of the year.

What's Next?

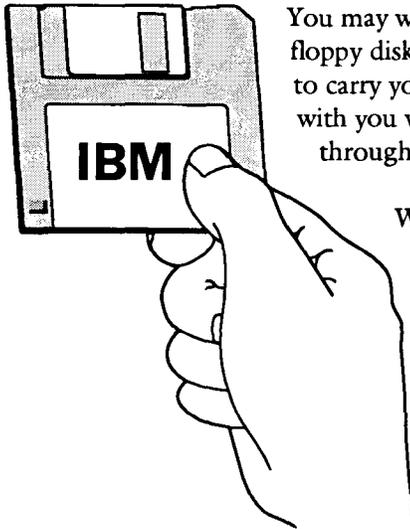
What next? Up to this point, the E-mail and Internet access as well as the dial-up SLIP access has been a free service to all faculty, staff and students. Because of the problems of keeping up with the explosive growth in use of these services on extremely limited budgets, we have been engaged in analyzing usage patterns. Based on this analysis, we have concluded that a very small percentage of the users consume a very large percentage of the available resources. We are considering the possibility of providing some base level of free access to faculty, staff and students, but also implementing some kind of fee-for-service for those users who consume significantly more of the resources.

Another option is to add dedicated modems for particular users or departments and charge for this special service. At the present time, adding sufficient modems to address the access problem would be too costly; and tariffs are currently too high to make ISDN or leased 56k lines a viable choice.

We have been striving to provide a high quality, reliable service to University faculty, staff and students either free or at as low a cost as possible. While limited University resources have made this difficult, we remain committed to this objective and will continue to work hard to achieve it.

Floppy Minuet

Using a floppy disk to access E-mail



You may want to use Minuet on a floppy disk if you need to be able to carry your E-mail messages with you wherever you go throughout the day.

When you use Minuet on a floppy disk you can read and compose E-mail messages using any IBM compatible computer anywhere; even if the computer does not have a network connection. In

addition, you can use your "Floppy Minuet" disk to *fetch* and *send* E-mail from any Computer Facility — or from home via SLIP dial-up access to the campus network.

Create a Minuet Floppy Disk

We recommend that you use a high density 3 1/2-inch disk. Format your disk and copy the following Minuet files:

```
MINUET.EXE
MINUET.CNF
CUSTOM.TXT
MINUET.HLP
```

These files are located on *micro_info*, our IBM Information (Novell) server. The easiest way to copy them is to take a floppy disk to:

- any Microcomputer HelpLine
- students can go to any Computer Facility (a list is at the end of this article)

Remember to format your disk first. Then go to the P: drive. A batch file named

```
flopmin.bat
```

Figure 1: Fill in these Minuet Fields

E-mail Address	lily1010@gold.tc.umn.edu
Your full name	Jasmine R. Lily

will copy the four Minuet files to the drive you specify. For example, at the P:\> prompt type:

```
flopmin a:
```

After the files have copied, you will have about 778K of extra space for messages and files. Minuet creates all the other files and directories as needed.

Start Minuet

By the time you read this the Computer Facilities on all campuses should let you access Minuet on a floppy disk.

East Bank or St. Paul

After you start up one of the IBM-compatibles, you will be presented with a C:\> prompt. (If you are given an option, select the DOS prompt.) To start your copy of Minuet, at the C:\> prompt type:

```
a:minuet
```

Press the **(Return)** key and wait for Minuet to load. You will see the *Incoming mail* window.

West Bank (HHH 50)

When you start an IBM computer in HHH 50, you are presented with a *Novell Menu System* with a list of selections. When you select

1. Floppy Minuet

a message will remind you to insert your Minuet floppy disk in drive A. Once you press **(Return)**, Minuet will load from your floppy disk.

Set up Minuet

The first time you start Minuet, you will want to set it up for your E-mail account. From the *Setup* menu choose *User* and you will see a "Setup Personal Information" dialog box. Fill in the two fields shown in Figure 1.

You must enter your *complete* E-mail address; in the example in Figure 1 that address is:

lily1010@gold.tc.umn.edu. If you wish, you can also enter your full name. Leave the other fields blank.

Click OK or Press Alt-K

To tell Minuet you have completed filling out a dialog box, click OK or press the Alt-K keys.

Password Security

To ensure the security of your account, *do not* enter your password in the Setup dialog box. Minuet will automatically prompt you for your password when it is needed to access the network. If you misplace your disk or someone else tries to use it, they will not be able to access your account without entering your password.

Additional Setup Menu Choices*Automate Your Mailings*

- A. Select *Preferences*. Check *Add signature to outgoing mail* so that your signature is automatically appended to every outgoing message. You may want to check *Save copy of outgoing mail* to keep a record of messages you send.

Create Signature

- B. Select *Signature* to enter your signature. A polite signature would be short but include your name, E-mail address, and institutional affiliation, such as:

Jasmine Lily, lily1010@gold.tc.umn.edu
University of Minnesota, Plant Biology

Create an "Address" Book

- C. Select *Aliases* to enter a list of E-mail addresses of people and groups. For example, you may send E-mail frequently to your friend in Ecuador, your cousin Wanda Fish, and your garden club.

An alias is a meaningful name followed by a blank space and one or more E-mail addresses, as shown in Figure 2.

Fetch Your Mail

You can use any IBM-compatible in one of the Computer Facilities; all of them are connected to the campus network. To fetch new mail you should be in the

Incoming mail

window. Press F3 or click the *Fetch* command to begin transferring the mail from the mail server to your floppy disk. If your password is needed, Minuet will prompt you for it.

All fetched mail messages are automatically saved to the directory:

A:\INBOX.MBX

Enclosures

Any enclosures you receive are saved to the directory

A:\ENCL

In order to read an enclosure, you will need the application which created it, such as Microsoft Word or WordPerfect.

Reading and Composing E-mail

You do not need to be connected to the network to read or compose E-mail messages. You can compose as many messages, replies, and forwards as you like. Your only limit is disk space.

You can start Minuet on any IBM-compatible that can read your disk.

- Read messages in the Incoming mail window. If necessary, select the *Window/Viewer* command to see it. Press F8 or F7 to go to next and previous messages.
- To compose a new message, go to a Composer window. If appropriate press F2 for Composer; the exact command you use depends on which Minuet window you start from.

Fill in the information for recipient, subject line, and message "fields." If you have set up aliases, remember to use the *Alias* command to designate recipient(s).

