

# Computer and Information Services Newsletter

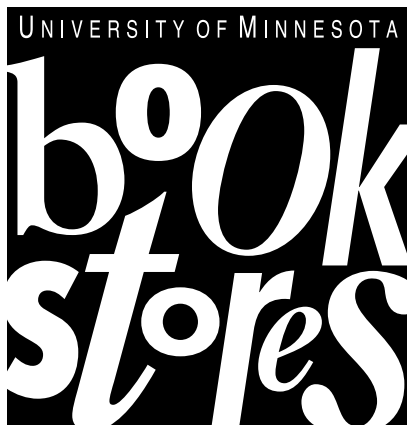
This newsletter is an information resource for the University of Minnesota.

Volume 5, Number 6

## December 1995

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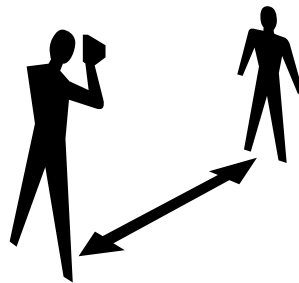


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## Adobe Photoshop

*an overview*



Ever wonder what you'd look like with purple hair? Or how you could combine an old photo with one of your doodles to create an unusual party invitation? All this and more is possible with a powerful photo design and composition software package called Adobe

Photoshop. Adobe calls its software "A Camera for Your Mind." With Photoshop, you can use your imagination to create completely unique images. What can Photoshop do? Here's a short list:

- scan photos and artwork
- correct colors and retouch photos
- create collages and photo montages
- create original artwork
- generate color separations

### Painting versus Drawing Programs

Photoshop is an image editor and falls into the software category of painting programs.

In a painting program, the objects are composed of tiny dots called pixels. There are other graphics applications called drawing programs, which are comprised of objects that are independent, mathematically-defined lines and shapes. Painting programs enable you to alter an image

## Painting programs enable you to alter an image pixel by pixel.



pixel by pixel, giving you considerably more control than drawing programs. However, the downside is that because there are a fixed number of pixels in an image, the resolution (number of pixels per inch) is dependent upon the size at which the image is printed. Increasing the number of pixels increases the size of the file on disk.

Drawing programs don't depend on the resolution of the image itself; rather, the objects automatically conform to the resolution of the output device (printer, film recorder, and so forth). And drawings are smaller files. Painting programs are best for

producing realistic and impressionistic artwork and other effects featuring soft edges. Drawing programs are best suited for precise line drawings, business graphics, and effects that require crisp, smooth edges.

### Scanning

You can bring images into Adobe Photoshop in several ways, for example: by scanning a photograph, a slide, or an image; by capturing images from video; or by importing artwork created with a drawing program. Scanning is the most popular method of importing an image.

**Scanned old, black and white photo. Crease is visible in dog's back leg.**



Photoshop allows you to control the process through which a photograph or slide is converted into a digitized image. You can improve the color, sharpness, and contrast of a photograph as you are scanning it. Once the image has been digitized, you can use filters to improve it further. For example, when you scan a halftone image from a magazine, you're likely to end up with a moiré pattern over the image (because of the way the image is printed in the magazine). You can use Photoshop's Dust & Scratches filter to eliminate the moiré. This may eliminate some of the image's detail; you could apply other filters to sharpen the edges.

### **Combine & Create Artwork**

Instead of working with only one scanned photograph, take parts of several scanned images and combine them into a completely new image. Or start with a blank screen and layer the images with other graphic elements, such as text and illustrations.

Layers work as transparent sheets, allowing you to combine elements without changing the original background image. You may opt to bring in artwork produced by other applications.

### **Tools and Filters**

Photoshop includes a wide range of painting and editing tools, selection tools, over 40 special

**Crease's removed from dog's leg.**



effects filters, and several methods for adjusting color levels.

Painting and editing tools can turn your computer into an electronic darkroom: you can retouch, dodge, and burn just like a professional. The selection tools enable you to select part of an image pixel-by-pixel, to change its colors or to move it to another image.

The special effects filters included with Photoshop will change the focus of an image (Blur, Sharpen), enhance color transitions, or completely distort the image (Pinch, Spherize). Additional filters are available via third-party vendors such as Kai's Power Tools and Paint Alchemy.

