

# Washington Apple Pi



The Journal of Washington Apple Pi, Ltd.

Volume 9

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Number 7

## Highlights

- The Button-Down Apple
- Macros for AppleWorks
- I Love Apple Music: Part 2
- ☐ Don't Upgrade to F 5.5/S 4.1 until you read this
- ☐ Mac Programmer Workshop (view from the Hill)
- ☐ Playback Program

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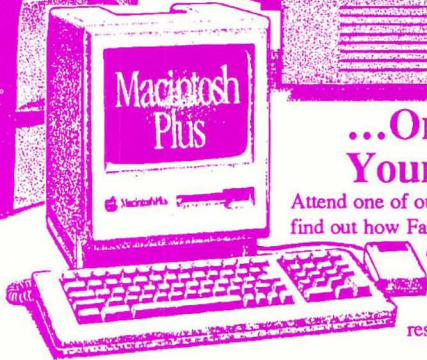
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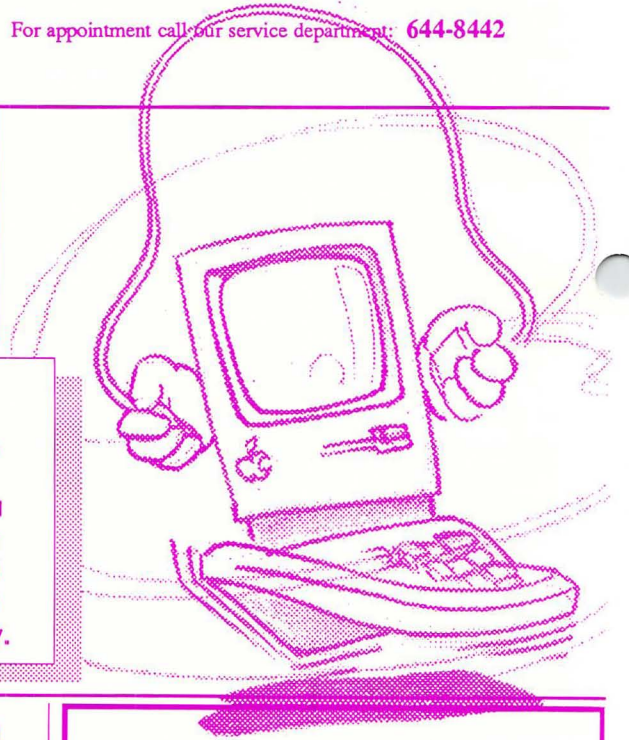
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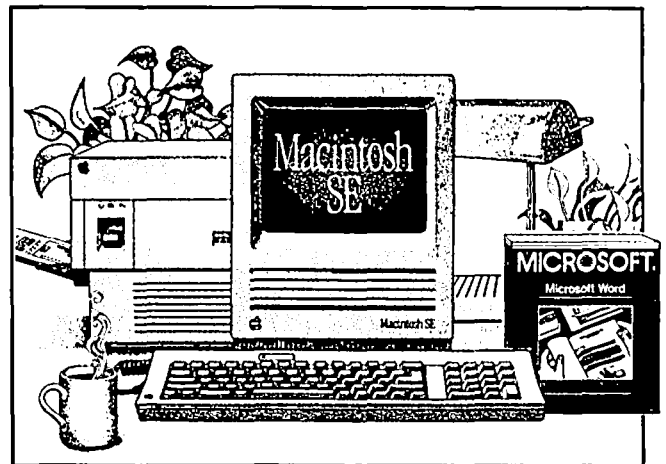
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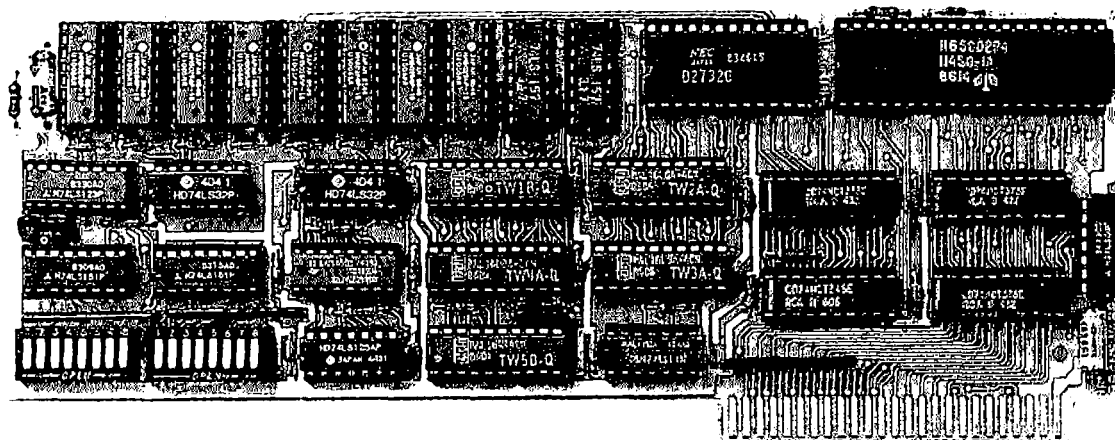
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# EDITORIAL

We don't do things conservatively in this household. 1. We installed System 4.1, finder 5.5 and the new utilities on our hard disk. 2. We installed Tops so that we could share the LW+ and hopefully the DataFrame. 3. We started on the Journal with the newly-released PageMaker 2.0. 4. We also used Super Mac's new utilities and drivers for the DataFrame. Now we can't tell whether the strange actions are due to errors on our part or bugs in any one or combinations of the new software. But things have surely changed by using PM 2.0. Many good and many bad. Perhaps after another Journal or two we will have a better fix on the bad, as to whether they are really bad.

Examples of the bad—Minor ones include: control keys have been changed for sizing the window (CD-1 instead of CD-

A for Actual page size, CD-W instead of CD-F for Fit in Window). Apparently Aldus was won over by PC users. Significantly bad is that PM does not recognize right margin settings from word processing files. All our working habits have to undergo major revisions. Heading and column formatting has to be re-learned, making as much use of the master page formatting and default settings as possible. The 0,0 horizontal vertical setting is changed to the upper left corner of the page, not the upper left of the margin settings. The screen refresh is very flaky. Charts and text sometime group together unexpectedly. One MacWrite document opened as a null document despite the fact that MacWrite did open it correctly several times using the same system and finder. We "SAVED As" a different document and this certified its contd. on pg 6



## PRESIDENT'S CORNER



### *time of transition at Washington Apple Pi:*

June and July is a time of transition at Washington Apple Pi, as we change "administrations," with a new set of officers and directors taking over from the old. As these words are being written, we do not know the results of the election. There will be, however, a number our valuable officers and directors moving into new roles here at the Pi,

and I want to take this opportunity to give them some of the recognition they deserve for all their service to the Pi.

Vice President for Apple II programs *Bruce Field* is retiring from that office, although he is presently running for Director-at-Large. Bruce has been one of the Pi's most stalwart volunteers over many years, helping to run the Apple II Question-and-Answer sessions and authoring the Apple II Q&A column in the WAP Journal. WAP members who are also members of the A.P.P.L.E. Co-op may know that Bruce is the Apple Doctor in Call-A.P.P.L.E.

Our other Vice President, *Jay Heller*, who has been overseeing Macintosh programs for the past year, is also stepping down. Jay came to our rescue last year when he agreed (no one used thumbscrews, not even once!) to serve as Vice President for Macintosh programs. Jay is somewhat unique among Macintosh enthusiasts in that he has a background in hardware and engineering as well as software. He brought that background and the help of many other Pi volunteers into making our Macintosh programs among the most interesting we have ever had.

*Rich Wasserstrom* is retiring from a formal role on the Board of Directors after having served as a Director-at-Large for more years, to my knowledge, than anyone else in the history of the Pi. Rich will continue to serve in the important role of Group Purchase coordinator and on our Dealer Relations Committee.

We will also miss the good counsel of *Marty Milrod*, but Marty will be continuing to serve as Macintosh New Disk Librarian and as one of the tutors of our new Macintosh users' tutorials. Marty's contribution as New Disk Librarian is one that deserves special commendation. Given the rate at which new public-domain and shareware software comes out, Marty's task is monumental, and one for which all Mac users must be extremely grateful. Thanks, Marty!

This is not, however, a time only of leave-taking. On the assumption that candidates who run unopposed for officers of WAP (President, the two Vice Presidents, Secretary and Treasurer) are highly likely to win, let me congratulate *Ray Hobbs* and welcome him back into Pi-wide office. Ray served for a number

of years on the Board of Directors and has also been chairman of the PI-SIG ("PI" standing for "Program Interfacing") and more recently of the MusicSIG. It was Ray, many of you will recall, who put together the fabulous music program for the May meeting. Ray will be the new Vice President for Apple II programs.

On the same basis, let me congratulate *Bob Platt*, who will be the new Vice President for Macintosh programs. Bob has served as a Director-at-Large for several years, and his work in rebuilding our tutorial program has been outstanding and of immense benefit to the many Pi members who have taken advantage of the inexpensive-yet-valuable WAP tutorials.

And let me congratulate two other valuable WAP volunteers who will be staying on in their current roles: *Peter Combes*, our Secretary, and *Ed Myerson*, our Treasurer. Not enough of us see the work that these two volunteers do, as it is for the most part done behind the scenes, but it is all the more valuable for being so. Peter has the responsibility of keeping up with what goes on at Board of Directors meetings as well as keeping track of the Pi's formal documents. WAP is particularly fortunate to have two such dedicated volunteers as Ed and *Priscilla Myerson*, who, together, manage the Pi's finances. The amount of work required to do this is considerable, and for us to have found two such dedicated professionals to serve as volunteers makes us especially fortunate.

\* \* \*

*The Great SE Fan Controversy:* A small but non-trivial minority of the Pi's Macintosh SE owners are reporting a noise problem with the fans in their SE's. While most SE fans are very quiet—the ventilation in your home or office is noisier—a few are noisy enough to be a significant distraction to doing concentrated work. A number of people on the Telecommunications System have reported this. My law firm, which has six SE's, has one with a fan that was noisy enough to turn on a voice-activated speakerphone located four feet from the computer. *Bernie Urban*, our Editor, reads newsletters from other user groups with whom we exchange our Journal (*see, fellas, we do read what you send us!*) and reports to me that a number of groups have reported the same experiences that Pi members have had.

I should stress that the problem is a relatively rare one. As I said, our firm's experience is literally one-in-six; the actual problem rate for SE's overall is, I suspect, somewhat lower.

The problem is that when you take in your SE to be fixed at your authorized Apple dealer, the dealer either refuses or is reluctant to repair or exchange the SE. I have heard that there is a fix to the problem that involves replacing one of the fan's resistors with a resistor of a different value, but I do not want to say whether this works or not, never having tried it or known personally someone who has. But the answer that many dealers seem to be giving, that the noisy fan is "normal," is just not acceptable. (Perhaps computer stores are naturally noisy places....)

But the truly troubling thing is that dealers are not willing to  
contd.

remedy the problem. This situation sounds similar to the Great Macintosh Power Supply Controversy of 1986. In that case, a small but non-trivial number of people were reporting that their Macintosh power supplies failed, requiring replacement. This usually occurred immediately after service work or after a board upgrade. Dealers refused at first to say that it was anything but coincidence, and required users to pay for the replacement of the power supply. In fact, it appears, the problem was in part with the power supply itself but, in greater part, with the service technicians around the country who were failing to follow *strictly* Apple's rules for adjusting voltage tolerances and observing proper grounding procedures. Apple sent out repeated service bulletins to technicians and made improvements in the power supply, and the problems diminished considerably—but customers who had to pay around \$100 each for power supply replacements were left out in the cold.

We may be in a similar situation with the SE fan, although fortunately the fan noise is not the fatal problem that a dead power supply is. But if dealers will not recognize that Macintosh SE users have a legitimate problem, the result is still customer dissatisfaction.

Apple Computer, Inc. knows, based on the number of complaints it has received, that it has a problem. We used AppleLink to tell *Jean-Louis Gassée*, Vice President for Product Development, and *Randy Battat*, Hardware Project Manager, about the problems Pi members were facing. The replies we received are worth quoting in full not only for their content but also because, interestingly, both messages convey something of the qualities of their respective authors.

Randy replied with his characteristic directness, "I'm forwarding your 'link to *Charlie Oppenheimer*, who is well aware of the issue you raise. Charlie may not be able to respond immediately, but I'll ask him to get back to you when he has more information."

Jean-Louis's reply combines forthrightness with charm, both of which he is well-known for:

You're right, we have a problem with the SE fan.

We have already done a substantial amount of investigating. What we think we know is the following:

1. There is indeed an occasional variation from unit to unit. We are working with manufacturing and our supplier in order to minimize these variations.
2. To our knowledge the SE's we ship are within our spec, 55 dbA. Actually well within, about 5 db less.
3. The SE is several db's "quieter" than other computers incorporating hard disks, if you see what I mean.
4. That's not an excuse: if our customers don't like it, we have to find a way to change it. That's what we are doing. Your Apple user group contact will communicate with you. Always feel free to contact me directly.

I'm writing this from home and I have an SE, a second (external) HD 20SC and a LaserWriter and I'm trying to listen to the Two and Three-part Inventions played by Andras Schiff... so you can tell your fellow members that I know how they feel even if my SE is not abnormally loud.

Thanks for caring,  
JLG

\* \* \*

*A note to authors of Journal articles written on the Mac using Word 3.0:* In discussing this column with *Bernie Urban*, our Journal Editor, I learned that now that he has PageMaker 2.0, he can read and write Word 3.0 files—but that they must be *not* be saved using the "Fast Save" option. Before saving a Word 3.0 file to submit for the Journal, use "Save As..." and *uncheck* the "Fast Save" box underneath the file name.

*There is a difference—but in mouse pads?* We now descend into the truly trivial. There is a difference in brand names, as we often find out, but to find a difference in simple products is still sometimes surprising. Our office bought a couple of Wave Pad brand mousepads through an office supply store, and to our surprise, they did not work as effectively as Moustrak, Inc. brand mousepads we bought from the Pi's Group Purchase program. The Wave Pad mousepads appeared to transfer dust to the rollers inside our mice very quickly compared to the Moustrak mousepads. In fact, the Wave Pad was so bad that the rollers had to be cleaned every week or two, or else the cursor would move erratically, particularly in the horizontal direction. Why this should be so, I do not know. But there was a difference.