Figure 2: Sample Alias List

<p>Juan jrivera@pi.geo.ec trevor tplant@bcfreent.neflin.lib.fl.us garden_club rose@thorn.com tiger123@maroon.tc.umn.edu asmyth@flowers.org</p>
--

- Each time you want to begin a new message, press **F8** to open a new Composer window; press **F7** to go back to a previous message.

You can return to any message to edit it. Minuet saves all your messages until you can send them. A status message at the bottom of the Composer window tells you which message you are composing, for example:

Composer 5 of 5

Sending Messages

To send your messages, you must connect to the network. Start Minuet as usual and select *Window/Composer*.

Send One Message

To send a single message, display the message you want to send and press the **F4** key or click *Send*.

Send All Composed Messages

To send all the messages you have composed, hold down the **Shift** key and press the **F4** key, or hold the **Shift** key and click the *Send* command.

Quit Minuet

Always quit Minuet before you eject your disk! From the keyboard press **Alt-X**; or click *Exit* from the *File* menu.

Disk Full

Eventually, your disk may fill up. For many people, the easiest solution is to start a new Minuet floppy disk. If you like, you can skip the on-line help file, MINUET.HLP, and save 121K. However you will notice additional files that Minuet created when you set up your signature, aliases, etc. If you want to continue to use the information in these files, copy the files listed here to your floppy disk:

POPMAIL.GUP
 MINUET.SIG
 MINHIST.TXT

Do not copy any of the directories.

More Information

To use Minuet's on-line help, click on the command or field where you want help, then press **F1**.

A short *Minuet Quick Reference Guide* is also available. It covers the basics and lists the commands by function key. You can pick up a copy at any Microcomputer HelpLine. Or, if you are on-line, you can get the text file *quickref.txt* by anonymous ftp from boombox.micro.umn.edu.

Using Minuet/FTP

From Minuet's menu select the *Window/FTP* command and enter the server name

boombox.micro.umn.edu

Minuet assumes you want to use anonymous ftp, so click OK when you see the dialog box with the word *anonymous*. Then follow this path:

pub/pc/minuet/quikref.txt

To retrieve the file, press **F3** for "Fetch File." Once you have retrieved the file you can view it by using Minuet's *File/Open* command.

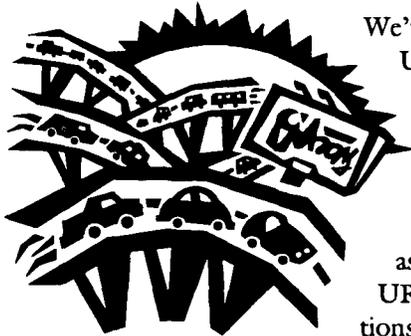
If you have questions about using Minuet, you can call the E-mail HelpLine or, send E-mail to minuet@boombox.micro.umn.edu.

Computer Facilities for Floppy Minuet

Building	Room
East Bank	
Lind Hall	26
Folwell Hall	14
Walter Library	9
Eddy Hall Annex	54
St Paul	
Central Library	B50
COB	135
McNeal Hall	305
West Bank	
HHH Center	50



URL-aware Software for the Mac



We've recently released URL-aware versions of TurboGopher and POPmail. You'll find brief announcements for both products below as well as some information on URLs and helper applications that understand URLs.

The parts that follow the colon vary. Generally two slashes (//) precede a host (or port) name.

Embedded URLs

Instead of retyping the URL, you want to give a command that says: go get it. To animate an embedded URL, the software must automatically establish a link with the document or directory. Next the client software that can display, print, or save the item must be launched. To execute these requirements the software must know several protocols. Protocols are the rules used to define, distinguish, and transmit data.

▼ Uniform Resource Locator

URLs can make locating resources on the Internet relatively easy. U-R-L stands for Uniform Resource Locator. URLs are an increasingly popular naming scheme that includes the location and method of obtaining items or directories on the Internet. The methods of obtaining Internet resources include gopher, http (www), news (newsgroups), mailto (E-mail), ftp, and telnet.

A Standard Form of URLs

Recently a working group of the Internet Engineering Task Force (IETF) produced a document (rfc 1738) defining a standard form for URLs. Given a standard way to point to resources on the Internet, a next step is to animate the URLs that get embedded inside documents. Animating the URL is desirable because a drawback to URLs is that they tend to be long and composed of curious and mysterious garbage words, as shown in Figure 1 (some of these examples are from the "On-Line Dictionary of Computing," copyright Denis Howe, 1994).

As you can see, URLs are crammed with information. Included in the URL is the name of the access scheme you need to use to view or acquire the information. That word is followed by a colon, for example:

```
ftp:
http:
gopher:
```

▼ Helper Applications

Since old Internet protocols evolve and new ones get introduced, adequately supporting all protocols in one application imposes horrific overhead on the development of software. Rather than trying to do everything in a single bloated application, several Macintosh developers (named below) banded together to develop a modular approach. They worked on a way to let software call external, helper applications that "speak" the correct protocol. Their efforts resulted in a suite of network access components.

Mac network applications can use the AppleEvent suit this team developed to do two things: call other applications and fetch resources pointed to by IETF-standard URLs. This approach makes it easy to add URL support to most Macintosh applications since the software can simply call appropriate helper applications to handle the URL.

The Mac developers of this suite include:

Internet Gopher team (University of Minnesota)	TurboGopher, POPmail and InternetLink
Peter Lewis	Anarchie
John Norstad	Ph, NewsWatcher
Steve Dorner	Eudora
John Hardin	MacWeb

Figure 1: Sample URLs

```
ftp://wuarchive.wustl.edu/mirrors/msdos/graphics/gifkit.zip
http://info.cern.ch:80/default.html#Introduction
```

```
<URL:ftp://ietf.cnri.reston.va.us//internet-drafts/draft-ietf-uri-url-08.txt>
<URL:GOPHER://wombat.doc.ic.ac.uk:70/77m/Dictionary>
```

We're very pleased with this approach. Ultimately this sort of architecture allows developers to concentrate on doing one thing really well and gives end users more choice in the tools they use for Internet access.

Thread Manager

These kinds of software upgrades come with a price: they don't work with old system software. To take advantage of these new features you need the Thread Manager extension installed on your Mac. The Thread Manager works on all Macs running System 7 or later. A thread is simply a series of instructions executed in a program, and the Thread Manager is a tool that manages these threads in multitasking endeavors.