## Color Adjustments

Photoshop lets you easily adjust your image color and brightness. Features include adjustments for brightness, contrast and midtones (gamma); controls for selectively adjusting hue, saturation and brightness; adjustable tonal curves and control points on curves; and independent color balance adjustment for shadows, highlights and midtones.

## Just a Beginning

This is just a quick review of all Photoshop can do. In coming issues of the newsletter, we'll have articles on scanning, file formats, and more about the capabilities of Photoshop. For more information about Adobe Photoshop, point your World Wide Web browser to Adobe's home page:

<http://www.adobe.com/>

## System Requirements

Adobe Photoshop offers software for Macintosh, Windows, and UNIX platforms. Generally, it will run best on a higher-end processor, and needs as much RAM as you can afford. Because paint images tend to be so large, you'll also need a fair amount of hard disk space set aside for your files.

On the Macintosh side, it's best on 68040 or greater processors running Apple System Software version

7.1.2 or greater; with 16 MB or more of application RAM for Macintosh 68040s and 24 MB of application RAM for Power Macintoshes.

On the PC side, it's best on Pentium processors, running DOS 6.0 or greater and Microsoft Windows 3.1 or NT, with 16 MB of system RAM (32 MB for Windows NT).

On either platform you'll need at least 20 MB of free hard disk space. ■

**Table 1: Photoshop Features**

- ▽ Broad graphics file support  
file formats include • Encapsulated PostScript (EPS) • Kodak PhotoCD • TIFF • JPEG
- ▽ Multiple layers support for compositing
- ▽ Pressure-sensitive tablet support
- ▽ Image transformation  
rotate, stretch, skew, and distort
- ▽ Ready-made filters  
for image sharpening • softening • stylizing  
• distorting video • removing noise  
• ability to create custom filters of your own
- ▽ Professional color separations  
ability to adjust printed output for paper stock and printing device
- ▽ Color support  
for converting between editing modes,  
including • Bitmap • Grayscale • Duotone  
• Indexed Color • RGB • CMYK
- ▽ PANTONE
- ▽ FOCOLTONE
- ▽ TOYO
- ▽ DIC and TRUMATCH color systems
- ▽ PostScript  
advanced PostScript language support

# POPmail for Windows

*Use this friendly Client/Server software to take advantage of your computer's processing power.*



WS\_POPmail is an easy-to-use electronic mail package for Windows. This software enables you to exchange messages with people around the world who have access to the Internet, regardless of which mail software they use.

## Many Popular Features

Since WS\_POPmail has a graphical user interface, you can issue commands by clicking on buttons or using pull-down menus. Figure 1 shows WS\_POPmail's menu structure, such as File, Edit and Help; it also shows many of its buttons, such as Fetch, New, and Discard.

You can handle mail that is waiting for you in two ways:

1. Use the *Fetch* option. This action copies messages to your hard disk and deletes them from the mail server that is assigned to your E-mail account.
2. Use the *Preview* option. This action lets you read the message but leaves it on the mail server. It's a desirable option for people who read their mail from more than one computer.

WS\_POPmail lets you personalize your set up. For example, you can turn on a feature that appends a signature to outgoing mail and save a copy of messages you compose. WS\_POPmail also makes it easy to keep and recall E-mail addresses and create group lists.

In the article below we'll briefly discuss fetching mail, handling addresses, and managing mail as well as composing, replying to, and forwarding mail.

## The Inbox

When you start up WS\_POPmail it opens the Inbox (Figure 1). The Inbox message list shows any mail

that you have fetched from the mail server. Initially each message has an icon of a closed envelope in front of it. This indicates that the message has not been read (Figure 1). Once you read a message, the icon in front of it changes to an open envelope.

To read a message, double-click on it. You'll see the message's contents in a Message Display window, with the subject of the message as the window's title. For anyone familiar with office memo styles, the message's layout will be self-explanatory. Table 1 defines the message's six parts.