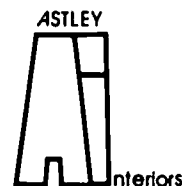
*Reasons Why I Use the Computer I Do:* A quotation from William F. Zachmann's column in the May 11, 1987 issue of *InfoWorld*, in which he writes about the best way to organize an MS-DOS computer's hard disk:

"Only three files go in my root directory: Command.Com, Autocexec.Bat, and Config.Sys. All the other entries in the root are for subdirectories. I use the DOS Path command in my Autocexec.Bat file to set a search path through the directories that contain commands and programs which I frequently use.

"The search path passes through three directories: Sysut1, Sysut2, and Sysut3. Old IBM mainframe types like myself will recognize these as the conventional DD names for intermediate sort files on 360/370 mainframes. I use them for their nostalgic appeal."

I could not make this up.

☺



Marcia F. Astley  
INTERIOR DESIGNER

- Residential
- Commercial
- Associate Member ASID

10118 Renfrew Road  
Silver Spring, Maryland 20901  
(301) 593-0312

## MINUTES

### Executive Board - May 13, 1987

Marty Milrod was presented the very first membership directory. The nominating committee had completed its work, and an elections committee was now needed to count the ballots. Paul Schlosser volunteered. WAP now has a license to distribute Apple system software, i.e. DOS and ProDOS masters, and Macintosh system software. The latest versions of Finder and System have been sent to us. Details were discussed as to how to make Macintosh system software available on the TCS. It was decided that we would obtain a full license for the TCS. Lee Raesly reported that new equipment had arrived for the TCS, and hoped to get the second line running within a week. A fee scale for the Garage Sale was determined—dealers \$50, exhibitors \$5, non-member shoppers \$2, and member shopper \$1. Bernie Urban and Lee Raesly reported on the Dayton user group conference. Only the New York group has a BBS that is anywhere nearly as extensive as our TCS. Almost all other large user groups charge more than we do for membership fees. Disketerias in most other groups are limited to the “disk of the month.” Bernie is chairman of the committee to discuss the formation of a “supergroup” to give services to user groups. About 150 user groups were represented. A committee of 12 will investigate what services can be provided. The Directors' Retreat has decided that WAP should be an educational group with Apple (brand) emphasis. A committee has been established to write a mission statement for WAP. ☺

## General Information

Apple user groups may reprint without prior permission any portion of the contents herein, provided proper author, title and publication credits are given.

Membership dues for Washington Apple Pi are \$32.00 for the first year and \$25.00 per year thereafter, beginning in the month joined. If you would like to join, please call the club office or write to the office address. A membership application will be mailed to you. Subscriptions to the Washington Apple Pi Journal are not available. The Journal is distributed as a benefit of membership.

**Mailing Notice:** Change of address must be postmarked at least 30 days prior to effective date of move. Journal issues missed due to non-receipt of change of address may be acquired via mail for \$2.50 per issue.

Current office hours are:

Monday - Friday - 10 AM to 2:30 PM  
Thursday - 7 PM to 9:00 PM  
Saturday - 12 Noon to 3:00 PM

Please note that the office is closed on all U.S. Government holidays. Members are asked to place phone calls to the office during the day Monday - Friday when possible, since only one person staffs the office during evening hours and on Saturday.

The office will be closed on Tuesday evening during July and August, and will be closed on Friday July 3 and Saturday July 4.

## EVENT QUEUE

Washington Apple Pi meets on the 4th Saturday (usually) of each month, both Apple and Mac, at the Uniformed Services University of the Health Sciences (USUHS), on the campus of the Bethesda Naval Medical Center, 4301 Jones Bridge Road, Bethesda, MD. Disketeria transactions, Journal pickup, memberships, etc. are from 8:45-9:30 AM and during the Q & A sessions (times for these vary according to the main meeting topic). The business meeting is from 9:00-9:30.

A sign interpreter and reserved seating can be provided for the hearing impaired, but we need 5 business days notice. Call the office.

Following are dates for upcoming months:

July 25

August 22

The Executive Board of Washington Apple Pi meets on the second Wednesday of each month at 7:30 PM at the office. Sometimes an alternate date is selected—see the WAP calendar for any changes.

## APPLESEEDS REFORMING

by Bruce F. Field

David Hakim is interested in restarting the AppleSeeds SIG. This is a special Special-Interest-Group for kids that meets during the boring Saturday meeting. David is hoping to start a lively group that will discuss programming tips, game reviews, graphics techniques, music, and other topics of interest to the younger set. Because of the Garage Sale in June, the first meeting will be in the USUHS cafeteria on July 25th starting at 9:00 am. The meeting is open to all.

A few parents have volunteered to help the kids with topics and suggestions for the meetings. To lessen the burden on any one individual we would like a few more parents to volunteer to help out. If you could help out with a meeting once in a while either contact me, Bruce Field, at 340-7038 and I'll pass your name along to the group, or come and talk to one of the parents at the AppleSeeds meetings. ☺

Editorial contd. from pg 3

existence to PM. A significant irritant is caused by a hair-trigger grabbing of an extra line when rolling back text. We thought that it was set to sense for descenders but it seems to grab even when below (but near) the line you wish to have remain.

But good things abound. Speed of laying the text has increased dramatically. You can resize (within reason) your text column, overriding existing column settings. The automatic kerning and hyphenation certainly cuts down on the white spacing between words. Don't do hyphenations in your word processor. PM does a fine job there. Some other niceties are popping up from time to time, such as once an item is “sent to back” it seems to stay there until you want it otherwise.

This is not intended to be a review but rather a first blush reaction. We need to familiarize ourselves with it a good bit more. The layout for “President's Corner” was considerably easier. How do you like the new look of the Journal? ☺



**\* July 1987 \***

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Mac Progmrs. 7:30 PM Office; dPub SIG 7:30 PM PEPCO	2 GameSIG 7:30 PM Office	3 Federal Holiday Office Closed	4 Independence Day; Office Closed
5 --> Deadline for Journal Articles is Mon. May 6	6 PI SIG 7:30 PM Office	7 Office Closed Tues. 7-9 PM during July and August	8 Executive Board 7:30 PM Office	9 Stock SIG 8:00 PM Office	10	11 Frederick Slice; Annapolis Slice; Music SIG
12	13 Introduction to Macintosh Tutorial - Office 7:30 - 9:30 PM	14	15	16 Pascal SIG 8:00 PM Office	17	18
19	20 Intermediate Mac Skills Tutorial - Office 7:30 - 9:30 PM	21	22 Apple /// 7:30 PM WAP Office	23 No EDSIG meeting in July	24	25 WAP Meeting USUHS
26	27 Becoming a Mac Power User Tutorial - Office 7:30 - 9:30 PM	28 Mutual Fund Sub-Group (Stock SIG) 8:00 PM Office	29	30	31	

**\* August 1987 \***

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Making Music With Your Mac Tutorial - Office 10-12 Noon
2	3 PI SIG 7:30 PM Office	4 Deadline for Journal Articles	5 Mac Progmrs. 7:30 PM Office; dPub SIG 7:30 PM PEPCO	6 GameSIG 7:30 PM Office	7	8 WordPerfect on the Apple II Tutorial - Office 9-12 Noon
9	10 Introduction to Macintosh Tutorial - Office 7:30 - 9:30 PM	11	12 Executive Board 7:30 PM	13 Stock SIG 8:00 PM Office	14	15
16	17 Intermediate Mac Skills Tutorial - Office 7:30 - 9:30 PM	18	19	20 Pascal SIG 8:00 PM Office	21	22 WAP Meeting USUHS
23	24 Becoming a Mac Power User Tutorial - Office 7:30 - 9:30 PM	25 Mutual Fund Sub-Group (Stock SIG) 8:00 PM Office	26 No Apple /// Meeting in August	27 No EDSIG Meeting in August	28	29
30	31					

**SIGNEWS**

Apple IIGS SIG meets at 8:00 AM before the regular WAP meeting in the USUHS cafeteria. For information call Ted Meyer at (703) 893-6845.

Apple /// SIG meets on the 4th Wednesday of the month at 7:30 PM in the WAP office. The next meeting will be on July 22.

AppleWorks SIG offers two meeting options: 8:00AM before the regular WAP meeting and 12 Noon after the meeting. Attend either or both.

DisabledSIG - Call Jay Thal at 344-3649 for info.

dPub SIG (Desktop Publishing) meets on the 1st Wednesday of the month at 7:30 PM in the PEPCO Auditorium at 1900 Penn. Ave., NW. The next meeting is on July 1.

EDSIG (the education special interest group) meets on the 4th Thursday of the month at 7:30 PM at the office. No meetings in July and August.

Fed(eral) SIG usually meets on the 3rd Wednesday of the month at the office, 7:30 PM.

GameSIG meets on the 1st Thursday of the month at the office, 7:30 PM. The next meeting will be on July 2.

Mac Programmers meet on the 1st Wednesday of the month at the office, 7:30PM. The next meeting is on July 1.

MusicSIG meets on the 2nd Saturday of each month. Call Ray Hobbs 490-7484, or Gary Larson 337-4267, for details.

PIG, the Pascal Interest Group, meets on the 3rd Thursday of each month at 8:00 PM at the office. New and prospective users are welcome. The next meeting will be on July 16.

PI-SIG (Program Interface) meets on the 1st Monday of the month at 7:30 PM at the office. See their news elsewhere.

Stock SIG meetings are on the second Thursday of each month at the office, 8 PM. The next meeting is on July 9.

Telecom SIG meets after the regular meeting on the 4th Saturday of the month.

## CLASSIFIEDS

**WANTED:** November 1986 issue of *Byte Magazine*. Stephen Bach, Rt. 2, Box 89, Scottsville, VA 24590 (804) 286-3466.

**WANTED:** A copy of the Microsoft File manual. Call Sheldon Kopp at 363-0050.

**WANTED:** WAP member to correspond with fellow Mac owner in Australia. Noel Kelvin, 107 Fernberg Road, Rosalie QLD 4064, Australia.

**WANTED TO RENT:** I need to rent a Mac (512K or more) for two months. If you have one that you can spare, please call Marvin Mark at (202) 543-0095. Please leave a short message on my recorder if I'm not in.

**PERSONS WANTED:** To share cost of buying MS Excel and Word 3.0 tutorials on disk/audio cassette. A single copy of each tutorial will be rotated among the participants. Call Larry Feldman, weekdays 10 - 2:30, 654-8060.

**FOR SALE:** Apple 400K external drive for the Mac. Best offer. Call Carolyn Komada, (w) 703-385-5880x3851 or (h) 703-691-1986.

**FOR SALE:** A Prometheus 300c modem for the Apple //c. Auto answer/auto dial, with internal speaker, 300 baud modem. Comes with manual and Procom-A, a communications program. Contact Brian at (703) 569-7826. Asking \$65 or best offer—negotiable.

**FOR SALE:** Carrying case for the Macintosh, Apple Mfg., Apple Modem 300/1200 and cable, Laserstart SoftStyle and cable, Macintosh MacTerminal. Contact Joan at 340-1253.

**FOR SALE:** Hayes Smartcom II software for the Macintosh. Originally purchased in February 1987. \$80. Call Karen, (w) 301-268-9660 or (h) 301-263-3404.

**FOR SALE:** 400K external drive for Macintosh, \$50. Excellent condition with original box. Call Ann Seiler (w) 497-4688 or (h) 757-5672.

**FOR SALE:** Apple Imagewriter I printer, \$220; DECLA50 (Imagewriter compatible), \$200; Okidata Microline 92 printer, \$245; Tekcom 212c (async/sync) modem, \$200; Hayes 300 Smartmodem, \$120. All items in like new condition, no reasonable offer refused. Call Gary at 703-882-3998 (area code required from metro area). ☺

## COMMERCIAL CLASSIFIEDS

Laserwriter Plus available for WAP and AAS members to print documents from Macintosh disks. \$.75 per page, \$6/hr. for Macintosh computer time. Must show membership card. Call Annapolis Office Services at 301-268-9660.

**FOR SALE:** Apple //e with 64K, 2 disk drives, Apple III green monitor, 6mhz Z80 Accelerator Card, CP/M, MM, software and manuals, \$725. Call Dave after 6 p.m. 301-540-2605.

**FOR SALE:** Corvus OmniDrive 20—Networking Drive, up to 64 users, 1 megabyte transfer speed/4 times faster than Apple Talk. Price \$1200 or negotiable (software and manuals included). Please contact Mrs. Israel at 301-230-0929. **SERIOUS INQUIRIES ONLY!** ☺

## MEETING REPORT

by Robert C. Platt

WAP's May meeting offered a variety of informative presentations. First, before the main meeting, the Telecommunications SIG sponsored a help table for people seeking to use their modems and for WAP's telecommunications system. At the same time, the Apple IIgs SIG held its first session at its new 8 a.m. meeting time. Meanwhile, the WAP library sold disks, including our first IIgs disks.

Following the business meeting, a plenary session covered CD-ROMs and WORMs. Jim Lanford demonstrated a WORM drive connected to a Mac SE. "WORM" stands for Write Once, Read Many times. Each WORM removable disk uses a glass substrate to burn in information permanently. The disk holds 400 Megabytes of data. WORM drives will be useful in archival applications or to distribute high resolution engineering drawings. The WORM drive connects to the Mac through the SCSI port.

Anne-Marie Barker demonstrated a CD-ROM player. This device is very similar to the music Compact Disk players. Although some industry standards have been developed to use CD's, they are MS-DOS oriented, so Anne-Marie had to create her own formats to store the Merriam Webster Ninth New Collegiate dictionary for on-line retrieval on the Mac. Not only were definitions stored, but also full screen graphics and audio recordings of pronunciations. Anne-Marie also demonstrated "Map Cabinet", which features the entire United States as a CD-ROM map data base. The user can select which map elements to display (e.g., rivers, interstate highways, political boundaries.) Both programs were very impressive. CD-ROM players which can be attached to the Mac are now marketed by at least three manufacturers.

Bob Fontana and Lewis Rosas then demonstrated various scientific software packages which plot functions and design digital filters. Both believe that the engineering community's acceptance of the Mac has grown since the introduction of the SE and the Mac II.

