

# MICROCOMPUTER NEWSLETTER

AUGUST 1987

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## NEWS AND ANNOUNCEMENTS

### ● PC-DOS 3.3 UPGRADE

In July 1987 IBM discontinued selling versions of PC-DOS older than version 3.3. Whenever a new version of an operating system is released, it tends to be larger than previous versions. PC-DOS 3.3 is no exception; this size issue may interest people without hard disks. On the right is a table which shows how the PC-DOS COMMAND.COM file has grown:

COMMAND.COM	
Version	File Size
1.1	4959
2.1	17792
3.1	23210
3.3	25307

You need version 3.3 if you have an IBM Personal System/2 computer. You may want version 3.3 regardless of the model of your IBM because it supports hard disks with multiple 32MB partitions and a few commands have been enhanced, such as the MODE command. MODE now supports four, instead of two, serial ports.

If you have an older version of PC-DOS you can upgrade to PC-DOS 3.3 for a reduced fee through December 1987. The exact fee depends on whether you are updating a personal or a departmental copy. Some of you will have received a letter from IBM outlining the steps involved in upgrading to 3.3. For those who have not seen this letter, here is how departments and individuals can order the upgrade:

#### Departments:

1. complete an *Upgrade and Certification Order Form*
2. submit this form and a U of M *Quick Requisition* form to the University Purchasing Department

Departments will be billed \$52.50 per upgrade.

#### Individuals:

1. complete a version 3.3 *Program Upgrade Order Form*
2. the upgrade fee is \$75 and is payable by check or money order to the *IBM Corporation*. The fee is subject to state and local taxes. If you live in Minneapolis, submit payment for \$79.88; elsewhere \$79.50 should cover the fee and Minnesota taxes.
3. submit proof of your license, that is, the original (not a photo copy) inside front cover from the DOS Reference Manual.

Individuals should mail these three items to: IBM Corporation, Information Systems Group, P. O. Box 3160, Wallingford, CT 06949

 NEWS AND ANNOUNCEMENTS CONTINUED ON ..... PAGE 90

## REVIEW: APPLESHARE



We talk to a lot of people who want to share information with others in their office or work group. The simplest method of sharing information is to copy the information to a floppy disk and carry the disk to the person with whom you want to share the information. While this method is appealing in its simplicity, it has some drawbacks: you must find and give floppy disks to all the people who need the information; and if you make changes to the information after you have given the floppy disk to your colleagues, you must carry another set of floppy disks around your office.

Another approach is to have some sort of shared disk that is accessible over a *local area network* (LAN). By using a disk which is accessible to everyone, you avoid distributing floppy disks whenever you revise the information. The drawback to this approach is that it requires some specialized software and hardware. First, you will need to have the microcomputers in your office connected together with a LAN; for Mac owners this generally means using the AppleTalk network. After the microcomputers are connected together, you still need a method of sharing a disk (usually a hard disk) over the network.

Apple's AppleShare file server software is one such method sharing a disk over a network. AppleShare is used to make one or more hard disks a shared resource which is available to others over an AppleTalk network. In this review, we will cover the basic features of AppleShare version 1.1 and offer some suggestions for setting up and controlling access to a shared hard disk.

### Hardware and Software Requirements

To use AppleShare you need three things: a dedicated Macintosh with at least 1 MB RAM to act as a file server, an HFS-compatible hard disk connected to the dedicated Mac, and an AppleTalk (or equivalent) network. To access the shared hard disk, each Macintosh on the network must have at least 512K RAM and must run Finder version 5.4 (or greater). AppleShare supports up to 25 simultaneous users on the network. This means that you can physically connect more than 25 Macs on the network, but that no more than 25 people can use AppleShare at the same time. (This AppleShare limitation does not restrict use of printers on the network.)

One of AppleShare's strengths is in some respects a drawback: AppleShare requires a dedicated file server. This means the sole task of one Mac on your network is to act as the file server; this dedicated Macintosh cannot be used for any other purpose. TOPS, another popular file server software package, does not require a dedicated file server; instead, any workstation on the network can act as a TOPS file server at the same time that it is running normal applications. At first glance, the approach used by TOPS seems to be preferable to Apple's, but there are drawbacks. Because a TOPS server must perform two tasks simultaneously (for example: run a word processing program,

and act as a file server) the network's overall performance is noticeably degraded; it's slower. Apple chose to dedicate a machine to act as a file server so that the performance of each individual's workstation would not slow down. Another advantage to AppleShare is that you can lock the dedicated server in a closet and always leave it turned on. Most people find it disconcerting to suddenly be cut off from a shared hard disk because someone turned off their machine; TOPS users have more responsibilities because their machine is acting as a file server. As you can see, there are advantages and disadvantages to both schemes.