**Table 1:**  
**Parts of the Message Display Window**

---

From .....	who sent the message
Date .....	when the message was sent
To .....	a list of the message's primary recipients
CC .....	a list of people who received a copy of the message
Subject .....	information about the message's contents
Message Body ....	the contents of the message; this section has a scroll bar for moving forwards and backwards

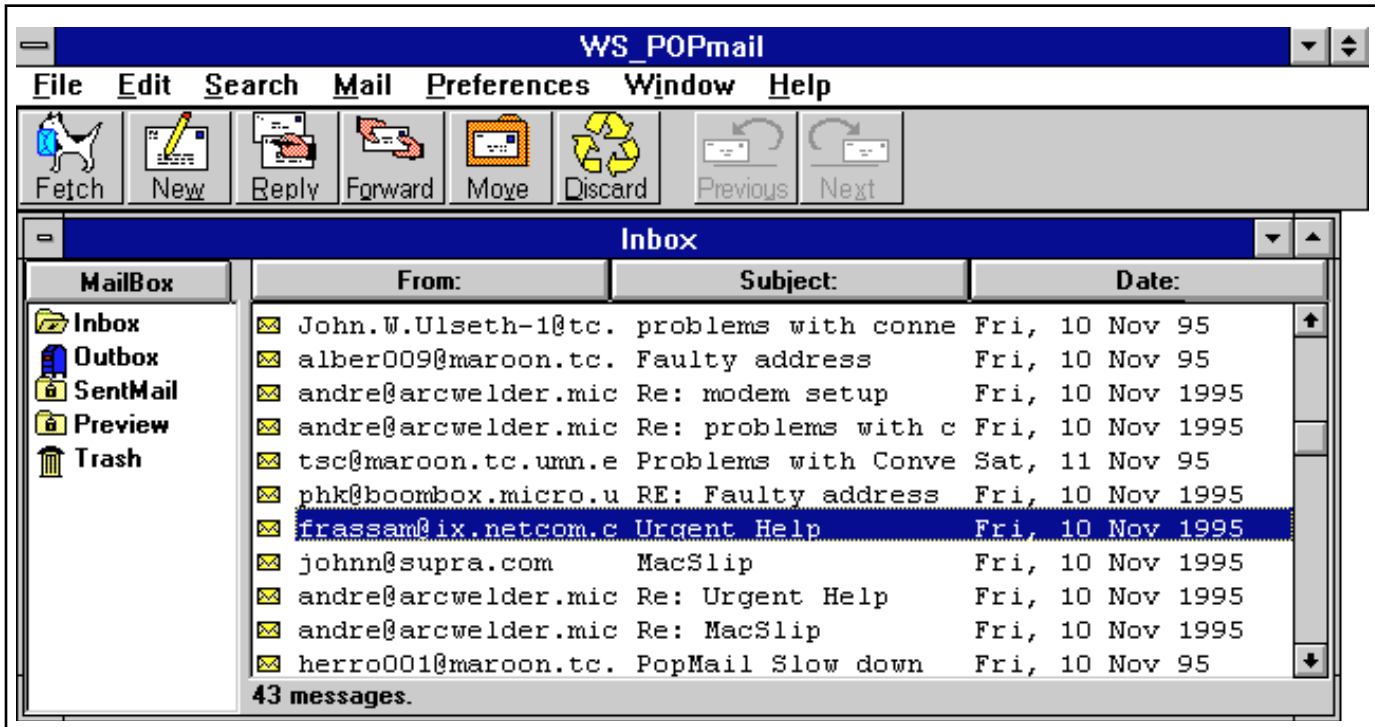
## Managing Mail

The list of messages you see in Figure 1 are those stored in the MailBox called *Inbox*. It is represented in the *MailBox* section by an icon of an open folder. WS\_POPmail makes it easy to store messages you decide not to discard immediately in different folders (mail boxes). It's also easy to sort messages.

## Sorting Messages

Initially messages are listed in the order they are received, but you can view them sorted by subject or by the address listed in the From field. To sort

Figure 1: Inbox Window and List of MailBoxes



messages, click on the From, Subject, or Date headings; these headings are also buttons (Figure 1).

### Mail Boxes

When you first set up WS\_POPmail you have four MailBoxes: Inbox, Outbox, SentMail, Preview, and Trash. You cannot rename or delete these MailBoxes.

For many people the best way to organize their mail is to file messages in additional MailBoxes. Each Mail Box you create is displayed in the MailBox list, along with the Inbox and other essential MailBoxes.