If you are running System 7.5, the Thread Manager is already installed on your Mac. On pre-7.5 systems you must drop the Thread Manager into your System folder and restart your Mac. A copy of the Thread Manager is included with TurboGopher.

Mode 32 Conflict

Thread Manager conflicts with Mode32, software that some old Macs using System 7 have installed.

Why use Mode32? Once Mode32 and System 7 are installed, those who use a Mac II can access up to 72MB of RAM and users of Mac IIx, IICx, and SE/30 systems can access up to 128MB of RAM. Mode32 is of no use to 16-bit Macs, that is, the Plus, SE, Classic, and Portable. Mode32 is not needed for the newer Macs.

▼ POPmail 2.2b2

We've made one significant change to POPmail (electronic mail client software): version 2.2b2 includes support for resolving URLs that are embedded in E-mail messages. This change makes E-mail messages seem like Internet-aware hypertext.

Fetch that URL

Now when your friends, colleagues, or mailing list group write to you about some wonderful Internet resource, if they use the URL reference, you can use the *Mail* menu's

Resolve URL

command to check out the resource. To make this option work, you must first highlight the URL (by dragging your mouse through it).

To actually fetch an item pointed at by a URL, POPmail calls the appropriate helper application. If you do not have a cooperating helper application on your hard disk, POPmail will not be able to complete your request.

Painless Upgrade

The upgrade is painless. When you copy the software to your disk you do not lose the options you've selected from the Setup menu, any messages you've saved or archived, or any groups you've created.

▼ TurboGopher 2.0b5

Version 2 of TurboGopher marks the start of our move toward a component architecture for Internet access tools; it works with all versions of System 7.

TurboGopher is still the fastest Macintosh Gopher client software available. Version 2 runs in native mode on Power Macs and on other Macs running System 7. This turbocharged version lets you read the first part of a document or directory while the rest is being fetched. You can fetch multiple documents or directories at the same time and view documents larger than 32K without first saving the document to disk — providing you have enough memory in your system.

Updated On-Line Help

Although you can learn a lot about TurboGopher's new features just by reading the built-in help, we'll cover a few topics to get you started. You'll find the *Help* item under the *Gopher* menu. Once you've opened a Help window, you can use the *Edit* menu's *Find* command to search for specific topics.

The first time you start TurboGopher version 2, it opens the Help window. If you close that Help window, it will ask:

*Do you want to save the changes to
"TurboGopher Help"?*

We strongly suggest you answer "Yes." The documentation answers common questions and also has an advanced features and shortcuts section; this section contains information on features that most longtime users eventually want to master.

Bookmarks

Gopher bookmarks serve the same function as paper bookmarks. Both make it easy to return to selections you want to peruse again. There is one major difference between paper bookmarks and Gopher bookmarks. Paper bookmarks are static. Gopher bookmarks save a pointer to the networked item. The actual item stays on another computer (the Gopher server). Since this pointer simply acts as a link to a point in Gopherspace, the contents of the referenced item may change when you link to it the next time.

The bookmark feature of TurboGopher version 2 has been improved. One improvement is that you can now use standard Macintosh *Cut-Copy-Paste* commands to build or rearrange your list of bookmarks.

Accessing Old Bookmarks

Version 2 has a different implementation of the bookmark feature. A by-product of this change is that version 2 does not recognize unconverted version 1 bookmark files. Although preparing for this conversion requires extra steps on your part, the process is easy.

Create a Separate Bookmark File

Many versions of TurboGopher let you save bookmarks you've accumulated to a separate file. This feature also lets you make a backup of your bookmarks; the cautious will already have made a backup of their valuable bookmark collection. If you do not have a current backup, you must create one *before* you can open your bookmark file in TurboGopher version 2.

Version 1

Save as Bookmark File

Start up TurboGopher version 1. If the Bookmarks window is not open, select the *Show Bookmarks* option from the *Gopher* menu. Next, select the *Save as Bookmark File* option from the *File* menu. If you save the backup to your desktop, it will be very easy to find when you import the "old" bookmarks into TurboGopher version 2. When you're done; use the *Quit* command.

Version 2

Option plus Open Command

Start up TurboGopher version 2. Hold down the **Option** key while selecting *Open* from the *File* menu. You may need to navigate disks and folders to find the old bookmark file; or you may find it on your desktop, as we suggested earlier. Once you've located and opened the old bookmark file, it will be converted to the new, version 2, format.

Hereafter whenever you want to open this bookmark file, you can simply select *Open* from the *File* menu.

Cut-Copy-Paste

Version 2 comes with some preset bookmarks; they're listed in the window called

Bookmark Worksheet

You can customize this worksheet; it's like a general construction area. When you paste items into it that you either copied while visiting some Gopher location or cut from another bookmark file, the worksheet's revised contents are automatically saved in a file called "Bookmark Worksheet." If you close the Bookmark Worksheet window and want to open it again, select *Show Bookmark Worksheet* from the *Gopher* menu.

Customizing the Bookmark Worksheet

You can rename a bookmark entry. To do this select the entry's name, then select *Edit Gopher Descriptor* from the *Gopher* menu. From the resulting window you can edit the *Title* that shows up in your bookmark worksheet. Don't use this edit option to change anything else unless you understand the Gopher protocol.

You can use the standard Cut-Copy-Paste commands to rearrange items in any window. This feature lets you put the items you use most frequently at the top of the list or arrange the entries in any way that makes sense to you.

Bookmark Overload

Many people accumulate so many bookmarks they find it difficult to manage the resulting list. Two options might help you if you, too, are experiencing bookmark overload. You can use the *File* menu's

New Item List

command to start a separate bookmark list devoted, for example, to governmental gophers. Thereafter when you want to open this bookmark file, select *Open* from the *File* menu.

In addition, if you find a folder somewhere in Gopherspace that you would like to come back to later, you can use the *Save As* command to save the entire folder to your hard disk.

Fetch that URL

You'll find the *Use Uniform Locator* option in the *Gopher* menu. You can type or paste a URL into this option's text window; and when you click on the *OK* button, TurboGopher will attempt to access the document or directory. To complete your request, if necessary, TurboGopher will call the appropriate helper application, such as ftp (Anarchie). Of course, if you do not have a cooperating helper application, TurboGopher cannot complete your request.