### AppleTalk Network

The network we used to test AppleShare is the same AppleTalk network that we use to share our LaserWriter printers. The network usually has 30 workstations connected to it and is a combination of AppleTalk and PhoneNet connectors (see our PhoneNet review in the March 1987 newsletter). Our AppleShare file server is a Macintosh SE with two hard disks: one is a 20 Megabyte internal disk; the other is an AST-4000 74 Megabyte external SCSI disk. Each hard disk used with an AppleShare file server is called a volume.

We didn't do anything special to add the dedicated file server to our AppleTalk network. Setting up an AppleTalk network from scratch or adding to an existing network setup is very straightforward. All the steps are covered in simple terms in the AppleTalk manuals (picture diagrams are included with the manuals). Once the file server is physically connected to the network you are ready to install the AppleShare software.


Since the file server is a dedicated Macintosh and serves no other purpose, you may want to keep the Mac in an out of the way location, such as a locked closet. By doing this it is less likely that someone will mistake the file server for 'just another Mac' and interrupt its operation. We put our file server in a closet and disconnected the keyboard and mouse. Now the only thing that can disrupt our file server is a power failure.

### Installing AppleShare

AppleShare comes with a special disk that has the installation software on it. To install AppleShare you startup the Mac you've chosen to be the dedicated file server with AppleShare's *Server Installer* disk. On this disk is an icon called *AppleShare Admin*. You open this icon and select one of your hard disks (if you have more than one) to be the startup volume.

After you have specified the hard disk you want to be the startup volume, you are asked to enter the *Admin key*. The *Admin key* is a special password you use each time you make changes to the file server. Only one person should know this password. Once the file server is setup with AppleShare, you must register and assign a password to each individual user (not workstation) on the network. You can also assign users to groups. Group members can share files with each other and restrict non-group members' access to files.


## Setting up the Workstations

AppleShare calls each microcomputer connected to the network a workstation. You use AppleShare's *Workstation Installer* disk to install AppleShare into each workstation's System Folder. The installer adds *Access Privileges* to the  desk accessory menu and tells the *Chooser* desk accessory how to select a file server.

To access the file server, you select the AppleShare icon from the *Chooser* desk accessory and enter your password. If AppleShare recognizes your name and password, the file server's disk appears as an icon on your desktop, just like any other disk. Using AppleShare is just like accessing another disk. The only difference is that you can *choose* to let other users see your files and folders.

## Using AppleShare

You "own" the files and folders you create on the file server. It is up to you, as the owner, to decide if you want others to see all or some of your work.

To share a file with others on the network, you choose *Access Privileges* from the  menu and select whether you want everyone on the network to be able to copy your file or want access restricted to a particular group. You can also let others read your files but not change them.

The example on the right shows the access privileges for a folder named *goodstuff* which is owned by MaMicro.

The owner, MaMicro, has given access privileges to members of the group MICROGROUP. Members of this group can see all files and folders in the *goodstuff* folder, but they can't make changes to anything within *goodstuff*. This means that they can open and read documents that are in the folder, but they cannot modify those documents. Anyone who is not a member of the group MICROGROUP cannot even open *goodstuff*. However, if *goodstuff*'s owner checks the boxes for 'everyone,' then anyone on the network would have access to the folder.

## Who's Responsible for What?

When working with a dedicated file server like AppleShare, it makes sense to designate one person to be the administrator. The AppleShare Administrator should be in charge of making all changes to the network, such as system and software upgrades, assigning initial user protection levels and passwords, and for making regular backups of the information stored on the file server. If more than one person shares the responsibilities

of administering the network, confusion may occur as to what changes have or have not been made.

The AppleShare Administrator occasionally needs to make changes to the system. For example, a new employee may need to access the network. To add a user to the network, the Administrator halts the network and starts it up again with the *AppleShare Server Installer* disk. Then the Administrator opens the *AppleShare Admin* icon, enters the Admin key (password), and does what needs to be done, such as add a new user, delete existing users, or change someone's password. The Administrator does not need to know a person's current password to change it to something else; this is helpful if someone has forgotten their password.