The Apple II program featured several impressive demonstrations by our younger members of software which they created. Bill Basham, author of Diversi-DOS, Diversi-Copy, etc. was the featured guest in the Apple II Q&A session. Bill grew up in Silver Spring, attended U of Maryland Medical School, and served on the teaching faculty of the University of Illinois Medical School when bitten by the Apple bug. Although Bill's first product was a copy-protection scheme "protecto-Disk", he soon turned to shareware (even before IBM programmers popularized that term). His Diversi-DOS has been available as WAP Disk 130 and Diversi-Copy as WAP Disk 45 for many years. Bill's presence triggered an extensive discussion of copy protection. The conclusion was that if users refuse to buy copy protected software, the publishers will stop using copy protection. However, it is important to send in shareware fees to keep people working on new programs. Bill has turned his development efforts to the IIgs, and his Diversi-Copy on the IIgs (WAP Disk 2001) is one of the few copy programs available. Bill now resides in Detroit. ☺

# Operant Systems

## HARDWARE

### DOT-MATRIX PRINTERS—

Panasonic 1091i (160 cps, Epson-compatible "best buy")	219
1080i (120 cps, as above)	189
Epson FX-86e (200 cps, 32 cps NLQ mode)	(call)
FX-286e (200 cps wide carriage)	(call)
LX-86 (100 cps, 16 cps NLQ mode)	(call)
LQ-800/LQ-1000 (180 cps, 24-pin NLQ mode)	(call)
Okidata 192-Plus (200 cps, NLQ mode)	369
193-Plus (132 column version of above)	549
292/293 (200 cps draft, 100 cps NLQ, 18-pin)	(call)
Toshiba 3215L (216 cps draft, slickest 24-pin avail)	549
351 (300 cps, wide carriage version of above)	1099
NEC P5/P6/P7 Pinwriter (24-pin high-quality matrix)	(call)
Citizen MSP 20 (200 cps matrix, Epson-compatible)	349

### DAISYWHEEL & LASER PRINTERS—

Citizen Premier 35 (35 cps, fastest for the money)	499
Qume LetterPro PLUS (45 cps daisywheel)	595
Silver-Reed 800 (40 cps, Diablo-compatible)	759
NEC Elf (16 cps, par & ser interface, NEC/Diablo emul)	419
8830 (55 cps daisywheel, built like a tank)	1195
Diablo 635 (55 cps daisywheel)	825
H-P LaserJet Series II (512k / 1.5meg, 8 ppm)	1895/2295
Okidata Laserline 6 (6 ppm, H-P Plus compatible)	1495
PS Jet (Postscript upgrade for Canon/H-P lasers)	2150
QMS-P5 800 Plus (8 ppm, LaserWriter compatible)	(call)
Epson, Okidata, AST, Quadram, Qume lasers	(call)

### MODEMS—

Hayes Smartmodem 1200A (1200/300 card for Jc+/JCe)	(call)
Micromodem JCe (300 baud card for Jc+/JCe w/sft)	145
Smartmodem 2400 (2400/1200/300 baud, R5-232)	599
Smartmodem 1200 (1200 baud, R5-232)	389
Smartmodem 300 (300 baud, R5-232)	145
Anchor Automation Express (1200/300 loaded w/ features)	219
Volkmodem 12 (1200/300 baud, R5-232)	139
Lightning 24 (2400/1200/300, R5-232)	325
Protheus Promodem 1200G (1200/300 baud, R5-232)	179
Promodem 1200A (1200/300 card w/ software)	209
US Robotics Courier 2400 (2400/1200/300 baud, R5-232)	395
Courier 1200 (1200/300, autodial/ans)	239
Zoomodem JCe Plus (300 baud card w/adv software)	119

### DISK DRIVES—

Sider 10-meg / 20-meg hard disk for Jc+/JCs	525/595
Applied Engineering half-hi floppy (for Jc+/e)	119
Controller for 2 drives	55
Video Technology half-hi floppy (for Jc/c/g)	125

### CP/M & 6502C SYSTEMS—

Applicard 16 Mhz Z-80, 64K to 192K RAM, 70-col video	129
Titan Accelerator JCe (gives Jc+/e speed of JCs)	229
Speed Demon (6502C high-speed coprocessor)	159
Applied Engineering Z-Ram Ultra 3 (256K+, clock, CP/M)	259
TransWarp (3.6 Mhz 6502C, 256K RAM)	225

### MONITORS—

Adek 300G/300A (12" green/amber anti-glare, 18Mhz)	125/139
Color 600 (13" composite/RGB color, 16 mhz)	425
NEC JB-1205 (amber anti-glare screen, 20Mhz)	119
Thomson 14" composite/RGB color	259

### INTERFACES & BUFFERS & CLOCKS—

Pkaso/U printer interface (superior graphics)	129
Quadram Microfazer (8K to 128K printer buffer)	139
ProGrappler printer interface (parallel w/ graphics)	85
Buffered Grappler+ (16K to 64K buffer plus graphics)	139
Practical Peripherals SerialL (for modems or printers)	99
Graphicard (parallel w/ graphics)	69
Printerface (par w/o graphics)	59
ProClock (PRODOS compatible)	109

### VIDEO BOARDS—

ALS 80-col card (w/64K RAM, AppleWorks-compatible)	69
Applied Engineering RamWorks III (64K—3 meg + 80 col)	139
Viewmaster (80 col for II+)	119

### MEMORY EXPANSION—

Microtek 16K RAM card (for Jc+)	69
Applied Engineering RamFactor (256k—1 meg for +/e/g)	189
gsRAM (256k—1.5 meg ram for gs)	139

## SOFTWARE

### WORD PROCESSING—

Word Perfect (new version w/speller)	95
Wordstar 3.3 (includes 6 mhz Z-80 Applicard)	159
Bank Street Writer (64K & 128K versions)	49
pfs: Write JCe (w/speller)	79
HouseWrite	95
ScreenWriter Professional	85
HomeWord (w/speller)	49
Sensible Speller IV (DOS or PRODOS versions avail)	79

### SPREADSHEETS—

SuperCalc 3a (super spreadsheet/graphics for JCe/c)	129
Multiplan (best spreadsheet for Jc+)	70

### INFORMATION MANAGEMENT—

dBASE II (the best Apple database, requires CP/M)	299
pfs: File w/Report	79

### BUSINESS & ACCOUNTING—

Dollars & Sense (accounting w/graphics)	79
Managing Your Money (accounting + investment mgmt)	119
Peachtree Back to Basics Accounting (GL/AR/AP)	129
BPI Accounting (GL/AR/AP/PAY/INVENTORY)	each 159

### COMMUNICATIONS—

Ascii Express Professional (best DOS/PRODOS program)	80
HouseTalk (new, w/pull-downs for e/c)	95

Crosstalk (best program for CP/M)	125
CompuServe Starter Kit (password & 25 dollar credit)	25

### ODDS & ENDS—

Print Shop/Print Shop Companion/Libraries	36/29/19
Newsroom/Clip Art Collection	42/19
Pinpoint Desktop Accessories	45
Infoerge (mailmerge for Appleworks)	49
Spelling Checker (pops up in Appleworks)	45
Typing Tutor III	36
Kensington System Saver Fan (w/surge protector)	66
CH Mach III or Kraft 3-button joystick	39
KoalaPad Graphics Tablet (with graphics software)	85
Curtis Emerald Surge Protector (6 outlets & cord)	45
Flight Simulator II or JET	39

Microsoft Works (finally !!)	189
Word (new version 3.0)	259
Excel (best Mac spreadsheet available)	245
Basic Interpreter/Compiler	99/125
Chart (presentation business graphics)	85
File	119
ReadySetCol (page processor, new version 3)	(call)
PageMaker (more page processing)	(call)
Odesta Helix 2.0 (database for the serious user)	235
Dollars & Sense (accounting w/graphics)	95
Sidelick w/PhoneLink	65
Micah AT 20 or 30 (fast internal hard disk)	(call)
Peripheral Land 20 or 30 meg SCSI drive	725/795
Video Tech 800K external floppy	215
MacSnap Memory (upgrade 512K to 1 meg or 2 meg)	169/475
Omega 10/20 meg removable cartridge drive	(call)
Kensington Mac System Saver (fan & surge protector)	75

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# WAP HOTLINE

For Use by WAP Members Only

Have a problem? The following club members have agreed to help other members. PLEASE, keep in mind that the people listed are VOLUNTEERS. Respect all telephone restrictions, where listed, and no calls after 10:00 PM except where indicated. Users of the Hotline users are reminded that calls regarding commercial software packages should be limited to those you have purchased. Please do not call about copied software for which you have no documentation. Telephone numbers are home phones unless otherwise specified. When requests are made to return calls, long distance will be collect.

<b>General - Apple //</b>	John Day (301) 621-7543	<b>Games - Apple //</b>	Charles Don Hall (301) 864-2715
	Dave Harvey (703) 578-4621	<b>Games - Mac</b>	Ron Wartow (301) 654-4439
	Robert Martin (301) 498-6074	<b>Hard Disks</b>	
<b>Accounting Packages</b>		Corvus & Omninet	Tom Vier (BBS) (301) 986-8085
Accountant(Dec.Sup.)	Mark Pankin (703) 524-0937	Corvus	Leon Raesly (301) 439-1799
BPI Programs	Jaxon Brown (301) 350-3283	Sider	Jaxon Brown (301) 350-3283
	Otis Greever (615) 638-1525		Otis Greever (615) 638-1525
<b>Home Accountant</b>	Leon Raesly (301) 439-1799	<b>IBM</b>	Ray Hobbs (BBS) (301) 490-7484
Howardsoft (Tax)	Leon Raesly (301) 439-1799		Leon Raesly (301) 439-1799
	Otis Greever (615) 638-1525	<b>Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine)</b>	
<b>APPLE SSC</b>	Bernie Benson (301) 951-5294	A	Louis Biggie (301) 967-3977
Apple TechNotes	Joe Chelena (703) 978-1816	A	Peter Combes (301) 251-6369
AppleWorks	Ken DeVito (703) 960-0787	A.I	Jeff Dillon (301) 422-6458
	Charles Baumgardner (703) 538-2316	A	Richard Langston (301) 869-7466
	Ken Black (703) 369-3366	A	Leon Raesly (301) 439-1799
AppleWorks Data Base	Morgan Jopling (301) 721-7874	A.I.M	Richard Untied (609) 596-8816
<b>Communications Packages and Modems-Telecom.</b>		A.I.M	John Love (703) 569-2294
Anchor Mark 12	Jeremy Parker (301) 229-2578	M	Ray Hobbs (BBS) (301) 490-7484
Apple Inc. Modem	John Day (301) 621-7543	P	Michael Hartman (301) 445-1583
ASCII Express	Dave Harvey (703) 578-4621	Forth	Bruce Field (301) 340-7038
BIZCOMP Modem	Jeremy Parker (301) 229-2578	MS Basic	Ray Hobbs (BBS) (301) 490-7484
Hayes Smartmodem	Bernie Benson (301) 951-5294	Math/OR Applns.	Mark Pankin (703) 524-0937
Smartcom I	Harmon Pritchard (301) 972-4667	Monitor, RGB	John Day (301) 621-7543
XTALK CPM Comm.	Bernie Benson (301) 951-5294	Music Systems	Ray Hobbs (BBS) (301) 490-7484
<b>Computers, Specific</b>		Operating Systems	
Apple //c	John Day (301) 621-7543	Apple DOS	John Love (703) 569-2294
LISA/Mac XL	John Day (301) 621-7543		Adam Robie (301) 460-6537
Macintosh:			Richard Untied (609) 596-8816
General	Michael Yourshaw (703) 534-2077		Ray Hobbs (BBS) (301) 490-7484
	Terry Monks (703) 471-4610	<b>CP/M</b>	Leon Raesly (301) 439-1799
	Donald Schmitt (717) 334-3265		Ray Hobbs (BBS) (301) 490-7484
<b>Desktop Pub/Graphics</b>	Jay Rohr (301) 655-0875	MS-DOS	Ray Hobbs (BBS) (301) 490-7484
Excel	David Morganstein (301) 972-4263	ProDOS	Leon Raesly (301) 439-1799
	Mark Pankin (703) 524-0937		John Love (703) 569-2294
	Jim Graham (703) 643-1848	<b>Printers</b>	
	Dick & Nancy Byrd (703) 978-3440	General	Walt Francis (202) 966-5742
<b>Helix</b>	Jim Berry (703) 662-0640		Leon Raesly (301) 439-1799
	Harvey Levine (301) 299-9380	Apple Color Plotter	John Day (301) 621-7543
<b>Inside Mac</b>	Jon Hardis (301) 330-1422	Apple Daisy Wheel	John Day (301) 621-7543
MacDraw	Tom Berilla (301) 434-3256	IDS 460	Jeff Stetekluh (703) 979-8249
	Tom Parrish (301) 654-8784	Imagewriter	John Day (301) 621-7543
<b>MacLion (DBMS)</b>	Mark Miani (202) 333-0098	MX-80	Jeff Dillon (301) 662-2070
MacProject	Jay Lucas (703) 751-3332	Okidata	Michael Proffitt (301) 874-2270
MacTerminal	Jon Hardis (301) 330-1422		Dan Robrish (301) 530-4202
MS-BASIC & MS-File	John Love (703) 569-2294	<b>Print Shop</b>	Thomas O'Hagan (301) 593-9683
Magic	Joyce C. Little (301) 321-2989	Newsroom	Carol Thomas (301) 424-1266
Multiplan	John Boblitz (301) 356-9384	Spreadsheets	Leon Raesly (301) 439-1799
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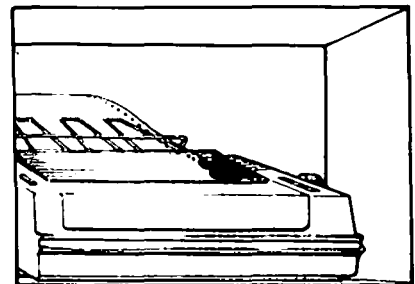
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# ON THE TRAIL OF THE APPLE ///

by David Ottalini, /// SIG Co-Chairman

## /// SIG MOVES

It's time for your /// SIG to move on—again. After spending about a year at the National Chamber of Commerce, some renovation work there has forced us to seek a new meeting place. Just in time, our own Washington Apple Pi office came to the rescue! So as of the June meeting, your /// SIG will now meet the fourth Wednesday at 7:30 PM in Bethesda, at the WAP office (in the room where tutorials are held and where our Apple /// is located.)