Once you have created a MailBox, you can move messages that you want to save to that folder. To view the contents of a MailBox, double-click on its name in the MailBox List.

#### Create, Rename, Delete MailBoxes

You can create, rename, or delete mail boxes in two ways:

- Select *MailBox Maintenance* from the *Mail* menu.
- Click on the *MailBox* button; it's above the list of MailBox folders.

#### Moving Messages

To move a message to a MailBox, click on the *Move* button on the command button toolbar (Figure 1) or select "Move to Another MailBox" from the *Mail* menu.

Note: You cannot move messages to the Outbox; it is reserved for messages that are to be sent.

### The Compose Window

To get a blank E-mail message form, click on the *New* button (Figure 1).

The *Compose Window* contains all the information fields listed in Table 1 plus the BCC field and buttons listed in Table 2.

WS\_POPmail's simple word processing functions let you type your message in the Message Body field. You can: use cut-copy-paste commands, use ASCII (plain American) characters, and let WS\_POPmail wrap words to the next line rather than using a carriage return at the end of each line. You cannot: use non-ASCII characters, such as £ Æ å, or formatting, such as tabs.

**Older versions of WS\_POPmail restricted the number of E-mail addresses you could include in a group.**

**Table 2: Compose Window Additions**

---

BCC .....	a list of people who will receive a copy of this message but won't be identified as having received it in the headers of the other copies (a blind copy)
▽ Three Buttons	
Send .....	sends your message to those listed in the CC and BCC fields
Enclose .....	sends a file along with the E-mail message (some restrictions apply)
Address .....	allows access to addresses you have stored in your address book

**Replying to and Forwarding Mail**

Before you can use the *Reply* or *Forward* buttons, you must select one of the messages that you have received by single-clicking on it in the Message List.

When you click on the Reply button, the To and Subject boxes in the resulting Compose Window are already filled in for you.

When you click on the Forward button, only the Subject box in the resulting Compose Window is already filled in for you; the subject line also has a FWD (forward) label added to it. You must fill in the To box yourself. The original message appears in the text area bracketed by these statements:

—Forwarded Message Starts Here —  
 —Forwarded Message Ends Here —

**Using the Address Book**

If you frequently send messages to a group of people or to individuals whose E-mail addresses are hard to type, you'll like the Address Book feature. Note: older versions of WS\_POPmail restricted the number of E-mail addresses you could include in a group.

You can create a group name for a large number of E-mail addresses; thereafter when you send E-mail to that group name, mail will be sent to each E-mail address. In addition to adding individual names to your address book, you can set an option for adding all incoming E-mail addresses to your address book.

To use the Address Book while composing a message, press the *Address* button.

**Hardware/Software Requirements**

To use WS\_POPmail you need an IBM-compatible computer running Windows 3.1 (or later) and Winsock as well as a VGA or better monitor.

**Obtaining the Software**

Students, faculty, and staff can get WS\_POPmail (along with Winsock) in the Windows Internet Kit. These five disk kits are available from any Microcomputer HelpLine. Students, faculty, and staff can also get the latest version of WS\_POPmail by anonymous FTP from the IBM Information Server and directory listed here:

boombox.micro.umn.edu  
 pub/POPmail/Windows

## Lab POPmail

Students who don't have their own computers can use a "Lab" version of WS\_POPmail. The computers in the Public Computer Facilities have copies of Lab POPmail.

additional training call our Shepherd Labs office at 625-1300 to register for a class.

WS\_POPmail was developed at the University of Minnesota. To reach the development staff you can send mail to

popmail@boombox.micro.umn.edu

## Convert Minuet Messages

If you are currently using Minuet for DOS, but would like to use WS\_POPmail, you can convert your messages and addresses from Minuet to WS\_POPmail. The convert.exe program is included with WS\_POPmail.

General help about using your E-mail account and Internet services is available from

help@tc.umn.edu

help@umn.edu

help@gold.tc.umn.edu

help@maroon.tc.umn.edu

## Demonstrations and Questions

If you have specific questions about WS\_POPmail, you can call or visit a Microcomputer HelpLine. WS\_POPmail is easy to use, but if you would like




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# Internet Stuff JUST FOR FUN

## Dr. Toy's Guide

This is a good site to visit to look for age appropriate toys:

<http://www.drtoy.com/>

It contains "Dr Toy's" top 100 list. Dr. Toy also divides his list into active, creative, and educational groupings. You'll find pictures, prices, and company phone numbers.