While the AppleShare Administrator is the person who makes modifications to the system, it is the person AppleShare calls the Custodian who is the owner of all the volumes attached to the file server. Usually, the AppleShare Administrator and the Custodian will be the same person.

## Documentation and Support

You receive two manuals with AppleShare: the Administrator's Guide and the User's Guide. The Administrator's Guide gives you step-by-step instructions on setting up the network and modifying it later. The User's Guide tells individual users how

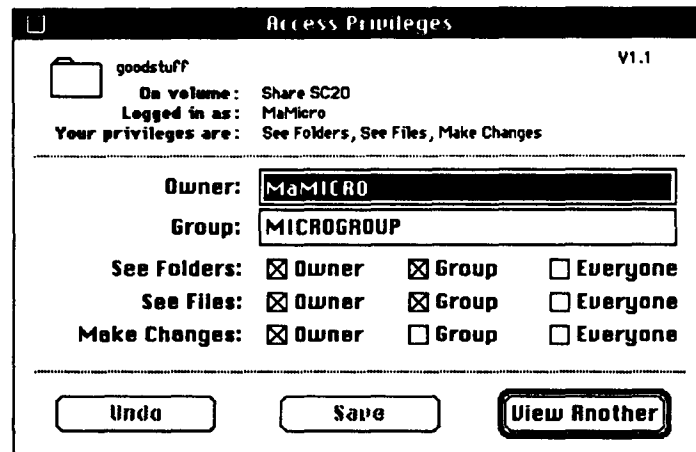
to install AppleShare on their workstation and how to share information with other users. We found both manuals very easy to follow. If you do have problems that are beyond the scope of the manuals, our HelpLine can provide support.

## Wish List

Each time the Administrator must make a change to the network, such as add a new user or change

someone's password, the file server must be stopped. To make changes the Administrator must re-start the system with the *AppleShare Admin* icon, make the changes, and then re-start the system again. This means that no one can access the file server when changes are being made and assumes that the Administrator is always going to make changes during non-working hours. We find coming in at six o'clock in the morning to make modifications unappealing. We believe the Administrator should be able to make minor changes, like changing someone's password, without shutting down the file server.

Another drawback is that neither the Custodian nor the Administrator can monitor the system when they are signed on as a

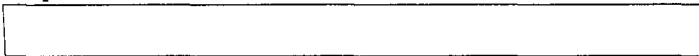


user. They cannot monitor who is using AppleShare or who may be on the network but not actively using AppleShare. We'd also like a more technical manual; one that gives a complete list of AppleShare errors and their possible causes. Although the manuals are very easy to understand, they assume your problems will be minimal. On the rare occasion that you have a more serious problem, you may not find the answer in the current manuals. The manuals also need more information on setting protection levels. You are told about the various protection options, but not when or why you would need them.

**Conclusion**

AppleShare is an excellent file server package; it is extremely easy to use, both from the Administrator's and a user's point of view. The file server's presence is nearly transparent to the individual user because AppleShare volumes are used just like any other disk. We do not consider the items mentioned in our wish list serious drawbacks; they are simply features that would make the package even nicer. The only potential drawback to AppleShare is that it requires that a Macintosh be dedicated solely to the job of acting as a file server. However, this results in better performance than other file server software.

AppleShare is available for \$455 at the Electronics Desk in the Williamson Hall Book Center. If you would like to take a closer look, we have AppleShare setup and running in the HelpLine.



**IBM SOFTWARE  
IN THE HELPLINE**



The HelpLine receives and purchases a lot of software over the course of a year. Below is a list of nearly 100 pieces of IBM and compatible software that are available on 5 1/4" disks in our HelpLine. The HelpLine supports some but not all of the software on this list. The list is divided into software categories. Notes, such as (SL) for Site License, are explained at the end of the list. We included the Minnesota Book Center's price if the Electronics Desk sells or can order the software; otherwise we included the suggested retail price. Since the software the Book Center sells changes, you can call them to see if software you are interested in has been added or deleted from this list.

We will periodically update this software list to let you know what we've added to our collection. If the software you're interested in is not on our list, it may still show up in the HelpLine. There is usually a delay between when the software is actually delivered to Shepherd Labs and when the software and its documentation appear in the HelpLine. Whenever we receive software we back up the disks and the documentation. This backing up process can add days to the time it takes the software to be ready for the HelpLine.