I want to publicly thank Ed Zier at the Chamber for his help and willingness to let our SIG meet there. It proved to be an excellent location. But by meeting at the WAP office, we will have direct access to our own Apple /// as well as the resources of the WAP. Why not join us?

As for the rest of the summer, /// SIGers, we will have a July meeting, but will take a rest in August. We'll pick up again in the fall with a meeting in September. Any ideas for programs, or SIG members willing to demonstrate a program, etc. are most welcome. Just give Tom or me a call.

## HARDWARE NEEDS

Speaking of our Apple /// in the office, we could really use a second disk drive to improve its operation. Anyone willing to make a donation? We are moving to get that Profile 5MB Hard disk operational (it is still sick). We plan to send it to Sun Systems for a check-up (hopefully it will be there by the time you read this!). Anyone know any sources for Seagate ST 506 5MB hard disk drives? I also wonder if the analog card in a 5MB Profile will operate a 10MB Profile (using the 10MB Profile driver).

That leads me to another question. Can an IBM hard disk be made to work with an Apple (// and ///)? I got a call recently from a WAP member looking into that possibility, since IBM hard disks are so much cheaper than their Apple counterparts. It should be possible (in fact, this caller said he had talked to someone who said they had done it but refused to say how because it was "a secret."). I should think with the appropriate driver and interface, it would be something someone could make some money at. Any comments or suggestions?

## TIP OF THE MONTH

For those of you still trying to learn how to use your Apple //, I can highly recommend a series of recent articles in On Three for beginners. Richard and Lavona Rann have put together one of the best tutorials I've seen in a long time. I hope they consider issuing it as one publication at some point.

## ON THE LANGUAGE FRONT

As I mentioned in a previous Trail article, Pair Software now has a new version of Forth called Go FORTH available (the version number is 3.4). Both the SOS and ProDOS versions are on the same disk, and can be booted in either the Apple // or /// directly. I have received a review copy of the program and hope to share my attempts to learn and use the program with you over time.

Pair's Frank Moore also has indicated he will be publishing a

monthly FORTH newsletter for \$12 a year and has announced a FORTH programmers contest, with first prize of \$1000. This is open to all FORTH programmers, so if you'd like more information, contact Pair Software at 3201 Murchison Way, Carmichael, CA. 95608. By the way, there are a few FORTH PD disks in the WAP library, including a GO FORTH tutorial from 1983 which I hope to check out and report back to you on.

On another front, MAUGer Chris Acreman has now become the distributor of SOS-based PASCAL programs from the USUS disk library. To receive the disks, you must join USUS for \$35.00 per year. The programs include games, software tools, utilities, communications packages, etc. There is an application in the MUSUS Forum on CompuServe in DL1 if you are interested. Chris's ID number on CompuServe is 72747,3060 if you want to contact him for more information.

## THREWORKS NOW AVAILABLE

The latest upgrade to the Apple /// Bibliography and Data Bases, now renamed ThreeWorks is out. Included are three bibliographies comprising 1000+ articles about the Apple /// from 1980 to 1986. There are also data bases on everything from Apple /// clubs, books, vendors and PD libraries to a complete listing of Business Basic Keywords. You can get it from the Third Apple Users Group or Apple THREE Group International. Pair Software and Pacific Technology Systems in Rockville are also expected to carry ThreeWorks, which is in AppleWorks/Three EZ Pieces format. 256K is recommended due to the size of some files.

## TUTORIALS

Thanks to /// SIGer Ed Gooding's Three's Company BBS, I have downloaded some tutorials on such subjects as replacing your Power Supply, upgrading to 256K, etc. and will place printed copies in the WAP library as well as on the WAP TCS. I will provide a complete listing in a future Trail article. I also hope to have a "Best of Three's Company" PD disk available

## JOB MART

**HELP WANTED:** Washington Apple Pi has an opening for a clerical person to work 16-20 hours per week, during the regular weekday office hours from 10-2:30. Duties include assisting with membership mail (in and out) and performing routine clerical duties. \$5.00 per hour. Schedule flexible. Ideal for parent of school age children. Informal, non-smoking atmosphere. Call Gena, 654-8060 M-F 10-2:30.

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**HELP WANTED:** Individuals proficient in AppleWorks (Word Processing) who are willing to work on an emergency basis. All time to be compensated. NON-SMOKERS. Call Gloria, 301-933-3805, weekdays 9-4. ☺

# EDSIG NEWS

by Patricia Kirby

## EDSIG CALENDAR

There will be no EDSIG meetings during July and August. The next meeting will be on the 4th Thursday of September at the WAP Office.

### Meeting Report - May Meeting

**QUESTIONNAIRE QUERIES GENERAL WAP PROGRAM INTERESTS.** EDSIG has been looking for ways to expand its program and activities, and attract more participants than the dedicated few who come each 4th Thursday evening. To that end, we gave out 100 questionnaires at the general WAP May meeting.

EDSIG's own May meeting was devoted to an analysis of the 50 returned questionnaires. While asking for Journal readers to answer the same questionnaire, we thought it would be insightful to give a summary of those questionnaires.

Perhaps one of EDSIG's suspicions was confirmed by two respondents when they said, "I thought EDSIG was only for teachers." (It isn't.) We have wondered how much this view prevails. For instance, we've wanted to attract parents with an interest in educational software for their children, or adults interested in educational computer applications for themselves.

As for teachers, we have not attracted hordes of them to our meetings, and wondered whether it is because they are tired after a long day on their feet—or feel they have enough colleagues at school with whom to share an interest in educational Apple computer applications.

About 3/5 of the respondents were parents, and 1/4 were computer programmers or software developers. Few were teachers. They expressed interest in a number of types of programs—about 1/3 in "general computer issues" and slightly more in choosing educational software for a wide range of age groups of children or young adults, and in specific subject areas.

Almost half the respondents said they would like to find out more about educational computer courses and opportunities for themselves as adult learners. Almost 1/3 indicated an interest in instructional graphics as a meeting topic. Perhaps these two topics generated interest merely because they appeared on the questionnaire and the respondents might not have really thought about them before. However, the fact that so many checked them was insightful.

Had respondents ever thought of becoming EDSIG members? Thirty-three said no—15 said yes, and 10 left their names and phone numbers to be called for further information. Questionnaires can stimulate membership as well as responses! To our surprise, we received many responses to the question, "what prevented you from doing so" to the above question, although the question was prefaced by, "If yes to the above question"! "Distance from Bethesda" - "tired at the end of the day" - and "other outside commitments" each drew about 1/5 of the reasons checked. One or two explained they had just joined ApplePi, or were not aware of the meetings, or did not have strong enough interest.

In discussing the responses at our May meeting, EDSIG

attracted several from the outer reaches of Western Maryland (THAT drive is commitment on a weeknight!), an active member of GameSIG, and an M.A. candidate in Computer Education. This mix provoked lively discussion. We hope to attract more such mixes.

Look for an EDSIG presentation at the GENERAL WAP meeting in October. Ideas are still welcome. Send them along with the questionnaire near the back of the Journal. ☺

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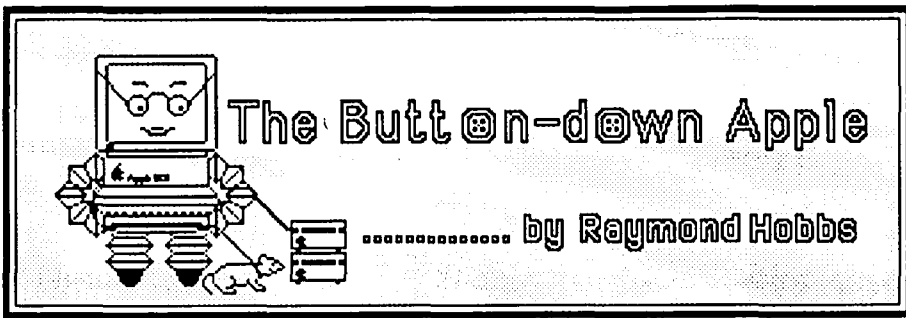
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I'm getting pretty much back in the saddle again. As regular readers of this column know, I found a foster home for my Apple ][+ and bought a new Woz-signature IIGS. It was pretty rough going for a while, friends, what with nothing out of my old system working on the new, and new features that seemed to be somewhere just out of reach, but things have just about gotten back to normal (whatever that is, in this office). My IIGS and Mac sit about nine inches apart on my desk, separated by a half-dozen disk drives of various sizes and a joystick (thank the good Lord for the "desktop" interface, since I haven't seen the wooden variety for over a year). My Alpha Syntauri music system decided to work finally, and I now have a RAM disk when I need it. Do I like the new system? Outside, the grass is now about 38 inches tall and the mower has cobwebs all over it. A cicada dropped down the chimney last week and started chirping angrily. I sampled the sound and played it back through the IIGS. The cicada modulated the sound. The GS responded in kind. I think they're in love. I like the idea, except that it's confusing to people when I talk about the bug in my system (OK, I apologize).

I frequently get calls concerning getting assembly language routines into the machine. Most computer users today don't relate well to assembly language, and feel a little lost typing something into the computer without knowing anything about what's going to happen, how or for how long. For that reason, I'm going to devote this article to the whys and whatever of assembly language on the Apple. Don't turn away yet, though. You're not going to have to learn assembly language to understand (or make use of) this article.

When the world was young, computers had to be spoon fed. They understood nothing except 1s and 0s. Programmers had to write code that computers understood, so they learned *binary*, or 1s and 0s coding. The resulting programs looked something like

```
10100010
00110010
00001000
11000101
```

or words to that effect. To make things a little (but not much) easier, the binary code was translated into *hexadecimal* code—base 16 instead of base 2. Then they could happily write A2 08 32 C5 in lieu of the above. Of course, the meaning of A2 32 08 C5 could be a little obscure, but programmers used to wear lab coats, and could be expected to understand it.

Somewhere along the way, a program was written to translate *mnemonic* code into binary code, and then programmers could write programs in a shorthand language which was easier to understand than hexadecimal. The computer would *assemble* the mnemonic code into binary code which the computer could understand. Thus, the Assembler program was born. Of course,

the programmers lost their lab coats. Now, code began to look like

```
MOV 0832H,01C5H
```

which meant something like "move the byte located at 0832 to location 01C5". To carry the story along, the assembly process was still laborious for programmers, who (having lost their lab coats) wanted an easier way to write programs. Assembly language is a "second generation" language; that is, it is one generation removed from the native language of computers (binary). Assembly language also translates on a one-for-one basis: one assembly language instruction is translated into one machine language instruction. Some operations, however, are so generic that it is unnecessarily cumbersome to write 25 or 30 instructions to perform, since the same 25 to 30 instructions will perform be written over and over again throughout the program. The next logical step was to write a higher-level language for programmers—one that would enable the programmer to write a single instruction which the translator program would translate into many machine language instructions. The enabling programs were called *compilers*, and represented a further step away from the native language of the computers. Compiled languages such as PASCAL, FORTRAN, COBOL and C are called "third-generation" languages. Normally, the compiler breaks down the third-generation code into a second-generation code, then resolves any ambiguities in addresses and so forth. This is done in one or two "passes", or computer readings through the code. Further, some third-generation languages may not be compiled at all. For example, built into the Apple is an interpreter program, which can interpret BASIC commands or statements into the necessary machine language instructions to be executed. It's very handy—you don't have to go through the compilation process—but it's also slow, because the interpretation must be done each and every time an instruction is encountered (even repeating instructions within loops!), which means that actually *two* programs are running—yours, and the interpreter itself. Compiled programs run about 15 times faster than interpreted programs.

This brings us back to assembly language. You see, sometimes the compiled language generalizes instructions. That is, a loop like

```
for i = 1 to 10 do
begin
j := j + 2;
k := k - 2
end;
```

sets up a variable, i, initializes it to the value 1, then performs the addition on the variable j and the subtraction from the variable k, then decrements i, checks it against the value 10

contd.



# Smart Computer: More Reasons to Buy Our Generic PC.

by Bud Stolker

In the IBM PC-compatible world there are many kinds of computers. Though they may look alike, they all differ under the cover—in the quality of the components, in the scope and usefulness of software, in the degree of care and foresight with which they're engineered and built. Some are better buys than others. Herewith we present a few criteria useful in comparing PC-compatibles. No matter what you need in a personal computer or where you buy it, you should ensure that the PC comes with the following features:

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(which was itself created out there somewhere in memory as a variable). Until *i* equals 10, the loop will be repeated. An assembly language routine to do the same thing would use at least one, if not two less variables, and would perform the loop counting in *registers*, which are rapid-access locations, instead of in RAM. In other words, assembly language is inherently faster than compiled languages, simply because it can be custom-tailored to the situation at hand. It pays for this speed by being much more costly in programmer's time.

Sometimes, speed is critical in an application, and in such situations it's hard to beat assembly language for speed. In other situations, speed itself may not be critical, but timing is. Assembly language routines lend themselves to timing precision (how many cycles does the PASCAL routine above take to complete?). Like it or not, there are some (thank God not all) situations in which you've got to do it in assembly language.