Preferences Menu

If you access a lot of ASCII (plain) formatted text, you may want to change the font that is used to display information to a fixed width font, such as Courier. You can do this with the *Gopher* menu's *Preferences* options.

With version 1, whenever you downloaded something you had to tell TurboGopher where to save the item. Version 2 lets you select a default location to download items; to customize this option look in the *Preferences* menu.

▼ Obtaining the Upgrades

Both the TurboGopher and POPmail upgrades are available on Gopher and on the Mac Information Server. An extensive collection of helper applications are also conveniently available on Gopher.

via Gopher

The POPmail and TurboGopher upgrades are available via gopher and anonymous ftp from boombox.micro.umn.edu. You can download self-extracting archive versions of the software. Many people already have bookmarks called *TurboGopher Distribution* and *POPmail Distribution*. They can use these bookmarks to zoom to the appropriate section of Gopherspace.

If you don't have the bookmarks, the full Gopher path is

Information About Gopher
 Gopher Software Distribution
 Macintosh TurboGopher

The POPmail upgrade is in the section called
 helper-applications

This section makes it easy to obtain the helper applications you need to access and "animate" the resources you can find on the Internet.

The URLs for the two upgrades are shown in Figure 2.

via Information Server

You'll also find the POPmail and TurboGopher upgrades on the *Information* volume of the Mac Information Server. In the near future we'll be rearranging folders on this server; our goal is to make it easier for you to find things. For now, you'll find a POPmail folder inside the *Network Software* folder. You'll also find a Gopher folder inside the *Internet Tools* folder. Here are both paths:

- Information
- Communications
- Network Software
- POPmail II
- Internet Tools
- Gopher Programs

Obtaining Helper Applications

When you upgrade you'll probably also want to get some helper applications.

Although version 2 of TurboGopher still functions as a stand-alone gopher client, it can now be called by other applications that want to resolve a Gopher URL. Likewise TurboGopher calls other applications to resolve URLs — provided the software is available on your hard disk. At press time those programs were *Anarchie* (ftp), *NewsWatcher* (newgroups), and *MacWeb* (WWW/html).

The Helper Applications section also includes other software. Internet explorers frequently find that they need many companion programs to make use of the resources they find on the Internet. The Helper Applications section contains a variety of software that meets this wide definition of helper.

To use some of the applications you must install them in your System folder or do other things to set them up. Read the accompanying "readme" files or look for further

Figure 2: URLs for the Upgrades

```
GOPHER://boombox.micro.umn.edu:70/11/POPmail/macintosh
FTP://boombox.micro.umn.edu/pub/POPmail/macintosh/
```

instruction in the software's built-in help files for specific instructions.

Over time the software included in the Helper Applications section will change. Below are brief descriptions of some of the helper software.

Internet Clients

Anarchie

Anarchie is shareware and an ftp and Archie client. Like Fetch it will let you browse ftp sites, download files, or find them using an Archie server.

MacWeb

MacWeb is World Wide Web (WWW) client software, similar to Mosaic.

Ph1

Ph client for use with the UIUC CSO nameserver (electronic phonebook software).

NewsWatcher

NewsWatcher is news readers software.

InternetLink

InternetLink is our Acrobat Exchange plug-in. It adds URL support to PDF files. Currently URL support is not available for the free Acrobat Reader software.

Image and Sound Utilities

Acrobat Reader

Adobe's Acrobat Reader software is now free. It lets you view, navigate, print, and present any PDF (Portable Document Format) file. PDF files are created by other Acrobat software, such as Acrobat Exchange, Acrobat Distiller, and Acrobat for Workgroups. The reader software lets people access documents without having the application software, such as PageMaker or Microsoft Word. Acrobat Reader is especially useful for reading newsletters, journals, and other precisely formatted publications on your computer screen.

JPEGView

JPEGView is an image viewer for PowerPC Macs and 680x0 Macs. It can open and display images in JPEG, PICT, GIF, TIFF, BMP, MacPaint, and Startup Screen formats.

QuickTime

Apple's QuickTime system software extension adds capabilities that let your applications integrate graphics, sound, video, and animation into documents.

Simple Player

Simple_Player uses the QuickTime movie controller to play and edit movies.

SoundMachine

A ulaw (or mu-law) sound player.

Sparkle

Sparkle is freeware that plays MPEGs, PICTs, and QuickTime movies and converts between them.

Ulaw

ULaw converts Mac sampled sounds to Sun Ulaw format sounds and vice versa.

File Utilities

CompactPro

A shareware file compression utility that supports archives and self-extracting archives.

StuffItExpander

Freeware to expand compressed files.

DownLine

DownLine is a utility which lets you process multiple files in predefined ways. DownLine can un-Stuff, un-Binhex, un-Packit, Stuff, and Binhex files in batch mode or on demand. This demo release is free.

UULite

UULite is shareware that handles UNIX to Mac text and Mac text to UNIX text conversions, that is uuencode and uudecode.



Academic Index

A Good Place to Start Your Research

Nancy K. Herther, University Libraries



Where would you go to look for information on diverse topics such as those shown below? The University Libraries now have a good all-round starting point for whatever research or trivia-types of questions that you might have.

What are the current immigration patterns to the U.S. from Europe?

What will be the impact of the Republican electoral victories on the next Congress?

What trends will be affecting academic research universities in the next decade?

Are cholesterol levels affected by vitamin intake?

What are today's hottest high technology stocks?

Academic Index

Academic Index offers a good, international collection of about 1500 scholarly, business and professional journals for interdisciplinary research spanning the general sciences, humanities and the social sciences. Topics covered include health, economics, communications, public affairs, management, law, politics, education, ethics and the environment. The database is produced by Information Access Company, a commercial, California-based database company.

Our implementation of the database is updated monthly and contains articles going back to 1985.

How Do I Get Access?

You can use the database from any public access LUMINA terminal in any of our campus libraries. You can also have remote access if you have an active Maroon or Gold E-mail account and password. Once you are at the main LUMINA screen, type in

indexes

instead of MNCAT or one of the other options. If you are at a remote terminal, you will be asked for your user id and your password, to verify that you entitled to use the

database, as defined by the terms of our contract. To use Academic Index, select the multidisciplinary option or, to get right into the database, type in

acad

Help and Tutorial

The database is menu-driven and quite easy to use. If you have difficulty at any step in the process, type in either *H* or *T* to access either the Help screens or the useful Tutorial to learn more about using the database.