*Next month, space permitting, we will publish a list of all training materials available in our HelpLine.*

SOFTWARE	VERSION NUMBER	VENDOR	BOOK CTR.	SUG. RET.
<b>COMMUNICATIONS</b>				
Kermit .....	2.27	.....		0
Connect .....	1.1	Control Data .....		18
PC-DOS Simtec and PrintFoto .....	3.0	ACSS .....		50
ProComm .....	2.4	Datastore Tech. ....	(SL)	
Smartcom II .....	2.1	Hayes .....		87
<b>DATABASE</b>				
Data Edition .....	1.0	IBM .....	(IBM)	
Exec. Card Master ....		Hewlett-Packard .....	(HP)	
dBASE III Plus .....	1.1	Ashton-Tate .....		417
IBM Filing Asst. ....	1.0	IBM .....	(IBM)	
IBM Report. Asst. ....	1.0	IBM .....	(IBM)	
Notebook II .....	2.3	Pro/Tem .....		310
Personal Card File ....		Hewlett-Packard .....	(HP)	
pfs: Prof. File .....	1.0	Software Publ. ....		150
pfs: report .....	C	Software Publ. ....		75
PowerBase .....	2.3	Power-base .....		200
R:base 5000 .....	1.01	Microrim .....		375-425
R:base System V ....	1.0	Microrim .....		365
Reflex .....		Borland .....		150
Reports+Edition .....	1.0	IBM .....	(IBM)	
<b>GRAPHICS</b>				
Chart .....	2.02	Microsoft .....		152
Graphs Edition .....	1.0	IBM .....	(IBM)	
Graphical File System Program. Guide ..	1.0	IBM .....	(IBM)	
Harvard Presentation. Graphics .....	A	Software Publ. ....		235
IBM Graph. Asst. ....	1.0	IBM .....	(IBM)	
pfs: graph .....	C	Software Publ. ....		84
Plotting System Programming Guide and Language Bind. ..	1.0	IBM .....	(IBM)	
Windows Draw .....	1.04	Micrografx .....		280
<b>INTEGRATED</b>				
Ability .....		Xanaro Technologies .....		100
First Choice .....	1.0	Software Publ. ....		110
Framework II .....	1.0	Ashton-Tate .....		417
Symphony .....	1.0	Lotus .....		334
Windows .....	1.01	Microsoft .....		55
<b>LANGUAGE</b>				
Basic Compiler .....	1.93	Microsoft .....		205
Cobol Compiler .....	2.10	Microsoft .....		360
GW Basic .....	2.0	Zenith .....		56
Fortran Compiler ....	3.31	Microsoft .....		232

Macro Assembler .... 4.0	Microsoft..... 80
Pascal Compiler ..... 3.32	Microsoft..... 155
Professional Fortran by Ryan-McFarland. 1.0	IBM ..... (IBM)†
QuickBASIC ..... 1.01	Microsoft..... 55
Ryan-McFarland Fortran .....	Ryan-McFarland ..... 675†
Turbo Asynch Plus .. 2.0	Blaise Computing ..... 100
Turbo Graphix Toolbox ..... 1.07	Borland ..... 33
Turbo Pascal with 8087 ..... 3.01A	Borland ..... 60
Turbo Power Tools Plus ..... 2.0	Blaise Computing ..... 100
Turbo Prolog ..... 1.1	Borland ..... 63
Turbo Tutor .....	Borland ..... 25

**OTHER AND UTILITIES**

Dirac-Tree ..... 5.02	Micro-Z ..... 50
Freelance Plus ..... 2.0	Lotus ..... *
HAL ..... 1.0	Lotus ..... *
HP PCLPak .....	Hewlett-Packard ..... (HP)
IBM PC Network Program ..... 1.0	IBM ..... (IBM)
MathCAD ..... 1.1	MathSoft..... 249
Measure .....	Lotus ..... *
Metro ..... 1.0	Lotus ..... *
Norton Utilities ..... 4.0	Norton ..... 60
Polaris Forms ..... 1.01	Polaris ..... 149
Printworks ..... 1.0	SoftStyle ..... 40-125
Reminder System .... 1.0	Campbell Services ..... 99
Sideways ..... 3.11	Funk Software ..... 42
Sidekick ..... 1.11C	Borland ..... 56
Smart Notes ..... 1.4	Personics ..... 45
SuperKey ..... 1.0	Borland ..... 62
TI Personal Consultant Plus with PC Scheme ..... 2.0	Texas Instruments..... (SL)
ThinkTank ..... 2.0	Living Videotext ..... 92
TopView ..... 1.01	IBM ..... (IBM)
TopView Prg's Toolkit	IBM ..... (IBM)
Turbo Lightning ..... 1.00A	Borland ..... 59