Having (at length) gone into *why* you find assembly language routines to be put into your Apple, I would like to take a few paragraphs to explain *how* to do it. Let's take a typical assembly language routine as a working example. Here's a quickie which plots a triangle on the hi-res screen (taken from one of my favorite books, Apple Graphics & Arcade Game Design, by Jeffrey Stanton—The Book Co., Los Angeles, CA., 1982):

```

ORG $6000
6000: 20 E2 F3 JSR SF3E2 ; HGR
6003: A2 03 LDX #S03 ; COLOR=WHITE
6005: 20 F0 F6 JSR SF6F0 ; HCOLOR
6008: A0 00 LDY #S00 ; HORIZ. POSITION HI BYTE
600A: A2 64 LDX #S64 ; HORIZ. POSITION LO BYTE
600C: A9 32 LDA #S32 ; VERT. POSITION
600E: 20 57 F4 JSR SF457 ; HPLOT POINT 1
6011: A2 00 LDX #S00 ; HORIZ. POSITION HI BYTE
6013: A9 96 LDA #S96 ; HORIZ. POSITION LO BYTE
6015: A0 64 LDY #S64 ; VERT. POSITION
6017: 20 3A F5 JSR SF53A ; HLINE TO POINT 2
601A: A2 00 LDX #S00 ; HORIZ. POSITION HI BYTE
601C: A9 32 LDA #S32 ; HORIZ. POSITION LO BYTE
601E: A0 64 LDY #S64 ; VERT. POSITION
6020: 20 3A F5 JSR SF53A ; HLINE TO POINT 3
6023: A2 00 LDX #S00 ; HORIZ. POSITION HI BYTE
6025: A9 64 LDA #S64 ; HORIZ. POSITION LO BYTE
6027: A0 32 LDY #S32 ; VERT. POSITION
6029: 20 3A F5 JSR SF53A ; HLINE BACK TO POINT 1
602C: 60 RTS ; RETURN

```

Now, here's how to get this routine into (1) your Apple, and (2) into your program:

1. Notice the first column, the numbers like "60—". These numbers are the absolute memory locations where this program was originally loaded into memory. If your own BASIC program isn't very long, you can use the same memory locations to load this subroutine into your Apple. Otherwise, you can change the locations. However, this area of memory is generally pretty safe. Alternatively, you can load this subroutine way down in memory, on page 3 (memory locations S300-S3FF). This is possible because the entire routine occupies only 45 bytes of memory (the length is S2D in hexadecimal). It will load nicely from locations S300 to S32C. Wherever you decide to put it, remember two things about it—where you loaded it, and how long it is. Jot the numbers down in hex. In our case I am going to load it onto page

3, so the numbers I jot down are: LOCATION \$300, LENGTH \$2D.

2. Enter the monitor (CALL -151).
3. Put a disk into the disk drive to save the routine.
4. Tell the Monitor where you want to load the routine, by typing in the memory address, but don't hit RETURN yet.
5. Immediately following the address, type in a colon. Don't hit RETURN.

6. Now, looking at the second column of numbers (and letters), these are the machine language instructions that the Apple will use to carry out the routine's instructions. The hex numbers are written as groups of two digits (the first group of numbers is 20 E2 F3). Enter these hex numbers as they are shown above, with a space separating each group of two digits. You may enter as many groups of two as you like, just as long as the line that you are typing is less than 255 characters. Your input line should look something like this:

```
* 300:20 E2 F3 A2 03 20 F0 F6 A0 00 A2 64 A9 32 20
57 F4 A2 00 A9 96 A0 64 20 3A F5 A2 00 A9 32 A0
64 20 3A F5 A2 00 A9 64 A0 32 20 3A F5 60
```

and then you hit RETURN. The routine is now in memory.

7. Leave the Monitor (3D0G).
8. Save the routine under some name that you can remember, like "TRIANGLE". In order to do this, you must save the area of memory occupied by the routine, and save it as binary data. At this point you must refer back to the numbers you jotted down for the starting location and length of the routine. The command to save the file is:

```
BSAVE TRIANGLE, AS300, LS2D
```

The BSAVE part tells the Apple that it is a binary file, the AS part tells the Apple where to start saving, and the LS part tells the Apple how many bytes to save.

9. The next part is to use the routine in your own BASIC program. In order to do this, you must get your program up and running, load in the subroutine TRIANGLE from disk and then jump to it as a subroutine from your BASIC program. Let's use a simple program that does nothing more than those things. I'll call the BASIC program "LOADER". It will look like this:

```
10 DS = CHR$(4)
20 PRINT DS;"BLOAD TRIANGLE, AS300"
30 CALL 768
40 END
```

Wow. That looks impossibly simple. Let's see how it works.

Line 10 sets up a variable, DS, as the ASCII character 4, which is a control-D character. This is critical, because when a control-D is printed, it alerts DOS that what follows is going to be a DOS command.

Line 20 does just that. It prints the Control-D, followed by a string message to DOS to load the file TRIANGLE starting at location S300. The use of BLOAD instead of LOAD tells DOS that the file is binary data.

Line 30 does the jump to the subroutine. Since it is a machine language program instead of a BASIC subroutine, we must use a CALL instruction instead of a GOSUB. The computer responds in a similar way, however. The machine language routine will be executed, and when the Apple hits the last byte control will be passed back to the BASIC program. At this juncture, I would like to call your attention to the code of the last byte of the

contd. on pg 47

# Q & A

by Robert C. Platt and Bruce F. Field

There was a typo in the May "Q&A" column, which illustrates the old maxim, "never dare make a typo when reporting a typo." Page 88 of the *Apple IIe Technical Reference Manual* (1985) incorrectly reports the AUXMOVE routine as starting at address \$C312. The value should be \$C311. We had the correct and incorrect numbers reversed in the May column. Sorry about that. By the way, note that AUXMOVE is a part of the slot 3 firmware. As a result, if you have an interface card in slot 3, AUXMOVE is hidden and unusable.

**Column Printing from AppleWorks.** Christopher Van Buren of the Q-Mar group wrote in response to our suggestion about using the spreadsheet portion of AppleWorks to create multiple column documents. Chris publishes an impressive looking newsletter called "Exclusive Reference" for AppleWorks users. Call (619) 455-7513 for a subscription at \$39.95 per year. Both Chris and the WAP Journal have carried descriptions of the procedure necessary to create a document in word processing mode, print it to disk with the proper column width (using JU), using the data base to convert it to a DIF file, and finally placing the columns on the pages using the spreadsheet.

**AST Sprint Disk and AppleWorks.** Alan Mitchell of Port Orford, Oregon writes about his problems using an AST Sprintdisk (distributed by Central Point Software) with AppleWorks 1.3. He contacted technical support at Norwich Data Services which fixed his disks with patch files and sent along the following technical information. Needless to say, Alan is very impressed with the help he received from Norwich.

A problem in the ProDOS ramdisk initialization routine arises when AppleWorks searches for a Apple II Memory Expansion Card and finds the AST SprintDisk. AppleWorks then determines the status of the card by a ProDOS call (`get_file_info for /RAMn`) which returns values for free and total number of blocks. If the machine has been cold booted, this is the first such access, and the card proceeds to initialize itself. Apparently, on older Apples (probably before revision 7) and on Franklins, the number of free blocks is reported as zero. AppleWorks believes it and crashes.

The problem has been traced to a hardware defect. In problem machines, the bank register is not stable and can be affected by a page advance. Here, when the page is set for writing the free block map, the bank register advances by one, misstoring this vital information. Norwich Data believes that the Apple Memory Expansion Card will not run properly unless the bank number is always set when the card address is updated. Fortunately, AppleWorks (but not the ProDOS initialization routine) always does this.

Norwich Data suggests the problem can be avoided by first formatting the Sprintdisk with FILER or Copy ][ Plus, rather initializing within AppleWorks.

**Q.** What is a "desk accessory?"

**A.** A desk accessory is a small program which executes while a main application program remains suspended in RAM

memory. This allows the user to "leave" an application, perform a quick task and then return to the exact place where he left off. To make the jargon of the MS-DOS world sound more imposing, desk accessories are called TSR's for "terminate but stay resident."

The Apple IIgs has two types of desk accessories: classic desk accessories (CDA) and new desk accessories (NDA). CDA's work in either native or emulation mode, while NDA's work only in native (16 bit) mode. CDA's have ProDOS file type \$B9 and are available in every Apple IIgs program as long as interrupts are not disabled. CDA's take control of the screen rather than use windows. Examples of CDA's are the Control Panel and the Alternate Screen Display. They are accessed by pressing open apple-control-escape. NDA's are similar to desk accessories on the Mac. NDA's work in a window which appears on top of your application. NDA's have ProDOS file type \$B8.

The current desktop on System Disk version 1.1 also comes with \$F1 type files for the following desk accessories: Calculator, Date, Puzzle, Show Text File and Sort Directory. These files are in the DESKTOP/DESK.ACC subdirectory. For further information see Chapter 24 of Michael Fischer's *Apple IIgs Technical Reference*. (Osbourne/McGraw-Hill 1986) \$19.95, which is a good source of information for gs programmers.

**Q.** How do you install a desk accessory on a IIgs?

**A.** Take a type \$B8 or \$B9 file and put it in both the DESK.ACCS subdirectory in the SYSTEM subdirectory and the DESK.ACC subdirectory in the DESKTOP subdirectory on your startup disk. You must reboot the startup disk to have your new desk accessory recognized.

**Q.** What programs can copy 3.5" disks in one pass?

**A.** Try the shareware program Diversi-Copy by Bill Basham. It works on the IIgs as well as with UniDisk 3.5's attached to the //c and //e.

**Q.** How can I find out whether an Apple II program is IIgs compatible?

**A.** Apple Computer sent a notebook listing all known compatibility information to its dealers. If the salesman at your dealer does not know about the notebook, ask to speak to the manager.

**Q.** What program converts Macintosh fonts to the IIgs?

**A.** Apple Computer wrote "Fontmunger" which should be released for distribution shortly.

**Q.** Will Copy ][ Plus work on the IIgs?

**A.** The current version of Copy ][ Plus (7.4) does not disable interrupts, so it may destroy data when using the control panel or moving the mouse while writing to a 5.25" disk. It will work fine with 3.5" disks, however.

**Q.** In May, you gave a routine to test auxiliary memory. Is there a shorter routine for enhanced Apple //e's?

**A.** Yes. The self-test in the enhanced Apple //e ROM tests the auxiliary RAM bank. To invoke it, press control-closed  
contd.

apple-reset.

- Q. How can I patch FID to work with more than two drives in a slot?
- A. WAP member Tom Vier has the following patch, that will handle up to 9 DOS 3.3 drives:
- ```
DRIVES=5
BLOAD FID
POKE 2419,176+DRIVES+1
POKE 2495,176+DRIVES+1
IF DRIVES>7 THEN POKE 2431,15:POKE 2507,15
BSAVE FID,A$2051,L$4687
```
- Q. What should you do if the system disk which came with your IIgs does not have the DESKTOP program?
- A. Get a copy from your Apple Dealer.
- Q. I get a blurry screen display on my IIgs when I return from a CDA to the desktop.
- A. The desktop supplied on the system disk version 1.1 automatically sets your IIgs into monochrome mode. When you enter the control panel, you are changing your display to color mode. To fix, change to monochrome in the display selection of the Control Panel.
- Q. I'm a proud Apple ][+ owner and have 150 disks worth of AppleWriter II and Visifile data files. I'm planning to convert to a Macintosh and would like to convert these files.
- A. Many Mac data base programs will accept input in DIF file format. As for AppleWriter II, these files are saved as DOS 3.3 ASCII text files. However, watch out for embedded printer control commands. There are several ways to port your files over to the Mac. First, you can purchase or borrow a UniDisk 3.5 and control card and convert these files over to ProDOS on 3.5" disks using the ProDOS System Utilities. Once on 3.5" disks, you can use MacPassport to read the ProDOS disks on the Mac. MacPassport is available from APDA for \$10. Second, if you have a serial card and communications program on your Apple ][+, you can use your Mac's Imagewriter cable or a "null modem" cable to connect your ][ directly to a Mac. By running communications packages on the Apple ][ and the Mac at the same time, files can be sent. Some packages such as ][ in a Mac include a special set of communication routines for both machines and complete instructions.
- Q. Can I port my Microsoft Word files from the Mac to my Apple II which is equipped with a 3.5" UniDisk?
- A. Not without losing formatting information. To bring the file over you must save it as Text Only. Then use the procedure outlined in the last answer to either telecommunicate it over a "null modem" cable or use the MacPassport program to write ProDOS 3.5" disks.
- Q. When I use the desktop on System Disk ver 1.1 with a Mountain Music card in my expansion slots, the desktop will not recognize the presence of any external disk drives attached to the Smartport. This problem disappears when I remove the Music card.
- A. The desktop is a ProDOS 8 based program which Apple is distributing as an interim solution until ProDOS 16 and a "finder-like" program are developed. In general, always test drive IIgs software with expansion slots occupied before you buy software. The IIgs appears to have more sensitivity to

cards in expansion slots than the //e world. This is due to the fact that the firmware on most cards was designed before the IIgs came on the scene.

- Q. At times my printer will hang AppleWorks and I will lose my current word processing file as a result of rebooting. Is there any way that I can recover and return to AppleWorks to save my files?
- A. Regardless of what word processor you use, you should make a habit of saving your files before you print. If AppleWorks hangs, follow these steps and pray:
- Step 1: Press <Control>-<Reset> to enter the Monitor. (If you don't get the \* prompt, forget it.)
- Step 2: At the \*, type C073:0 <return>
- At the \*, type 3 <control>-P <return> (If you don't get 80 column mode, it's hopeless.)
- Step 3: At the \*, type 2F0:2C 83 C02C 83 C04C <return>
- Step 4: At the \*, type :33 10 <return> (For AppleWorks versions 1.1 through 1.3) or type
- :27 11 <return> (for AppleWorks version 2.0)
- Step 5: At the \*, type 2F0G <return>
- If the main menu of AppleWorks appears garbled, press <escape>. Save your desktop files and reboot.
- Q. Several months ago I purchased a series of public domain disks including "Charts and Graphs" for my Apple //c. I just recently tried to use the disk for the first time and believe I need to enter different codes for the printer routines. When I have tried to print a chart I get a printer line feed and the screen clears and then regenerates the previously displayed information. What codes can I enter to use the programs?
- A. I don't have a copy of the program in front of me but I suspect that the codes in the program are designed to command a specific printer interface card to print (dump) the hi-res graphics screen. Unfortunately the printer interface card built into the Apple //c will not do this graphics dump; you will have to buy a special program to print the hi-res screen. You may be able to find a public domain graphics dump program and you will want one that runs under DOS 3.3 rather than ProDOS. One commercial program that I know of is Beagle Bros "Triple-Dump" which will dump hi-res graphics, lo-res graphics, double hi-res graphics, double lo-res graphics, 40-column text, and 80-column text. The program has gotten pretty good reviews. It is probably available at most software stores or you can get it direct from Beagle Bros, 3990 Old Town Avenue, Suite 102C, San Diego, CA 92110 for \$39.95.
- In order to use any dump program you will have to modify your "Charts and Graphs" program to save the hi-res screen to disk. Replace the lines with the printer codes with the following instructions. (The line numbers below are included just to remind you that they are needed, use the line numbers from the lines containing the printer codes.)
- ```
9740 TEXT:INPUT "Save using what filename?";
FILES
9750 PRINT CHR$(4)"BSAVE "FILES",A$4000,
LS$2000"
```
- When you run the modified program it will draw the chart on the graphics screen and then switch back to the text screen to

contd. on pg 35



# FREDERICK APPLE CORE

A SLICE OF THE WASHINGTON APPLE PI



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The Frederick Apple Core now meets on the second Saturday of each month in the large conference room of the Frederick Library at 110 E. Patrick Street, Frederick, MD at 9:30 AM. Programs are normally scheduled for both the Macintosh and the Apple II.