Search Options

You can search by keyword — which will search through the text of the citation (title, descriptors, abstract), or by author, title or subject descriptor. For example, to search for articles by management guru C. K. Prahalad, type in

prahalad-c-k

or simply type in prahalad, since this is an uncommon name. You are then able to see the results of the search — in this case eight articles with Prof. H. Prahalad as either first or second author — and you can type in

QD

to get a quick display of the eight articles and an indication of whether or not full-text is available.

Interested in covering some of the hot political issues of the day? Let's try prayer in public schools. By typing in

school? and prayer

at the search prompt you are given a total of 136 documents with these words in them. The question mark (?) is used as a wild card to allow for truncation. The first document in this list is shown in Figure 1. If the full text is available for this article, to get it to appear on the screen just type in

FT

Other important search options are given in Figure 2.

Figure 1: Sample record in Academic Index "ACAD"

Document Display		DATABASE-ACAD	
Search 1	SCHOOL? AND PRAYER	136 Documents	
Document:	1		
Accession No:	15522941. 9407.		
Database:	ACAD		
Source:	Church-State. volume 47, issue n5, May, 1994, p.12(2). (940500).		
Coden/ISSN:	ISSN: 0009-6334		
Year:	1994		
Title:	School prayer crusade advances in Georgia, Mississippi. (school prayer bill adopted in Georgia and Mississippi).		
Geog. Location:	Georgia. Mississippi. NNUSUGA. NNUSUMS.		
Descriptors:	Religion-and-state: Analysis. Georgia: Religion. Mississippi: Religion.		
Abstract:	ABSTRACT: Legislatures in states such as Mississippi and Georgia have adopted the school prayer bills which are expected to be adopted in Washington D.C. and Florida as well. The bills allow non-proselytizing and non-sectarian prayers at public school events. The prayer will be led by a student volunteer. Various civil liberties groups, including Americans United in Washington DC, are against such a bill.		
Illustration:	cartoon.		
To skip to a screen, enter screen number.			
Screen → <input type="text"/>			
S-Search	RD-Resume Display	FT-View Full Text	K-Keyword Paragraph
H-Help	BR-Browse Terms	C-Change db	MC-More commands

Full-Text

Yes, believe it or not, the Libraries are able to provide the full-text for many of the documents in this database! Here is a partial listing of some of the publications for which the owners of the database have arranged for full-text access:

Age and Aging
 American Journal of Psychology
 British Journal of Political Science Change
 Criticism
 Economic Geography
 Environmental Law
 FDA Consumer
 Foreign Policy
 Futurist
 Geriatrics
 Human Rights Quarterly
 Industrial and Labor Relations Review

Journal of Advertising
 Journal of Human Resources
 Lancet
 MacUser
 Middle Eastern Studies
 NEA Today
 Observer
 Public Welfare
 Sciences
 UNESCO Courier
 Women's studies

The exact composition of which journals are full-text and which aren't is not up the Libraries, but is determined by contracts negotiated by the owner of the database. If a particular article is available full-text, you can access this once you have the bibliographic citation and abstract on the screen by typing *FT*.

Figure 2: List of General Commands in Academic Index - ACAD

Here are just a few of the important commands you will want to remember when using this database:

Searching the database:

- S** Use when you want to enter a new search term
- BR** Browse terms
- RE** Use to revise your search statement

For Displaying your results:

- D** To display documents
- SC** To get a full screen list of results - giving only the author and title for each

For Managing your search process:

- R** Review the complete search history of your work during this session with the database
- PG** Purge previous searches (use to clear the screen and all previous work)
- SO** Sort Search results

When you need Help:

- H** Help! General tips and ideas to help you see where you are at in the process and what your options are
- T** A tutorial option to give you general search tips and guidance - a good place to start!

Where Can We Go Now?

How has the war in Bosnia affected American foreign policy? Are there some recent articles on our own Gopher and how it is being used. What trends are affecting interest rates? Is diabetes sometimes caused by a virus? What is known about the connection between dark, winter days and depression?

Here is just a sampling of some of what I found doing some quick search on the topics in the database:

Search Term	No. of Articles Found
Bosnia and foreign policy	258
Gopher and Internet	39
Trends and interest rates	58
Diabetes and viral	11
Winter and depression	67

Give it a try yourself. Academic Index isn't intended to replace other, more specialized research tools, but it is a very impressive, important, easy-to-use starting point for whatever research question you might have.

If you have any questions or need help using this or any of our databases, please feel free to stop in one of our campus libraries or contact me, Nancy Herther, phone 624-2020; Internet nherther@iic.lib.umn.edu.

My campus address is Integrated Information Center, University Libraries, 6 Walter Library, East Bank.



Using TIN to Read USENET News



We've recently installed a new Usenet newsreader, Tin, on the maroon and gold E-mail hosts. Tin was selected because it is an easy-to-use newsreader with a "look and feel" that is similar to the Pine mailer, Pico editor, and Lynx Web browser already on those machines. Tin features a full-screen interface with lots of online help, and you can even use some of the same commands for navigating on screen that you use in Pine.

Tin is a threaded newsreader, which means that articles are displayed one "thread" at a time. A thread is a consecutive series of replies or articles on a specific topic. These threads are maintained and displayed in the order that they are received.

On Screen Menus

Each screen in Tin has a menu of commands at the bottom of the screen. This menu lists only a few of the most frequently used commands. For a complete list of the commands available from each screen, type h. (The only screen or level of Tin where this will not work is the initial "newsgroup-checking" level.)

Quick Start Options

Tin provides simple commands to help you get started quickly: i.e. the -z option tells Tin to start only if there are new or unread articles; the -q option tells Tin not to check for new newsgroups; and the -n option tells Tin to display only groups listed as subscribed to in your .newsrc file.

There is also a command to easily download a newsgroup without interactively accessing and saving specific articles. The articles you've saved can then be read later.

The .NEWSRC File

If you have used other news readers on maroon or gold on a regular basis, you probably have a ".newsrc" file that contains information about the newsgroups you are subscribed to and which articles have been read. If so, Tin will use the same .newsrc file, and automatically display the groups to which you are subscribed.

If you've never used a newsreader, we've made getting started easy. Since there are thousands of newsgroups, with many new groups added daily, it can take hours to view all the groups and subscribe to the ones you're interested in. To avoid this process and help new users get started, our news administrators have set up a "template" .newsrc file for each account that automatically subscribes you to a small list of newsgroups that we recommend for new users. Table 1 lists these groups.