**SPREADSHEET AND FINANCIAL MODELLING**

1-2-3 ..... 2.01	Lotus ..... 238
IBM Planning Asst. .. 1.0	IBM ..... (IBM)
MathPlan ..... 2.0	WordPerfect ..... *
Multiplan ..... 3.0	Microsoft ..... 100
pfs: Prof. Plan ..... 1.0	Software Publ ..... 150
Plans Edition ..... 1.0	IBM ..... (IBM)
Plans+Edition ..... 1.0	IBM ..... (IBM)

**STATISTICAL**

IMSL ..... 0.0	IMSL, Inc. .... (SL)
SPSS/PC+ including Graphics and Translate .....	SPSS ..... (SL)
Advanced .....	SPSS ..... (SL)
Systat ..... 3.0	Systat, Inc. .... (SL)

**WORD PROCESSING AND DESKTOP PUBLISHING**

DisplayWrite 3 ..... 1.0	IBM ..... (IBM)
Easy ..... 1.0	MicroPro ..... 88
Exec. Memo Maker ...	Hewlett-Packard ..... (HP)
IBM Writing Asst. .... 1.01	IBM ..... (IBM)
Manuscript ..... 1.0	Lotus ..... *
My Word! ..... 1.71	TNT Software ..... 25
PageMaker ..... 1.0	Aldus Corp ..... (HP)
Prof. Editor ..... 1.0	IBM ..... (IBM)
Spellbinder ..... 6.2	Lexisoft ..... 790
Script/OC ..... 1.0	IBM ..... (IBM)
Turbofonts ..... 1.1	Image Processing ..... 175
Text Charts .....	Hewlett-Packard ..... (HP)
WSUtools ..... 1.0	ACSS ..... 50
Word ..... 3.1	Microsoft ..... 82
WordPerfect ..... 4.2	WordPerfect ..... 150
WordPerfect Library ..... 1.0	WordPerfect ..... *
Words Edition ..... 1.0	IBM ..... (IBM)
WordStar ..... 3.3	MicroPro ..... 210
WordStar 2000+ ..... 2.0	MicroPro ..... 357
WordStar Professional ..... 3.3	MicroPro ..... 250

**NOTES**

- \* - Book Center price undetermined but available soon.
- (HP) - HP donation/demonstration programs.
- (IBM) - IBM donation.
- † - IBM Professional Fortran and equivalent; U of M departments can order through state contract.
- (SL) - Site License:  
Site licenses are only available to members of the University of Minnesota community. TI Personal Consultant Plus, IMSL, SPSS, and SYSTAT site licenses are only available to departments (not individual faculty, staff, or students); to use these site licenses departments must pay an initial and an annual fee.

**ACSS CONTRACT SERVICES GROUP**

by Polina Shur

Recent developments of microcomputer technology accompanied by the development of the next generation software has changed the role of computing in business, teaching, and research. For many, computers stopped being simply a useful tool and became truly indispensable. How can you use computers in your business, research, teaching, or everyday life? How can computers - from microcomputers to mainframes - help you solve your problems? What hardware and software are suitable for your needs? The Contract Services Group, part of the Academic Computing Services and Systems (ACSS) department of the University of Minnesota, can help you get answers and solve your problems.

- We can help you understand what your computer needs are.
- We can choose the hardware and software matching your needs and provide "hand holding" - from unpacking and setting up your computer, and installing your software to teaching you (on site) how to use your computer and software.
- We are available for consulting and custom programming in dBASE II and III, Lotus 1-2-3, Excel, Reflex, as well as Pascal, FORTRAN, BASIC, and other computer languages. We can even teach you beginning programming skills.
- We provide individual or group classes and consulting.
- If you include our future services into your proposal budget, we can help you write a section of your proposal dealing with applications of computers to your research.