The July 11th meeting will NOT be held at the library. Instead the group will be having a Picnic at Pinecliff Park. This is a family affair! Bring your own lunch—Pinecliff offers covered picnic areas, grills, play equipment for the little ones, softball fields, FUN FUN FUN. The fun begins at 11am. Please join us—we really had a super time last year!. You do not have to be a member to come to ANY of the meetings or outings. Pinecliff Park is located east of Frederick, just south of I-70. If you need a map to the park please contact Donna Logan and she

will send you one. She can be reached at 898-3179 home or 695-6006 office.

At the June meeting, we had an in-depth demonstration of the new Mac II. We also wish to thank Ron Wartow for a fabulous May meeting concerning leisure time software for the Apple II and Mac. We would like to point out that there are always Apple II and Mac computers available at the meetings, so anyone with a software problem is encouraged to bring the package and ask for help.

### FAC Upcoming Programs:

July 11 - Family Picnic at Pinecliff  
 August 8 - GS Developments - New Products and Graphics; Custom Mac Icon designs ☺

## CP/M & PRODOS DISKETTERIA NOTES

by John T. Bell

This month I am adding Ron Cain's Small C Compiler, with Floating Point Arithmetic to the WAP library. This disk is volume 224 from the SIG/M library. Several month's ago a friend of mine, Bill Karl gave me a copy of this disk on CP/M 8 inch format. My friend died last March and so I would like to dedicate this disk to his memory. I have converted this to a two sided Apple CP/M formatted disk. On the first side I have put all of the source code and documentation files. The compiler, macro assembler, and linker as well as the header files and libraries are all on the reverse side of the disk. These files are in the squeezed file format and will have to be unsqueezed by using usq.com before you can use them. USQ.COM is also provided.

Ron Cain's Small C Compiler was first published in Dr. Dobbs Journal issue #45. This version has been greatly enhanced by a number of people. James R Van Zandt has added the floating point capability and Jim Hendrix has added a greatly improved I/O library. Small C now includes printf and many of the other stdio functions which are so familiar to C programmers. This package also includes its own macro assembler, and object code linker. These features were not available in the earlier version.

There is a large amount of public domain source code written

in Small C. The compiler itself is written in Small C and the source code is included on the disk. The compiler will actually compile itself. I hope over the next few months to collect some of these utilities and put them together on another disk of Small C utilities. There is also a 6502 version out there somewhere. If I find that then we will have Small C for ProDOS.

Well that's it for this month. Next month I hope to have the documentation for XLISP for ProDOS and then that will be included in the library. (If anyone happens to have the doc's for Xlisp version 1.1 please let me know). Lee Raesly has informed me of some AppleWorks templates and there are still a few special surprises out there. Remember if you have software to donate to the library let me know. Until later, keep those disk's spinning. ☺

# MACROS FOR APPLEWORKS

by Richard M. Rowell

MACROS? No it is not a new diet fad from California. No, they are not the ex-presidential couple from the Philippines. A macro is a single keystroke (sometimes a few keystrokes) that replace a greater number of keystrokes, thereby saving time and energy and eliminating the aggravation that results from tedious and repetitive keyboard operations. As a bonus, macros are more accurate than a bored or tired typist. Macro features have long been popular in all kinds of microcomputer applications, but only relatively recently have they been implemented in AppleWorks. The Beagle Bros., publishers of MacroWorks and Super MacroWorks, initially advertised their product as "making AppleWorks do everything that it should have done in the first place".

There are currently four popular programs available to add macro capacity to AppleWorks. They are: AUTOWORKS, KEYPLAYER, MACROWORKS, and SUPER MACROWORKS. In addition AppleWriter's WPL (Word Processing Language) allows macro activity.

Each of these programs offers a different mix of power, ease of use and features. AutoWorks and Key Player work with all versions of AppleWorks. Macroworks is compatible with versions 1.0, 1.1, 1.2 and 1.3, while Super MacroWorks enhances version 2.0. User reaction to and support for the various packages seems to relate more to which one a given individual picked up first rather than a clear superiority of one product over another. An exception to this currently is Super MacroWorks, which appears to offer more power and features than the other alternatives. However, opinions will certainly change as new versions and updates of all the packages are released and they leapfrog one another in the quest for the "perfect" macro program.

Whenever you find yourself doing a repetitive task at the keyboard it is time to install a macro program. The task may consist of typing "Pacific Technology Systems" again and again in the word processor, or it may be moving down eleven rows and over two columns and blanking a cell in the spreadsheet. One macro key will perform each task.

All of these packages alter your AppleWorks StartUp disk, so that once installed they are available on-call at any time. All take over the solid-Apple key (or Option key on a IIgs). None are compatible with each other, so choose one.

The choice between MacroWorks and Super MacroWorks is an easy one; it depends upon which version of AppleWorks you are using. Super MacroWorks has many, many features not found in MacroWorks (for example, an "if" command). Writing your own macros in Super MacroWorks is far easier than in MacroWorks, although both use the AppleWorks word processor. Both come with many built-in macros. Tired of answering those printer questions in AppleWorks? From the beginning? Which Printer? How many copies? With the built-in macro, simply push solid-Apple P and the printer goes to work.

Another nice feature, although not really macro-related, of the Beagle Bros. disks will be discovered when your Apple-

Works crashes. With MacroWorks installed, type 33DG; with Super MacroWorks hit Control-Reset, and you will (probably) find yourself back in AppleWorks.

I originally purchased AutoWorks for its "READ DISK" feature. This program will automatically construct an AppleWorks data base of the names of as many disks and files as you wish to feed into your drive. (Super MacroWorks can perform the same feat.) AutoWorks also includes a Mail Merge—very useful for those of you who have not upgraded to AppleWorks version 2.0.

Oh, one more little freebie from Super MacroWorks—the ability to change the character representing a carriage return if you've grown tired of AppleWorks' checkerboard. I've changed mine to ↵.

## Summary of Macro Utilities

	Super			
	MacroWorks	MacroWorks	AutoWorks	KeyPlayer
Publisher	Beagle Bros.	Beagle Bros.	S'wre	Touch Pinpoint
Compatible with AW	1.0 - 1.3	2.0	All	All
Use Mouse	Yes	Yes	Yes	No
Upper/lower case convert	No	Yes	Yes	No
Link files	No	Yes	No	No
Read on-screen characters	No	Yes	No	No
List price	\$34.95	\$49.95	\$49.95	\$49.00

An example application of a macro occurs if you want to be able to press one key to type in your company name and address. After deciding that you want to use the "A" key for this (Super MacroWorks) macro, it would be written as:

```
A:<awp>PACIFICTECHNOLOGYSYSTEMS<Rtn>  
Box 8005<Rtn>Rockville, MD 20856<Rtn>!
```

You could also add AppleWorks printer options (Apple-O) to place the return address in the upper left corner of an envelope. All of the formatting and typing is then executed by pressing solid-Apple-A.

It is generally necessary to write your own macros as their use is usually specific to your situation, but perhaps seeing a few examples that I use will inspire you to create your own. Mine listed below are functional, although not elegant (sort of like the author).

FILL IN: Fills in (ditto) any blank entries for one category in a database.

```
A:<adb><sa-B><sa-C><Rpt>!
```

```
B:<adb><if><oa-'><sa-A>!
```

```
C:<adb><ifnot><Rtn><sa-A>!
```

STRIPPER: Removes all carriage returns from a word processor document. Useful for "unformatting" text from an electronic bulletin board system.

```
D:<awp><oa-T>R<Esc><sa-E>!
```

```
E:<awp><sa-Rtn><oa-D><Rtn> <Rpt>!
```

contd.

Note: if you wish to strip only a portion of the text place the cursor at the appropriate start point before pressing solid-Apple-D.

NUMBER 'N: Provides automatic numbering. Very useful in a spreadsheet. Each time solid-Apple-F is pressed the next number will be used.

F:<all><list><Ctrl-A>1,2,3,4,5,6,7,8,9,10!

DUPE CHECK: Searches a data base for names that begin with the same first five letters.

G:<adb><sa-H><sa-I><sa-J><sa-K><Rpt>!

H:<adb><0=><read><read><read><read><read><save0>1!

I:<adb><Rtn>!

J:<adb><0=><read><read><read><read><read><Rtn><up>!

K:<adb><if0>1<oa-C>T<Rtn><oa-Q><down><Rtn><oa-C>F<oa-Q><up><Rtn><sa-G>!

Note: This application requires some preparation. It needs two data base files on the desktop: a mailing list file and a storage file for possible dupes. The mailing list file should be sorted by ZIP code before executing the macro.

As you begin to use macros the application of the preceding examples will become clear. I would like to put together a collection of macros for AppleWorks and add them to the Washington Apple Pi Disketeria. If you have one that works for you send me a copy. ☺

## APPLEWORKS SIG NEWS by Peg Matzen

AppleWorks SIG'ers continue to gather for meaty Q & A meetings. In the event you don't know about the availability of such AppleWorks wisdom, be advised that WAP AppleWorks users meet at both 8:00 a.m. and 12 Noon after the regular WAP meetings to air their problems and frustrations or share their solutions and successes.

The SIG enjoys a number of resident experts who participate regularly and some frequently write AppleWorks articles for this journal (see Ken De Vito, Lou Pastura and Richard Rowell in recent issues of the WAP Journal). Watch for these articles, as well as notes from the AppleWorks SIG meetings.

Pointers of possible interest gleaned from the May 23 meeting and elsewhere:

1) A number of complaints were voiced about Apple's slow response to inquiries and rebate requests.

2) Half-height letters are ideal for sub- and super-scripts.

3) Control-L underlines efficiently in AppleWorks 2.0.

4) Richard Rowell reports there will be an "Applefest Conference and Exposition" September 18-20, in San Francisco—the first since 1983. The conference will focus on the Apple II; Steve Wozniak will be the keynote speaker. Richard has taken a booth for his firm, Pacific Technology Systems, Inc. If you go to the conference you will find him right next door to Beagle Bros.!

AppleWorks SIGs will not meet in June—attend the Garage Sale instead—but they will meet again in July. Come! ☺

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### APPLIED ENGINEERING

(additional AE items in stock)

GS-RAM, 1.5 Meg	\$284.00
GS-RAM Plus, 1 Meg	354.00
Z-RAM Ultra 1, 512K	189.00
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Z-RAM Ultra 3, 1 Meg	339.00
RamFactor, 1 Meg	279.00
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# PLUS-WORKS + APPLEWORKS ON THE ][+

by Boris Levine

This is a brief report based on my experiences so far in using Plus-Works to put AppleWorks on my ][+. I have got up to, but not yet started, the instructions for connecting to the printer. So far, the process has been simple and the results encouraging.

## BEFORE GETTING STARTED

Plus-Works modifies the AppleWorks Startup disk so that it will boot and operate on an Apple ][+. There is a lot of information out there: in the instructions furnished with Plus-Works itself; in "Open-Apple", especially August 1985; Apple's own AW Tutorial on "How to use AW", plus several items in the WAP Journal.

There are certain requirements for using Plus-Works on the ][+, and there is a choice in selecting the version of Plus-Works for your particular ][+: needed at least are an 80-column card, and an expanded memory card. My set-up comprises:

- Shift-key modification for lower case
- 80-column card            Viewmaster
- Expanded memory card PCPI
- Printer    Diablo 1620 daisy wheel

Plus-Works is offered in two versions: a basic version which lists for \$19.95 and a more elaborate -XM which puts all available memory into the desktop and makes use of several memory boards, including the PCPI board which accompanies PCPI's CPM. (NOTE: There had been a separate XM-P disk for the PCPI board, but I found my XM version 3.3. does use the PCPI board.) Plus-Works is available locally ( see WAP Journal ads for for at least one source) or from Norwich Data Services, PO Box 356, East Norwich, NY 11732 (516-922-9584).

## GO AHEAD

The instructions furnished with Plus-Works are terse but clear and easy to follow. However, they are printed in a tiny typeface and cover a wide variety of ][+ options, 80 column and memory boards. So, the first thing to do is to copy the Plus-Works instruction pamphlet on a copier which will enlarge the text to readable size. Next, read the text and strike out all options not applicable to your equipment. Third, for reasons that will appear shortly, go through it again, over-writing all 'open apple' symbols with 'ESC'.

Now, with an 'unprotected' working COPY of AppleWorks Startup disk on hand (a good idea is to have at least two copies), follow the instructions for copying Plus-Works onto it. Note that you start with the ][+ in 40-column mode and only when instructed go to 80-column mode. In case of error, or to explore other options, use that other COPY of the AppleWorks Startup disk and do it over.

Plus-Works handles the limitations of the ][+ by providing alternative keyings. The major change is that the ESCape key is substituted for the 'openapple', so if you didn't make it earlier, mark this substitution in the instruction sheets. Further, AppleWorks provides several dozen Apple and Ctrl commands, some of which are summarized in the table on page 14 of Plus-Works. For my purposes, I have settled on those I would use most frequently for word-processing, and have listed them at the end.

(Note: the commands are similar, but not always identical in the three AppleWorks modes).

There have been no real problems in following the instructions, so far. With the modified Startup disk, the AppleWorks logo appears and reports that 72K are available.

However, two minor items have come up:

The tutorial disk: "Apple presents AppleWorks" does not boot. This disk insists on dealing with either a //c or //c. (I may write to Norwich for help.)

The exit instruction: '6 Quit' goes to a blank screen, rather than the <AppleWorks> good-bye. However, pressing Ctrl-Reset does get this exit line.

There is also a significant typo in the reference chart on page 14 of the Plus-Works instructions; the keying for 'open apple-left arrow' is ESC Ctrl-A (not Ctrl-R, which is used for right-arrow)

## PRINTER CONNECTION: THE NEXT STEP

The variety of printers has made the interconnection a special problem for all wordprocessors, AppleWorks included. The AppleWorks program recognizes a dozen, but what to do with all the others. (Mine is a Diablo 1620 daisywheel with an Apple Comm. card.)