On the right is the book list. It lists suggested ages, such as 4-8 and 3-7, as well as prices. ■

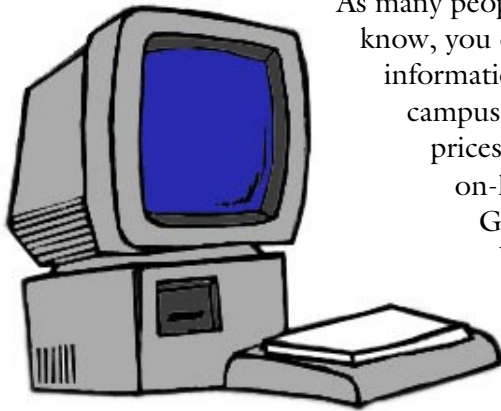


### BOOKS

1. Creative Teaching Press **Learn to Read** 4-8 \$12.95 800-444-4287
2. Living Books **Dr. Seuss's ABC** 3-7 \$39.95 800-397-4240
3. Pearce-Evetts Productions **Fingerplays and Action Chants: Animals** 2-6 \$14.95 800-842-9571
4. Rock 'N Learn **Animals** 2-5 \$9.95 800-348-8445
5. Spizzirri Publishing **Library Album** 2-10 \$39.95 800-322-9819
6. W.J. Fantasy **Games Around the World** 4-10 \$12.95 800 ABC-PLAY



# Changes to Searching the On-line Price List

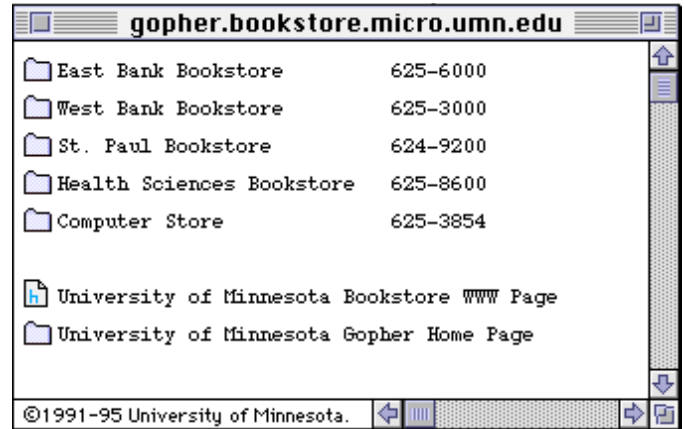


As many people already know, you can get information about the campus bookstores' prices and policies on-line by using a Gopher or a Web browser to access these URLs:

<http://www.bookstore.micro.umn.edu>  
<GOPHER://gopher.bookstore.micro.umn.edu>

In general you can access the same information via Gopher or the Web (Figure 1). We recently improved the on-line service by making a new, dedicated gopher server is available for the Bookstore.

**Figure 1: On-line Bookstore Information**

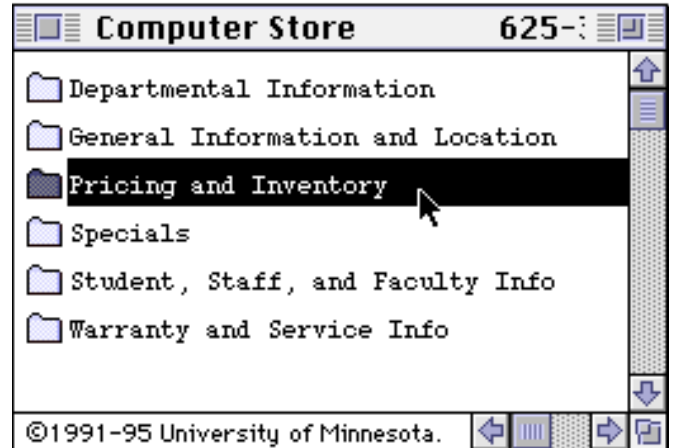


**Figure 2: Searchable Price Lists Are Only Available Through Gopher**

## Search Price Lists

The Internet Gopher site has one feature that is not on the Web site: searchable price lists (Figure 2). Along with the new server mentioned earlier, you'll see improved search capabilities on the Gopher end. To try it, follow one of these paths or access the URL listed in Figure 3.