Here are a few examples of programming we can perform:

- If you work with tables of numbers or simple graphs, we can convert your research data to two- or three-dimensional color graphics suitable for analysis or presentation.
- We can set up for a database of literature references on the subject of your research. You will be able to find references by author's name, key words, or date, and have optional descriptions of articles on file.
- We can set up an electronic mail system in your department using standard phone lines and standard micros.
- We can write computer aided instruction programs for your course complete with drills, tutorials, and on-line help.
- We can do computer-assisted text analysis helping different research projects in humanities.
- We can do statistical analysis of survey responses, technical writing, file transfer and conversion, and much more.

The Contract Services Group employs professional analysts and programmers with background in computer science, statistics, management information systems, business administration, and Liberal Arts. We have experience with both mainframes and microcomputers. Our clients include University departments, faculty, researchers, and users of University computing services; agencies of the state, local, and federal government; and nonprofit organizations. The ACSS Contract Services Group is a unique and valuable University of Minnesota resource. By using it, you will greatly benefit from applying computer technology to a variety of your problems.

If you would like the Contract Services Group's assistance on a project, *your first step is to call Phil Kachelmyer at 625-2303 and arrange a meeting.* At the first meeting, for which there is *no charge*, a Contract Services staff member will evaluate and interpret the nature of your work. If we decide that the project is within our scope of operation and you decide that you want to use our service, we'll provide *a free estimate of the cost of our services* and the time necessary to accomplish the task. If you find the estimate acceptable, we assign a Contract Services Group staff member to the project and work begins.

## 👁 ANNOUNCEMENTS CONTINUED FROM .... PAGE 85

The HelpLine has extra copies of IBM's individual and department upgrade order forms. If you are part of the University community but are still unsure how to order an upgrade, you can contact Jim Leach, IBM representative, at 341-6317.

Please allow 4-6 weeks for delivery. Upon receipt of your upgrade you have 30 days to be sure PC-DOS 3.3 works with your hardware and software. IBM's upgrade agreements require you to destroy your *original* materials (such as DOS diskettes) that are replaced by the upgrade. You must destroy these materials within 30 days of receipt of PC-DOS 3.3.

### ● MAC SOFTWARE UPGRADES

The HelpLine has upgrades to three 🍏 software programs: MacTerminal version 2.2, MacDraw version 1.9.5, and MacProject version 1.2. You can get a free upgrade if you bring your *original* disk and an initialized disk to the HelpLine in 125 Shepherd Labs. The disks in the HelpLine contain the application, a short READ.ME document, and Apple's software license, but no operating system. The disks do not contain a System or Finder because the 512K Macs should use Finder 5.3 and System 3.2 while the Mac Plus, SE, and II should use Finder 5.5 and System 4.1. All three programs support the new operating system and the Mac II, SE, Plus, and 512K Mac. MacDraw 1.9.5 and MacProject 1.2 also work with AppleShare. In addition to supporting AppleShare, MacProject 1.2 supports color monitors, and MacDraw 1.9.5 supports more fonts than before (up to 54) and new command key combinations, such as "A" for *Select All* and "R" for *Reshape*.

### ● H-P LASERJET PRICE INCREASE

Sometimes prices go up. In July the Book Center's price for the Hewlett-Packard LaserJet Series II went from \$1430 to \$1490.

### ● 512K MACINTOSH DISCONTINUED

Because demand is down for 512K Macs, the Book Center recently stopped stocking them; we believe demand is down because buyers are concerned that their software choices won't run satisfactorily on only 512K RAM. Now Apple has announced that they've stopped manufacturing the 512K Mac. This announcement does not affect the Mac Plus, Mac SE, or Mac II, all of which are still available from the Book Center.

### ● MINNESOTA BOOK CENTER

- *Security Kits* — The Book Center in Williamson Hall has security kits for the Macintosh similar to those sold under Apple's name. The \$27 kits are made by Grimes (the people who used to make Apple's security kits) and work on the Mac Plus and the SE. If you want to see one of these security kits, stop by the HelpLine in 125 Shepherd Labs. The Book Center appreciates your patience in waiting for these Mac security kits.

- *Furniture* — Because the Book Center has received so many requests for furniture, they're trying an experiment. Until mid-

October the Smith (West Bank) Book Center will carry some inexpensive and good quality computer furniture. You may want to consider it for your home or office. To actually see furniture samples, talk to Kari at the Smith bookstore. To simply peruse a catalog, talk to Bobbie at the Electronics Desk at the Williamson Hall bookstore. You must pay for furniture in full when you order it; usually your order will be delivered within 10-14 days.