Plus-Works points out that this printer-relation is properly an AppleWorks responsibility; nevertheless, it provides a cautious but extended approach to this part of the operation. There are additional instructions in 'Open-Apple' and of course in 'Using AppleWorks'. With all this good advice, I will proceed cautiously to this next stage.

## SEVERAL USEFUL COMMANDS for the Word-processor Mode

Move cursor up	Ctrl-E (NOTE the ESDX Cluster)
down	Ctrl-X
left	Ctrl-S
right	Ctrl-D
Move cursor to page:	
top	ESC Ctrl-E
end	ESC Ctrl-X
next word	ESC Ctrl-D
prior word	ESC Ctrl-S
file start	ESC 1
mid	ESC 2-8
end	ESC 9
Change cursor mode	ESC E
Delete previous character	Ctrl-G
to end of line	Ctrl-Y
ESC (for real)	ESC ESC
Rescind unwanted ESC	0
Special Character-function	Ctrl-Z
FILE: Save file	ESC S
Quick file-change	ESC Q



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11:00 - 12:00	Word Processing: Tips, techniques, and suggestions
12:00 - 1:00	Break
1:00 - 2:00	Data Base: Tips, techniques, and suggestions
2:00 - 3:00	Spreadsheets: Tips, techniques, and suggestions

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### About the speaker...

Dr. Williams' recent presentations include:

"Advanced AppleWorks: Tricks and Techniques" Michigan Association of Computer User's in Learning—Kalamazoo, MI, March, 1986.

"AppleWorks: Doing What the Program Can't Do." Association of Educational Data Systems—New Orleans, LA, April 1986.

"AppleWorks: Undocumented Features." National Educational Computer Conference—San Diego, CA, June, 1986.

Dr. Williams has presented AppleWorks seminars in Chicago, Denver, Detroit, St. Louis, Philadelphia, and other major cities.

### Comments from previous seminars...

"Excellent! Gave the information I need!"  
*Ron Grooter, St. Louis, Mo.*

"Learned a lot of tips to speed up operations."  
*W. Bayer, Detroit, MI.*

"I am just a beginner, but now I know what [AppleWorks] can do."  
*Danna Zingeman, Aurora, Co.*

"The presentation was easy to follow and the printed examples were good aids."  
*P.N.C., Ann Arbor, MI.*

"Very helpful advice, pleasantly presented."  
*S. Crane, Westminster, Co.*

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## The AppleWorks Forum

This 20+ page monthly newsletter is one of the many benefits of your membership in the National AppleWorks Users Group.

Here are some of the articles that appeared in our 24 page June issue:

- Printer codes for over 60 popular printers.
- How to print three line headers at the top of each page.
- A review of SchoolWorks.
- How to use the protection feature in spreadsheets.
- How to improve your spreadsheets with the @IF function.
- Three ways to enter repeated data into the data base.
- There's a bug in ProDOS 8 version 1.3.
- An update on the Pinpoint desk accessories.

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# THE MAKING OF "THE APPLEWORKS USER'S GROUP'S GREATEST HITS"

by Paul Kelbaugh

I think I heard the magic words at either the first or second AppleWorks SIG meeting of 1987. I had arrived much too early for the WAP monthly meeting and grabbed a chair in the cafeteria while Ken DeVito, Lou Pastura and Richard Rowell led the AppleWorks attendees through a broad range of questions and comments concerning AppleWorks. Ken DeVito had just finished fielding a question and then, almost as an afterthought, said, "You might want to check the TAWUG library disks".

WHAT? It was 8:30 on a sleepy Saturday morning, but did I hear there was a library of AppleWorks files floating around? I waited patiently and then pounced on Ken at the conclusion of the meeting. "Ask Lou Pastura, he keeps them". Lou and I missed connections for the rest of that Saturday and I spent the entire month thinking about those magic library disks. How many were there? Ken hadn't said, but geeez, maybe there were three or four disks full.

I couldn't wait any longer. I sent Ken a message on the TCS asking him to reconfirm the number of disks. "Ken, are there enough to fill a 3.5" micro-disk?" Ken's message came right back "Paul, there are enough to fill at least FIVE 3.5" micros."

I stared at the screen, rereading Ken's message. I thought I had died and gone to heaven. Imagine the wealth of information on five micro-disks of AppleWorks files. I sent Lou Pastura a similar message. "Lou, can you bring the TAWUG library to the March meeting so I can copy them?" Lou took a few days to respond. With hindsight, I now realize Lou was probably trying to figure how to break it to me gently. He finally came back, "Paul, I'll bring them to the next monthly meeting. There are twenty-eight sides on 5.25" floppies."

It was more than I could bear. TWENTY-EIGHT sides!!

The March 87 meeting came around. With a somber face, Lou kept his end of the deal and handed me the box of disks. He kept a straight face. "Paul, how many mortgage amortization programs does a person really need?" His comment was lost on me. I had solid gold in my hands and I couldn't wait to get home.

I took nearly two hours to copy all twenty-eight sides. With the library disks safely tucked away to avoid a bout with Murphy's Law, I booted up AppleWorks and began loading my loot into the desktop.

The earth did not move. I stared at the screen as file after file was loaded to desktop, "worked" and deleted. There is no polite way to say it. This stuff was—uuhhhhhh—well, no purpose is served here by repeating my reaction.

After six or seven sides, I had The AppleWork's Users Group (TAWUG) history down. It had started as a clearing house for original AppleWorks files. Send in some of the creative uses you had found for AppleWorks and if it was useful, it would be loaded on the next disk to be made available to those willing to pay about \$2 a disk or send in their own disks for file transfer. Things were a little sparse in the early days of AppleWorks, so

as a result, many of the files on the early disks are letters and messages exchanging comments and good wishes. I knew I was in trouble when I loaded up a file and read, "Good news! Apple has announced version 1.2 of AppleWorks is ready to be released!"

It took nearly sixty hours to weed through all the disks. I did find some files which looked promising. As Lou Pastura had promised, there were lots of loan calculation programs. I counted eight on the first ten disks. I picked out the one which looked the most promising and deleted the rest. Then I found a worksheet for buying a new or used car. Hhhmmmm. Interesting. That's worth keeping. Then I found a data base listing all the episodes of Star Trek in chronological order showing the dates the episodes were first aired on network television. This was a gem! One person's trash is another person's treasure. I saved it. Ohh! Here is a complete listing of all the TV satellite channels. You never know when someone will ask you which satellite beams the Playboy channel back to earth ("Beam me down, Hugh"). Answer: WESTSTAR 4.

Somewhere around hour forty-five on this project an idea developed. Why not "The AppleWorks User's Groups Greatest Hits"? There were probably less than a hundred files here which really warranted viewing and long-term saving. All would easily fit on one 3.5" microdisk or both sides of a couple of 5.25" floppy disks.

The rest was explained and detailed to the April 87 AppleWorks SIG.

I found that most of the TAWUG files fit in one of twelve categories:

DESKTOP ACCESSORIES	COLLECTIONS
MONEY	APPLE II MISC
TIME	FUN STUFF
FOOD & GARDEN	STAR TREK
LISTS	PRINTER INFO
GENEALOGY	BUSINESS

With some much needed assistance from Glen Bredon's "PROSEL", I was able to reorganize the files and directories and the "Greatest Hits" was born. These were grouped on four sides and, with some able assistance from Paul Schlosser were then loaded to the WAP Download board for downloading in four groups.

I recommend them for your review if you are an AppleWorks user looking for ideas. Nothing will shock you and I doubt seriously that any light bulbs will be turned on. If nothing else, I've taken a very large data base of questionable utility and turned it into a small data base of questionable utility. Remember that I used my own subjective criteria as to what was worthy of this sampler. Your taste and mine are probably different. But it was fun and I hope you take time to look through the "Greatest Hits".

contd. on pg 27

# APPLE IIGS SIG NEWS

by Peg Matzen

Yes, there is a IIGS SIG—and—it promises to be a place to take problems and get solutions!

Interested GS'ers met at 8 a.m. before the regular WAP meeting on May 23. Conversation was lively; comments and questions abounded. Chairman Ted Meyer had lined up members to bring parts of their systems—so a functioning GS system, with its many goodies, enthralled WAP members all morning, even after the SIG meeting had ended. Ray Hobbs provided "expert" advice during the SIG meeting.

To be a bonafide WAP SIG, a group must have not only a chairman, but also a recorder and a librarian. Peg Matzen volunteered to be Recorder; David Todd and Sherman Lewis agreed to serve as Disk Librarians.

One function of the SIG will be to add GS volumes to the WAP Library. Sherman Lewis (703-437-3483) is the collecting agent for software to be formatted on 3.5-inch disks for the WAP Disketeria. So, share your wealth with Sherman.

As part of the function of adding GS volumes to the Disketeria, David Todd (301-228-0237) is organizing the downloading from commercial telecommunications services (e.g. CompuServe). So, before you download call David—he's available after 6:00 pm.

Chairman Ted Meyer demonstrated the two GS disks re-

cently compiled and available from the the WAP Disketeria: Volume 2001, "Utilities & Pictures A" (includes Basic Stuff, Desk Accessories, Pictures, etc.) and Volume 2002, "Demonstrations A" (includes Hodgepodge; Demo.Sys16; Paint; Pictures; etc.).

Bill Basham, DSR Inc., 34880 Bunker Hill Rd., Farmington, Michigan, honored the group with his presence and creative ideas. Bill had driven all night to arrive in the Washington area in time for the WAP meeting AND HIS BROTHER'S GRADUATION. Diversi-Copy™ was created by Bill; he is distributing it in a new and interesting way. He took a copy of our SIG membership list and suggested that he might send each of us a demo disk. Watch the mails.

SIG members encourage you to come and share your wealth and woes as you get acquainted with your IIGS. (Getting acquainted with the system may be a lifelong process for some of us nonhackers—but IT SURE IS FUN—most of the time!)

If you are a programmer and can't come at 8:00 for our SIG meeting, you may want to try PI SIG, an active group working with the GS.

See you at the Garage Sale in June. If you can't stand the temptations of the garage sale—see you at the SIG meeting in July. ☺

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# UPGRADING FROM AN APPLE //e TO A IIgs:

A WAP Member's Adventure in Reality

by Paul C. Kelbaugh

It isn't hard to remember the date: September 27, 1986. It is one of those dates that is engraved in my internal datebook along with my wedding anniversary, the birthdates of my wife and children and the last possible pay date on my monthly mortgage on the house. September 27, 1986 was the date WAP's monthly meeting hosted a special preview of the Apple IIgs. It knocked my socks off (actually it did more than that, but this is a "G" rated magazine).

I attended that WAP meeting impaled on the horns of a dilemma. A strong advocate of "Apple II Forever!", I was prepared to welcome anything which would inject life into the Apple II line. On the other hand, I had owned my Apple //e for less than a year and finally had it customized and loaded just the way I wanted it. After months of tinkering, all my programs were finally running the way I wanted them. I didn't understand how I had gotten to that point, but I had. And it was the comfortable feeling of a working truce between man and machine.

After the September 27 WAP meeting, I went home and turned on the trusty Apple //e.

"UNABLE TO LOAD PRODOS"

The //e knew. The honeymoon was over. I was lusting for another machine. Fortunately, cost and the limited availability of the new Apple IIgs made it unnecessary to act. But, I recognized the feeling in the pit of my stomach. It was the same one I had in January 1986 when I had borrowed a //e to run some programs which wouldn't run on my Franklin 1200. The Franklin is still in the closet and I've never looked back. But now there was this machine called a IIgs and I was enamoured.

There was a possible compromise which might work. The folks from Cupertino, led by Ellen Lease, had told us that there was a motherboard swap-out and some other changes to the //e which would make the //e into a IIgs and the cost would be about \$500. I focused on that number. \$500.

Continuous calls to my friendly dealer at regular intervals during October, November and December 1986 proved this was too good to be true. No availability of the IIgs motherboard for the //e swap-out. Another decision involving dollars deferred. Then I began following the comments of Lee Raesly and Bruce Field and others on the TCS regarding the pros and cons of a swap-out versus cutting your losses, selling out and starting over with a new purchase. Gee, Lee's arguments were awfully good—but Bruce had a good point there. And at the monthly question and answer session, Ray Hobbs had raised an interesting issue—I was miserable.

Then, some assistance arrived. The February 1987 issue of A+ Magazine showed up in the mailbox in early January with my burning question emblazoned across the cover: "THE IIGS UPGRADE: Should You Get Apple's Upgrade Kit or is There a Better Way?"

I devoured the issue. The article was written by Gary Little, of Pinpoint and "Point to Point" fame. Hey, I trusted this guy. He was going to give me the answer. Well, he copped out a little. He

straddled the fence. He gave us four scenarios, with one costing about \$500 (there was that figure again—\$500) and three others escalating up to a cost of almost \$1200. The one that caught my eye was "Scenario 2" in which a //e owner cuts his losses, sells his system, swaps over a few cards and buys a IIgs and a 3.5 disk drive. Gary indicated the brave of heart who would choose this route would have to pour in another \$650, above and beyond what they got from the sale of the //e.

I didn't sleep that night. Okay, so that is \$150 more than the \$500 figure I had been living with for three or four months. But geez, \$650 and the sale of my old system and I could be sitting at the wheel of a new Apple IIgs. My life was beginning to sound like an Ourisman Chevrolet commercial. But could I afford to "Always get my way" as the Ourisman commercial promises?

There was the new figure: \$650. I slept on it for a while. I was hooked. As long as I didn't go over \$650, I could afford it. April 27, 1987, I made my move. Seven months, to the day, after Ellen Lease hosted the WAP presentation, I was a IIgs owner. I was offered the chance to buy a IIgs CPU from my Apple dealer for 20% off list. My wife, the practical one in the family posed the world renowned question that is repeated daily across America and the free world as we know it, "You already have a computer. Why buy another one?" And of course the follow-up question, "What is this going to cost?" She did it in a nice way. She doesn't understand this computer madness, but she knows it makes me happy. So she tolerates it.

I looked her right in the eyes and said, "It'll cost us \$650 assuming I sell the old system." Whether she believed me is not at issue. What really was unstated was, "Did I believe myself?" Was I going to be able to pull off the swap from //e to IIgs for \$650? The rest of this article is dedicated to proving I am either a pathological liar, or the worst financial planner in the history of civilization.