- University of Minnesota Campus Information
- Department and College Information
- University of Minnesota Bookstores
- Computer Store
- Pricing and Inventory



- Computer Information
- University of Minnesota Bookstore Computer Prices
- Pricing and Inventory

**Figure 3: URL to Search Bookstore Price Lists**

<GOPHER://gopher.bookstore.micro.umn.edu:70/11/computer/pricing>

**Figure 4: Results of Search for "3com"**

→	3C589B-TP	3COM Etherlink IIIB PCMCIA TP	\$155
	3C529TP	3COM EtherLink III 10 Base T Ethernet Card for Mic	\$226
	3C509COM	3COM EtherLink IIIB 10 Base T and Coaxial Ethernet	\$126
	3C509TP	3COM EtherLink IIIB 10 Base T Ethernet Card for IS	\$115

## The Modifications

The modifications fall into three areas.

### Easier to Read

The headlines that come back are much easier to read. Figure 4 shows an example search for 3com.

As you can see from Figure 4, everything lines up. The part number is first, followed by a description, and then the price. This format allows you to quickly find information about products that the bookstore sells. Other information, such as availability, vendor and more information about the product, is also available. To see that information, select one of the items returned by the search.

### Improved Indexing

The second new feature is field indexing. Each field of the on-line database (Vendor, Info, Price, etc.) is separately indexed. For instance, to search for all Apple products that cost more than \$3000 type in this search request

```
'vn=apple and pr>3000'
```

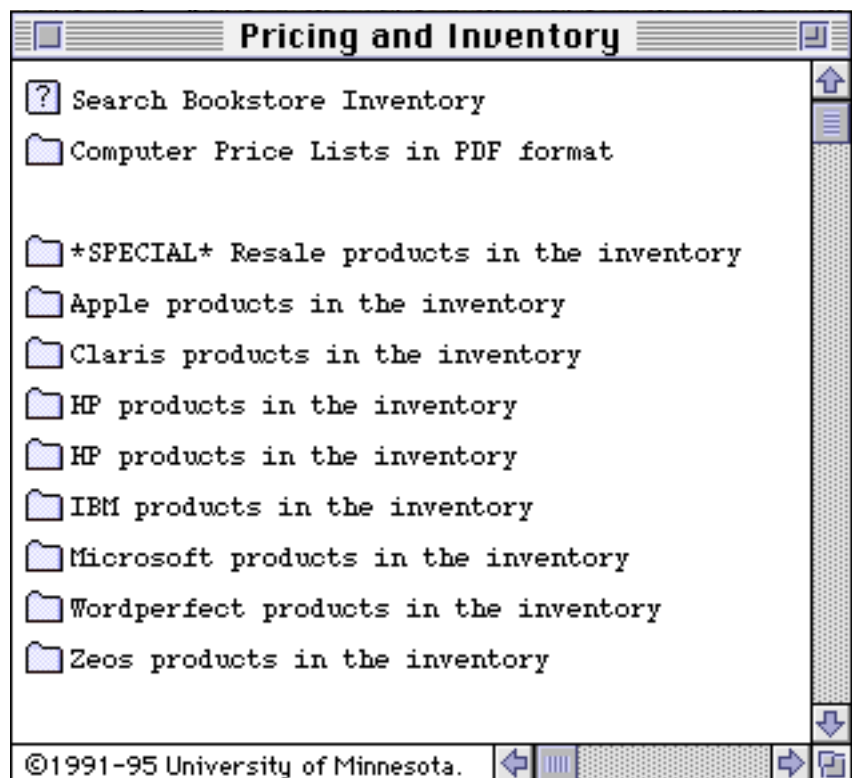
The fields and their abbreviation tags are as follows:

```
vn  Vendor
pr  Price
pn  Part Number
```

Eventually we will have a Gopher+ and HTML (Web) form that will make searching for this kind of information even easier (because it will free you from this bizarre syntax).