Starting TIN

You can start Tin by simply selecting it from the mail shell's main menu as you do to use Pine or Gopher. However, you will first need to specify Tin as your "preferred" newsreader, since nn is currently the default news reader.

To do this select *Special Utilities*, then *File Preferences*, then *Change News Reader*, then *Tin*. When you return to the main menu, Tin should be specified in the brackets after the "Usenet News" menu item.

Table 1: Default .newsrc File

```
news.announce.important
news.announce.newusers
news.answers
news.lists
umn.config
umn.general.events
umn.general.food
umn.general.forsale
umn.general.housing
umn.general.jobs
umn.general.misc
umn.general.movies
umn.general.music
umn.general.sports
umn.local-lists.bookstore-prices
umn.local-lists.microcomputer-news
umn.local-lists.news
umn.news-server.announce
umn.news-server.questions
mn.general
clari.local.minnesota
clari.net.announce
clari.net.newusers
```

Subscribing & Unsubscribing

You'll use Tin's initial "Group Selection" menu to view and select newsgroups you would like to subscribe to. Type "y" and Tin displays all unsubscribed newsgroups at the bottom of the menu. Unsubscribed groups are indicated with a U to the left of the list. You can subscribe to a group simply by moving your cursor to the group and typing "s". To unsubscribe to a group, type "u".

Selecting a Group

If you start Tin without specifying a particular group, the "Group Selection" screen (Figure 1) will display a list of active groups. Use your arrow keys or the **J** and **K** keys to move your cursor through the list line by line, or move through the list page by page using **Ctrl-D** (down) and **Ctrl-U** (up). To view a particular group, move your cursor to that group and press **Return**.

Figure 1: Tin's "Group Selection Screen"

```

Group Selection (news.cis.umn.edu 42)                                h=help

1 124 alt.aldus.pagemaker      Don't use expensive user support
2  39 alt.ufo.reports          Like alt.paranet.ufo,only dif
3  67 comp.internet.net-happenings  Network announcements
4 188 rec.music.tori-amos      Discussion of the singer
5  19 soc.history.living       Living history and reenactment
6      alt.soc.comets
7  31 alt.tv.picket-fences     The Picket Fences show.
8   6 umn.tc.systems          systems announcements,discussion
9   1 comp.sys.mac.programmer.info  Frequently requested information
10 16 rec.arts.books.reviews   Book reviews. (Moderated)
11 64 rec.music.makers.bands   For musicians who play in groups

<n>=set current to n, TAB=next unread, /=search pattern, c)atchup,
g)oto, j=line down, k=line up, h)elp, m)ove, q)uit, r=toggle all/unread,
s)ubscribe, S)ub pattern, u)nsubscribe, U)nsub pattern, y)ank in/out

```

Figure 2: List of Threads

```

alt.aldus.pagemaker (48T 92A 0K 0H R)                                h=help

1 +  seeking employment advice      Therese Maus
2 +  PM5 to HTML ?                  Shing-Te Li
3 + 2  comparing version            Julie Clark
4 +  Pagemaker 4.1/5.0 fony problem  RavenGraph
5 + 5  PM5.0 and Word 6.0          James Davis
6 + 2  graphics                    Saam Barrager
7 + 3  PageMaker to HTML file ?    david s. broudy
8 + 4  Extracting text from Mac PM5 Paolo G. Cordone
9 +  New PageMaker 5.0 utilies for MAC? Sean M. Vadas
16 + 2  PM5 upgrade                Richard S.Keirste

<n>=set current to n, TAB=next unread, /=search pattern, ^K)ill/select,
a)uthor search, c)atchup, j=line down, k=line up, K=mark read, l)ist thread,
|)=pipe, m)ail, o)=print, q)uit, r=toggle all/unread, s)ave, t)ag, w)=post

```

Reading Articles

After you've selected a group, a list of threads will be displayed in the thread menu for that group (Figure 2). At the top of the screen the group title is displayed along with the number of threads (e.g. 48T) and total number of articles (e.g. 92A) in the group.

Each thread is represented by one line which describes, from left to right, the thread number; a code indicating if the thread has been read or not ("+" means it is unread); the number

of articles in the thread; the title of the first article in the thread, and the author of that original article.

Use your arrow keys or the **J** and **K** keys to move through the list of threads, and select the one you wish to read by placing your cursor on it and pressing **Return**.

While reading an article, press **Return** to move to the next article in the thread.

Posting & Replying

To post an article to the newsgroup, use the "w" command. To follow-up a specific article, use the "f" command.

Other Options

Individual articles or entire threads can be mailed using the "m" command and saved using the "s" command.

Training Update: 625-1300



Distributed Computing Services owns training packages for many popular software products.

We recently purchased the packages listed below.

These training packages are available to University of Minnesota departments and current employees and students. There is no fee for using these packages, and you may check them out for 48 hours. However, before you can check them out, you must sign a *Usage Agreement* and leave your University of Minnesota ID with us. We will return your ID when you return the training materials.

Reservations Required

To reserve or check out these materials, phone 625-1300 or stop in our Shepherd Labs office in room 190, M-F, 8 am to 4 pm.

Unless you use our Self-Paced Training Centers, you must supply your own equipment, such as computer and cassette player, and software, such as Microsoft Word or Windows, to use these training materials.

Training Center Hours

Location	Monday-Friday
1 Nicholson Hall	8 am to 7 pm
99 Coffey Hall	9 am to 4 pm

Macintosh

▼ System 7.5

Audio training from Personal Training Systems.

Module 1, Basics: for the new user who wants to learn to use the equipment and operating system, start application programs, get on-line help, and perform tasks common to all applications.

Module 2, Beyond Basics: learn to understand the System Folder, create aliases, open IBM-PC files, share files using PowerTalk and AppleShare, automate tasks with AppleScript.

▼ Excel 5.0

Audio training from Personal Training Systems.

Module 1, Beginning: learn to enter words, numbers and percentages; create formulas and functions; format numbers and words; preview and print spreadsheets; create and use templates.

Module 2, Intermediate: learn how to auto-fill using custom lists; use styles and create number formats; draw graphic objects and create text boxes; sort lists and modify outlines.

Module 3, Advanced: create function and 3-D formulas; use absolute references and define named ranges; protect and audit spreadsheets; use macros.