• *Attention 128K Macintosh owners* — This may be your last chance to upgrade your 128K Mac because THE UPGRADES ARE NO LONGER AVAILABLE FROM APPLE. The Book Center still has about 20 upgrades that will turn your 128K machine into an Enhanced 512K Mac. This \$360 upgrade gets you a board with 512K RAM, an 800K (double sided) internal floppy drive, and the new Mac ROMS. Contact Pete at the Electronics Desk in Williamson Hall if you are interested in this upgrade. To qualify for the Book Center's \$360 price you must have purchased your Mac through an educational discount program.

• *Disks* — Demand for single-sided 3.5" disks is much less than for double-sided disks. Since the Book Center cannot sell single-sided disks as cheaply as double-sided disks, they will no longer sell single-sided 3.5" disks.

Mac owners with 400K disk drives can use these double-sided disks because double-sided disks can be initialized as single-sided disks. However, the reverse is not true. When you initialize a disk, the Mac asks if you want the disk to be initialized as double- or single-sided. If you have a double-sided (800K) drive, you can safely choose either option. If you have a single-sided disk drive, your only option is single-sided.

## ● SUN Software Distribution

The University of Minnesota and SUN Microsystems are working on an agreement for a SUN software distribution program. Such a program would save departments money by centralizing software distribution through the Microcomputer and Workstation Systems Group; some departments could save over \$2000 per year by participating in this program. The proposal calls for annual fees based on the number of *disked* and *diskless* SUN workstations within each participating department. The maximum annual fee any department would pay is \$500. Here's the proposed fee structure:

Number of Sun Workstations	Annual Software Fee
1	\$ 100
2-5	\$ 50
5+	\$ 25

The proposed program includes manual updates. SUN will sell individual manuals or complete sets, and manual prices will be available in the Shepherd Labs HelpLine. Departments will be able to buy their own updates or come to the HelpLine to view or copy segments of ours. If your department is interested or if you have questions about this program, please contact Dave Burris at 625-2078.

## ● SOFTWARE TRAINING

The HelpLine owns several training packages for which we supply the training materials, but you supply everything else, such as a microcomputer and audio cassette player. University of Minnesota departments and people with a current University of Minnesota ID can check out one copy of the HelpLine's training materials for 48 hours.

### • WORDPERFECT

Our latest acquisition is an audio cassette training package for WordPerfect 4.1 and 4.2 entitled *How to Use WordPerfect*. This FlipTrack Learning Systems package comes on four tapes and uses conversational-style instructions. You use this package with your own copy of WordPerfect (version 4.1 or 4.2). This audio course is designed for the first-time computer user and assumes no previous word processing knowledge. To use it you must be sitting at your computer and have already made working copies of WordPerfect and installed it to work with your printer. The course includes a short, printed *Quick Reference Guide*. We suggest that you use this course as a supplement to the tutorial that comes with the WordPerfect manual. A recent issue of *The WordPerfectionist* (V. II, N. 8) recommends the FlipTrack course for "training beginners up to the advanced intermediate level."

## ● USERS GROUPS

### • MMM, Minnesota Macs in Medicine

An Apple Mac users group for health professionals was recently organized at the University of Minnesota Medical School; this users group is called MMM, Minnesota Macs in Medicine.

One of MMM's main purposes is to serve as a clearing house for information on medical applications written for the Macintosh. Lyle Torguson, President of MMM, believes the clearing house is necessary because there are many useful medical programs developed by medical schools and hospitals across the country that are unknown to health professionals who own Macs. Another MMM function is to serve as a personal users group; this means making a medically oriented public domain library available to members and coordinating group buys on items, such as blank disks and ribbons. Currently MMM's members include medical students, residents, physicians, and other allied health professionals from around Minnesota as well as around the country. Some of MMM's members are involved in developing medical applications. For more information on MMM, you can write to Lyle Torguson, c/o MMM at 6041 2nd Avenue S, Minneapolis, MN 55419 or call him at (612) 861-5925.

### • IBM USERS GROUP

The U of M IBM Users Group meets from 3-4:30 pm on the last Thursday of each month. The August meeting is on the 28th. A week before the meeting, you can call Nancy Grant, IBM, at 341-5187 to learn the location of the meeting.