### Automatic Searches

An offshoot of field indexing is automatic searches. You can quickly search for available vendor products, such as IBM and Apple, by clicking on a simple menu item, as shown in Figure 5. ■

**Figure 5: Automatic Pricing and Inventory Searches**

# Free Help: Computing & Information Technologies

University of Minnesota Accounts

Phone

Help Line Hours

## 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

## 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) 90 Coffey Hall walk-in consulting ..... 624-6235 ..... M—F ..... 9-11 am, 2-4 pm

## E-mail and Internet

- 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 in person to Microcomputer Facilities in Blegen 455 (6-7778), Central Libr B50 (4-3269), COB 17 or 135 (6-1252, 4-9226), Eddy Hall 54 (5-0314), Elliott 121 (4-0866), Folwell 14 (5-4896), HHH 50 (4-6526), Lind 26 (6-0856), McNeal 305 (4-5367), Walter Libr 9 (6-1899).

## General Information

### Computer Store

Williamson Hall Book Center ..... 625-3854  
(inventory and prices also available on Internet Gopher)

### University Computing & 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, UZ, VX, VZ, VM1 ..... 6-8366
- Data Entry ..... 6-8351
- System Status ..... 6-1819
- Tape Librarian ..... 6-1838
- Computer Facilities (also call individual facilities) .. 5-1300
- Classroom Facilities ..... varies
- Digital Media Center
- Development Suite for Faculty, 15 Walter Libr. .... 5-5055
- 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
- Gopher Hotel (server set up for a fee) ..... 5-2303
- Kodak Printer Service ..... 6-1661
- St. Paul Computing Ser, VM1 Accounts, 50 CofH ... 4-7788
- Software Services (contract programming) ..... 5-2303
- Statistical Support
- SAS ..... 4-3330
- SPSS, BMDP, Minitab on VAX or EPX ..... 6-8366
- Supercomputer Center Help, 3030 SCC ..... 6-0808
- Telecommunications, 30 TelecomB
- Networking Services Information ..... 6-7800
- Networking Services Repair ..... 5-0006
- Training Library, Reservations, 190 ShepLab ..... 5-1300
- Course Registration, 190 ShepLab ..... 5-1300
- U Libraries, Integrated Information Center ..... 4-2020
- University Networking Services, 130 Lind ..... 5-8888
- Workstation Support Group, 98/99 Coffey ..... varies
- IBM AIX, HPUNIX, IRIX, SOLARIS, SUNOS ..... 4-7486



### Associate Vice President for Academic Affairs and Acting Director of Information Technology


Donald R. Riley, Professor ..... 626-9816

## Access Information



- SLIP: 2,400 to 14,400 (V.32) ..... 626-1920
- SLIP: 14,400 to 28,800 (V.34) ..... 627-4250
- 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 and above, Telecomm supports 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



- Gopher, alternate access (log in as gopher)
- 300, 1200, 2400, 9600 ..... see Dial-in Server 
- \_\_\_\_CONSULTANT.MICRO.UMN.EDU

- Help by E-mail for POPmail or Gopher or SLIP or Minuet
- Format \_\_\_\_NAME@BOOMBOX.MICRO.UMN.EDU

- AIS SecureID V.32 ..... 626-1061 
- 300/1200/2400 ..... 6-7770 
- tn3270 & Telnet \_\_\_\_ ADMIN.AIS.UMN.EDU

- EPX,NVE,UZ,VX,VZ 300-9600 ... 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 at 7-1-even
- 9600 ..... 624-3668 
- 1200/2400 & <19.2 campus data phone ..4-4220 
- \_\_\_\_VM1.SPCS.UMN.EDU

- News Server \_\_\_\_NEWS.TC.UMN.EDU
- FAX via E-mail (note: John.Doe & 9-9999 are examples)
- /pn=John.Doe/dd.fax=9-9999/@fax.tc.umn.edu

- U of Minnesota Web \_\_\_\_ http://www.tc.umn.edu/
- Distributed Computing \_http://www.micro.umn.edu/
- Central Computing \_\_\_\_ http://www.umn.edu/ccs

Please be legible. Help us keep our costs down by using a campus mailing address whenever possible. Thanks.

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Department \_\_\_\_\_

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City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

### University of Minnesota Affiliation. Please check one box.

Department  Faculty  Staff  Student  Alumni  Other

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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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## Computer and Information Services Newsletter

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