Module 4, Charts & Databases: create and modify charts; use find and replace command; use autofilter; extract records from a database.

▼ Word 6

Audio training from Personal Training Systems.

Module 1, Beginning: learn to enter and edit text, create headers and footers, check spelling and print documents; change the appearance of text and set tabs; use Wizards to create documents quickly.

Module 2, Intermediate: create tables; add borders and shading; generate automatically numbered lists; use styles to format text quickly; use proofing tools to proof documents.

Module 3, Advanced: use AutoFormat and templates to quickly format entire documents; create newspaper-style columns; add graphics to documents; use Word's Find File command and sorting capabilities; generate form letters.

Windows & Mac

▼ Excel 5.0

We purchased a video training series from MacAcademy/WindowsArcade. The topics covered in each tape are the same whether you use Windows on an IBM-compatible or use a Macintosh.

Tape 1: learn about installation, workbook, cells, tabs, worksheets, function tool, formulas, templates, relative mode, paste special, absolute reference, auto fill, tool menu, tool bar, tip wizard, RAM memory, password, file types, summary info, page setup, printing, headers/footers, print page order, shortcuts.

Tape 2: learn about names, calculation, functions, function wizard, rows, delete/insert, spelling checker, tools, name definitions, sorting, clear, move/copy, find, find/replace, tool bar, view manager, page break, notes, format cells, column width, custom format, date/time, update function, time frames.

Tape 3: learn text alignment, borders, patterns/colors, quick data path, protect document, rename sheet, auto format, style, tools menu, circular references, payment calculations, goal seek, daisy chain calculation, page setup, R1C1 notations, numbered worksheets, colors, hiding, edit titles, logic statements, profit worksheets, error messages.

Tape 4: learn about checkbook, cell protection, logic statement, linking, rename, re-establishing links, change links, arrays, complex link, database, extract information, wild card, P&L statement, outline, tables, sort, subtotals, filter, charts, format data series.

Tape 5: learn about charts, hot spots, drawing tools, text, group, macros, visual basic, run macros, alert command, debug macro, payment macro, custom tool bars, custom tools, buttons, function macro, dialog editor, custom menu.

Computer Facilities: *Winter Quarter* 1995

January 3 to March 18, 1995. Most facilities will be closed for the Martin Luther King Holiday (January 16).

Building	Room	Phone	Classes	Hours: Weekday	Hours: Weekend	Notes
East Bank						Preliminary Schedule
<input type="checkbox"/> Students have free access to these microcomputer facilities.						
▼ Microcomputer facilities managed by Distributed Computing Services: contact Jerry Larson at 625-7850.						
Eddy Hall Annex	54	625-0314		M-Th * Fri *	Sat * Sun *	*To reopen soon.
Elliott Hall	121	624-0866	†	M-Th 9 am-8 pm Fri 9 am-5 pm	closed	
Folwell Hall	14	625-4896	†	M-Th 8 am-10 pm Fri 8 am-6 pm	Sat 10 am-6 pm Sun 4 pm-10 pm	
Lind Hall ♣	26	626-0856	†	M-Th 8 am-midnight Fri 8 am-6 pm	Sat 10 am-6 pm Sun noon-midnight	
<i>Watch for 24-hour schedule to be posted the 6th week of each quarter.</i>						
Walter Library	9	626-1899	†	M-Th 8 am-midnight Fri 8 am-8 pm	Sat 10 am-6 pm Sun noon-midnight	
▼ Microcomputer facilities managed by other departments.						
Moos Tower	8-425	—		M-Th 8 am-5:30 pm Fri 8 am-4:30 pm	closed	
Contact: Gail Vandermerwe, 625-1477						
<input type="checkbox"/> IT Computer Facilities for IT students only.						
<ul style="list-style-type: none"> • For eligibility and fee details see the <i>Institute of Technology Computer Facilities</i> brochure. • Problems? Report to lab attendant. Report unanswered questions to operator@itsparc.itlabs.umn.edu 						
EE/CSci	3-166	624-8885		M-Th 7 am-2 am Fri 7 am-midnight	Sat 10 am-2 am Sun 10 am-2 am	Sun 10 am-2 am Mon
EE/CSci	4-204	625-9081		M-Th 7 am-2 am Fri 7 am-midnight	Sat 10 am-2 am Sun 10 am-2 am	Sun 10 am-2 am Mon
Mech. Eng.	308	625-7352		M-Th 7 am-2 am Fri 7 am-midnight	Sat 10 am-2 am Sun 10 am-2 am	Sun 10 am-2 am Mon
Physics	130	625-6820	†	M-Th 8 am-10 pm Fri 8 am-6 pm	Sat 10 am-6 pm Sun 4 pm-10 pm	
<input type="checkbox"/> Students have free access to these terminal facilities.						
Diehl Hall	278	—		limited access	limited access	
Contact: 626-4045						
Nicholson	1	625-5082		M-F 8 am-6 pm	closed	
Contact: Mike Dunham, 625-7397						

Computer Facilities: *Winter Quarter 1995*

January 3 to March 18, 1995. Most facilities will be closed for the Martin Luther King Holiday (January 16).

Building	Room	Phone	Classes	Hours: Weekday	Hours: Weekend	Notes
West Bank						Preliminary Schedule
<input type="checkbox"/> Students have free access to these microcomputer facilities. ▼ Microcomputer facilities managed by Distributed Computing Services: contact Shu-Fan DeJarlais at 624-0877.						
H. Humphrey Ctr	50	624-6526		M-Th 8 am-midnight Fri 8 am-10 pm	Sat 10 am-8 pm Sun noon-11:30 pm	
▼ Microcomputer facilities managed by Distributed Computing Services: contact Jamil Jabr at 624-7766.						
Blegen Hall ♣	455	626-7778	†	M-Th 8 am-10 pm Fri 8 am-6 pm	Sat 10 am-6 pm Sun noon-5 pm	
St. Paul						
<input type="checkbox"/> Students have free access to these microcomputer facilities. ▼ Microcomputer facilities managed by Distributed Computing Services: contact Jamil Jabr at 624-7766.						
Central Library	B50	624-3269	†	M-Th 8 am-10 pm Fri 8 am-6 pm	Sat 10:30 am-4:30 pm Sun 4 pm-10 pm	
Classroom Office Bldg.	135	624-9226	†	M-Th 8 am-10 pm Fri 8 am-6 pm	Sat 10 am-6 pm Sun 4 pm-10 pm	
Classroom Office Bldg.	17	626-1252	†	M-Th 8 am-midnight Fri 8 am-6 pm	Sat 10 am-6 pm Sun noon-midnight	
McNeal Hall ♣	305	624-5367	†	M-Th 8 am-midnight Fri 8 am-6 pm	Sat 10 am-6 pm Sun noon-midnight	
▼ Microcomputer facilities managed by other departments.						
Vet. Science	450	624-4281		M-Th 8 am-9:30 pm Fri 8 am-5 pm	Sat 9 am-5 pm Sun 1 pm-9 pm	
Contact: Livija Carlson, 624-3078						

Printing is Not Free

A *Printer Access Card* is required to obtain output in all microcomputer facilities and laser or plotter output in IT Computer Facilities.

Central Systems printing is charged against Central Systems accounts.

Misc. Notes

† Instructors can reserve these labs for *instructional* use; contact the department responsible for the lab.

♣ These labs are frequently scheduled for classroom use. Call before making plans to use these facilities.

Internet and CIS network

Through the Computer and Information Services network, these Computer Facilities can access the Internet, LUMINA, E-mail, and other Central System computers, e.g., EPX, NVE, UZ, VX, VZ, VM1, and the School of Management's IBM mainframe.

Free Help: Computing and Information Technologies

Phone Help Line Hours

Central Systems

These systems require a user name and password, which you get when you open an account.

Qualified users can apply for grants to cover some computing related costs.

- EPX (Unix), NVE (NOS/VE), UZ (Ultrix), VX and VZ (VMS) 626-8366 M—F 9 am to 4 pm
- VM1 (IBM/CMS) 99B Coffey Hall walk-in consulting hours may vary.... 624-6235 M—F 9-11 am, 2-4 pm
- MEDLINE (MinnesotaMEDLINE on NVE) 626-8366 M—F 9 am to 4 pm

Distributed Systems: Microcomputers, Workstations, LANs

Software, hardware, peripherals, local area networks 626-4276 M—F 9 am to 4 pm

- East Bank 152 Shepherd Labs above above above
- West Bank 93 Blegen above above 1 pm to 4 pm
- St. Paul 58 Biological Sciences Center above above 1 pm to 4 pm

E-mail and LUMINA

- E-mail: call for help using your University account..... 626-7676 M—F 9 am to 4 pm
 Forgot your password? Staff: call 626-8366. Students: go to any Computer Facility – e.g., 14 Folwell, 26 Lind, 305 McNeal, HHH 50. Troubleshooting: if Maroon or Gold are down, you'll hear a status report at 626-1819.
- LUMINA: call if you have trouble connecting 626-7676 M—F 9 am to 4 pm

Computer Services Information 625-1555 any day .. any time

General Information

Williamson Hall Book Center

Computer Dept 625-3854
 (inventory and prices also available on Internet Gopher)

University Computing and Information Services

- Administrative Information Svcs. (AIS) Help desk ... 4-0555
- Biomedical Graphics, various locations 6-3939
- Central Computing Services, 100 LaudCF 6-1600
- Accounts: EPX, NVE (incl MEDLINE), UZ, VX, VZ.. 6-8366
- Data Entry 6-8351
- Statistics Services 5-2303
- System Status 6-1819
- Tape Librarian 6-1838
- Computer Facilities (also call individual facilities) .. 5-1300
- _FolH 5-4896 _Lind 6-0856 _McN 4-5367 _HHH 4-6526 +more
- Disability and Computing Services, voice/TTY 6-0365
- Distributed Computing Services, 190 Shep Labs 5-1300
- Engineering Services, 103 LaudCF 5-1595
- Equipment Repair and Warranties 5-1595
- Faculty Resource Center (for appointment) 5-1300
- Gopher Hotel (server set up for a fee) 5-2303
- Kodak Printer Service 6-1661
- St. Paul Computing Services, 50 CofH 4-7788
- Accounts: VM1 (IBM/CMS) 4-7788
- Tape Librarian 4-3482
- Statistics Services 4-6235
- Software Services (contract programming) 5-2303
- Supercomputer Center Help, 3030 SCC 6-0808
- Telecommunications, 30 TelecomB
- Networking Services Information 6-7800
- Networking Services Repair 5-0006
- Training, Course Registration, 190 ShepLab 5-1300
- U Libraries, Integrated Information Center 4-2020
- University Networking Services, 130 Lind 5-8888

Associate Vice President and

Associate Provost Academic Affairs

Donald R. Riley, Professor 626-9816

Access Information

SLIP: 2400/14,400 626-1920
 SLIP: ADI-100 and ITE (with MKO) 3-0291

- Terminal settings for these systems are 8-1-N (8 data bits, 1 stop bit, no parity) unless otherwise noted. The number you dial may depend on the modem's bps or baud rate.
- Internet addresses.
- Dial-in Server: 626-0300, -1200, -2400, -4800, -9600
- At 9600 Telecomm supports V.32 and MNP level 5 error correction.
- On campus ADI-100 and ITE setups use 626-2400.

LUMINA: 300/1200/2400 625-6009 
 V.32 4-7539 

Telnet & tn3270 ____ PUBINFO.AIS.UMN.EDU

E-mail and Internet Service and Servers, Twin Cities
 _____ GOLD.TC.UMN.EDU

_____ MAROON.TC.UMN.EDU

Gopher, alternate access (log in as gopher)
 300, 1200, 2400, 9600 see Dial-in Server 

_____ CONSULTANT.MICRO.UMN.EDU

Consulting via E-mail: low priority Central System ques

Format ____ CONSULT@MACHINE.NAME.UMN.EDU

AIS SecureID V.32 626-1061 

300/1200/2400 6-7770 

tn3270 & Telnet ____ ADMIN.AIS.UMN.EDU

EPX, NVE (includes MEDLINE), UZ, VX, VZ

300, 1200, 2400, 9600 see Dial-in Server 

EPX or UZ or VX or VZ or NVE.CIS.UMN.EDU

EPX, NVE: 300/1200/2400 625-1445 

up to 19.2 campus data phone 3-2400 

VM1 (IBM/CMS) at 7-1-even

9600 624-3668 

1200/2400 & <19.2 campus data phone .. 4-4220 

_____ VM1.SPCS.UMN.EDU

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Computing and Information Services

The University of Minnesota is committed to the policy that all persons should have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

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