On September 27, 1986, (there's that date again) here's what I owned as my Apple //e system:

- Apple //e (enhanced)
- Amdek 300A Amber monitor
- Apple //e mouse and mousecard
- Apple II 5.25 disk drive (Shugart 390)
- Central Point 3.5 disk drive
- Central Point Universal Disk Controller card
- RamWorks II w/ 738k
- Prometheus 1200A modem
- PKASO printer interface
- Okidata printer
- Thunderware Thunderclock
- Kensington System Saver Fan for //e

I also owned about fifty 5.25" floppy disks, ten 3.5 microdisks and 25 commercial programs. My "must use" software was AppleWorks v.1.3, Macroworks, Pinpoint 1.2, Spelling Checker for Pinpoint v. 1.0.2, Managing Your Money v.2.0, MegaWorks v.1.2 and a few other odds and ends. Some were bought new, contd.

some used. The total investment out of pocket was about \$2,000.

Since April 27, 1987, here's how my "upgrade scenario" has played out:

- Purchased a IIgs CPU for \$800
- Sold the //e along with Mouse / IIe Mousecard for \$500
- Harvested 512K in 41256 chips off RamWorksII
- Sold RamWorksII with 256K onboard for \$110
- Transferred PKASO, Thunderclock, Prometheus 1200A to IIgs
- Purchased GSRAM (Applied Engineering) with 512K for \$169 and added harvested 512k chips for total 1 meg.
- Shipped Central Point Card back to vendor for reworking and modification to work in IIgs. Repair cost: \$25
- Unable to get Central Point 800K drive to work on IIgs, so purchased Apple 3.5 drive for \$300
- Kensington System Saver does not transfer over, so purchased an MDIdeas ConServer fan and surgeprotector for \$100
- Transferred 5.25 drive w/ controller board to IIgs
- Sent \$50 to Apple for Appleworks 2.0 upgrade
- Sent \$22.50 to Beagle for upgrade to SuperMacroworks
- Sent \$20 to Pinpoint to upgrade to Pinpoint v.2.0 and Pinpoint Spelling Checker v.2.0

And what do I have now? A true cadillac system, lacking only a color monitor. (NOTE: There is a method to my madness here. As most IIgs users and lovers are aware, the Sony KV1311 color television/monitor is a great deal. However, Sony stopped producing them in early Spring, 1987. As I was upgrading my system and writing this article, I was advised Sony would replace the KV1311 in their line-up beginning in July 1987 with a new improved version of the KV1311 under a different model number. I decided to wait.) A IIgs with a 1 meg memory expansion, 3 disk drives (yes, I finally got the Central Point 3.5 disk drive to work after the controller board was modified) and updated software. But what did it cost me? Purchases and hardware and software upgrades came in at \$1486.50 plus tax/or shipping. I got \$660 for the equipment I sold. Net out of pocket expense? \$876.50 plus tax/or shipping. I'll realize a few more bucks back after I sell the Amdek 300 amber monitor and the Kensington System Saver. But I expect to spend another \$500 for the new Sony monitor and cable when they are available in a few months.

The reality of the //e to IIgs upgrade is that the "scenarios" costing \$500 to \$650 are probably just not going to happen for you. If you plan to sell your Apple //e and buy a new IIgs, I'd say \$900 to \$1400 is more realistic and acknowledges that software upgrades, Ram cards, color monitors and 3.5 disk drives will go hand-in-glove with the IIgs. To realize the capabilities of this machine, you might as well open up the wallet and give 'til it hurts. Believe me, the pain is diminished once you power up. ☺

TAWUG's Greatest Hits contd. from pg 24

Oh yes, Ken DeVito tells me more TAWUG disks are on order and someone will need to sort through them. I don't know, Ken. How many mortgage amortization programs do you really need? ☺

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Apple™ Software		Macintosh™ Software	
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On Balance	70	BPI Gen. Acct.	165
<u>Communications</u>			
Commworks	60	Smartcom II	104
Point to Point	80	Straighttalk	21
<u>Database</u>			
Bank St. Filer (128K)	50	Omnis 3 Plus	295
pfs: Workmates(f,r,p,w)	170	Reflex	72
<u>Education</u>			
Computer SAT (HBJ)	28	Puppy Love	22
Math Rabbit	29	SAT Improvement	70
<u>Graphics</u>			
Create a Calendar	22	Graphic Works 1.1	70
Springboard Publisher	92	Printworks for MAC	48
<u>Leisure</u>			
Hollywood Hyjinx	29	Comicworks	57
Mean 18, Ultimate Golf	29	Smooth Talker 2.0	32
<u>Programming</u>			
Terrapin LOGO	70	MacForth II	79
Turbo Pascal 3.0 (CP/M)	50	Turbo Pascal	72
<u>Spreadsheet</u>			
Planner's Choice	36	Crunch	95
VIP Professional - IIgs	205	Excel 1.03	275
<u>Word Processing</u>			
Talking Text Writer/GS	170	MORE (512K)	175
Word Perfect 1.1	101	MS Word 3.0	285

### .....New, recently published software.....

APPLE		MACINTOSH	
816/Paint	48	Business Card Mkr	44
ASCII Mousetalk	63	Business Filevs'n	225
Award Maker Plus	26	FullWrite	180
Bank St. Writer+128K	57	HD Back-up	34
Clip Art Gallery - IIgs	22	Jet	40
Music Studio/GS	57	MacOneWrite Sys	64
Real Est. Invest. Mgt.	70	Powerpoint	250
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# BEST OF THE APPLE ITEMS FROM TCS

by Lou Pastura

## CURBSIDE REVIEWS

JERRY COTTRELL ON 05/05

Are there any GraphWorks or ReportWorks users out there? If so, do you recommend these products? I've read some of their literature, so I know what these products are SUPPOSED to do—I am just wondering how WELL they do it.

KEN DE VITO ON 05/06

I have GraphWorks and can only recommend it for the most basic graphs. It would probably be adequate for 8th Grade Math when they teach you the difference between Pie, Bar, Stacked-Bar, and Line Graphs. It doesn't do anything except depict the difference between the various types of graphs and the cost is about 4 times what it should be. This is probably the biggest vacuum in the AppleWorks Add-On area. If any-one could come up with a SuperCalc 3a graphics capability for AppleWorks they could obtain a luxury retirement in a matter of 3 years! Are you AppleWorks Gurus out there listening?

ROCKY RAGANO ON 05/06

I can't respond to Graphworks, but I can with regard to ReportWorks. ReportWorks has several nice features that are not contained in AppleWorks. It is more flexible and contains more report formatting options than AppleWorks. However, there is one MAJOR drawback with ReportWorks. It is VERY slow when it goes to actually build/compile a report. As an example, it took about eight minutes (yes, minutes) to compile a report using one input file containing about 250 records.

## APPLEWORKS STUFF!

BILL HUGHES ON 05/08

Here is what I hope is an interesting problem. When figuring out grades, the total number of points possible on each assignment can be added and so can the total number of points that a student has earned. Now for the problem. Is there any way to add up just those assignments for which the student is to be graded? For example, John Smith missed an assignment, but I will excuse him from making it up. Can I tell AppleWorks (or any spreadsheet—I also have THE Spreadsheet from Call-APPLE) not to include that grade?

RICHARD ROWELL ON 05/09

For ADDING UP just those assignments that the student has completed—no problem ... that's all that will be added. For AVERAGING also no problem—as long as you leave the incompleting assignment blank. (@AVG ignores blank cells, but does include cells that contain the number 0.) For more sophisticated fiddlin' you can use @COUNT which counts all non-blank cells only. (@COUNT also includes in its count cells containing 0.)

KEN KNIGHT ON 05/10

I have been asked to try to set up a data base for a school which

would run under AppleWorks that would include such things as: transcripts, report cards, schedules for students... What I need to know is since these reports all share so much data (i.e., a report card can get the classes from the schedule and the transcript can include the report card data) ,can AppleWorks handle those relationships on the fly or in some relatively easy manner without the user having to retype the data? Also could a user pull out a class list for any given class, assuming all the schedules were in place?

RICHARD ROWELL ON 05/10

All of the things that you ask for can be done in AppleWorks; however in the past it would have required a fair amount of experience by the user to manipulate the switches between spreadsheets and data bases. Today it can be set up to operate very simply. Suggestions: (1) Set up WP files for each report form (transcript, schedule, etc.) and use the mail merge feature of AppleWorks version 2.0 to get the data out of one or more data bases; (2) Use the Beagle Bros. SuperMacroWorks which offers the ability to link AppleWorks files; (3) Get a new utility, called DATA.PASTE, that can merge any AppleWorks data bases. (The utility is available from Pacific Technology Systems.) The set of Word Processor, Data Base and Spreadsheet files that it will take to offer all of the features that you have described will be a medium-sized job to construct. To do it properly (so that data entry and report printing is easy for the user) will require about thirty hours of development time.

## PRINTER WOES

JACK LINDERMAN ON 05/22

I'm getting Linefeeds and Carriage Returns in the middle of words and sentences when trying to print. I'm using a //e, a Grappler+, and an MX100....whats happening?

RICHARD ROWELL ON 05/24

Run through this trouble-shooting routine in order: 1. Apple-Z(oom) to reveal carriage returns. Make certain that the typist didn't insert hard returns at the end of typed lines; 2. Choose #5 "Other Activities" from the Main Menu, then #7 "Specify information about your printer"; then select Interface Code and enter a CNTRL-0 (then a ^ to get out of entry)

## STOP THAT PROGRAM

HENRY DONAHOE ON 04/29

I'm trying to find a way to fix a continuously running Basic program so that a single keystroke interrupts the program and sends a "BYE". In other words—with the program running—I'd like to have the user be able to hit a given key which would put PROSEL (or any other BYE selection system) on the screen. Any ideas?

HENRY DONAHOE ON 05/02

FYI: Glen Bredon (also known as MAUG's Angel of Mercy) left contd.

me a neat piece of code to accomplish the feat: 100 IF PEEK (12\*4096) > 127 THEN POKE 12\*4096 +16,0: PRINT CHR\$(4) "BYE"

TOM VIER ON 05/02

That PEEK looks at the keyboard, which will be >127 if ANY (ASCII) key is pressed. The POKE clears that keypress.

#### NEW VERSION OF QUICKEN

PAUL SCHLOSSER ON 04/29

I just received the ProDOS version of Quicken from Intuit. Haven't booted it yet, but they've made several changes in the program, all for the better. The ProDOS version can be run from any ProDOS device, i.e., 5.25's, 3.5's, a ram card, or a hard drive. And the data files can also be used from any ProDOS device. The program should really fly when run from a ram card. There's even a menu option to copy the data files to/from the ram card; also, multiple accounts on 3.5's and hard drives (but only one account per 5.25) and a complete menu for ProDOS functions (formatting, renaming, deleting, etc.). About the only thing lacking is a way to quit from Quicken to the ProDOS quit code. You've got to re-boot when finishing the program. They also furnished a utility program to convert all my old Pascal data files to ProDOS data files.

#### MORE TELECOMM SOFTWARE OPINIONS!

RICHARD SALEN ON 05/14

I would like some input on what is a good and inexpensive communication software package (I have a ][c with an ADC 300/1200 baud modem). I also am looking for a screen dump (guess that's what they call it?) program for my Imagewriter printer. Thanks for any responses.

RICHARD ROWELL ON 05/15

(1) Watch out for saving money on telecomm software. Get ASCII Express or MouseTalk and save the enormous number of hours that you'll spend if you use a budget telecomm package. (2) For a screen dump, TRIPLE DUMP from the Beagle Brothers is excellent.

DALE SMITH ON 05/15

I will second Richard R.'s comments. I use and like MouseTalk and in version 1.30 (the current one) it is a very solid program.

HENRY DONAHOE ON 05/19

There is an inexpensive telecomm program that is easy to learn and use but provides all the necessary features. It's called MODEM MGR, and it's little known because it's not being distributed by any of the major software houses. I found out about it through the Apple SIG on Compuserve, where this program has quite a few enthusiastic fans (many of them converts from AE PRO). It retails for about \$40 and does Binary II download and has easy-to-learn macros and fantastic support.

FROM ALLAN LEVY ON 05/20

I am currently evaluating several packages, and right now I would go with Mousetalk or Proterm. Proterm has a nice dial library, but Mousetalk is more common around here. Both work well. Point to Point is also very nice and has an AppleWorks

flavor.

#### PRINTRIX—FINALLY!

LOU PASTURA ON 06/01

Spoke with the head of Technical Support today at Data Transforms and here's what he had to say: Printrix was due to ship today; problem with the manuals; new ship date is 6/10. It is a ProDOS based Typesetting program that will use Fontrix fonts transferred over to a ProDOS disk. List price (introductory) will be \$65. It will accept text files as well as files from AppleWorks, Apple Writer II, Word Perfect, and Word Juggler. It will include left, right and fill justification (microjustifies the text line); centering, pagination, etc. You can use up to 4 fonts per line; unlimited number per file. You can use graphics from Fontrix (therefore I assume you can use ANY hi-res screen, but that's my assumption, not his assertion) and any 4 sector graphic (that's what HE called it—he means you can use Print Shop pics!) It is configured for 130+ printers. It will run only on the //e, //c and the GS (requires 128K). That's all I can recall. Looks like a nifty program! I ordered it—more after I get to play with it.

#### UNIVERSAL DISK CONTROLLER FOR GS?

PAUL KELBAUGH ON 05/03

Kim: Reference our conversation on the TCS a few months ago regarding the Universal Disk Controller Board from Central Point Software. At that time you and I left it as, "Yes it will work with the GS but you have to knock a hole in the front panel of the GS CPU because the UDC board is too long for the enclosure." We speculated that it should work fine in the //c upgraded to GS since the enclosure would be larger. Here's an update: owners of the older (and longer) UDC boards can call Central Point and get a return authorization number. For \$25, the old (long) UDC card and a copy of a bill of sale for a IIgs, they will ship back a new, shorter and ROM modified card to work on the IIgs.

#### TESTING! TESTING!

TOM VIER ON 05/06

In this month Journal's Apple II Q&A, Bob Platt has a long program to test to check all 128K in your //c. Here's a shorter version.....

Press <Control>.....

At the same time, press <Closed-Apple>.....

At the same time, press <Reset>.....

Now release the <Reset> button.....

Finally, release the other two keys....

Now, sit back and watch the show....

Beepity-beep...System OK

RICHARD ROWELL ON 05/07

I perform this test occasionally—since I don't watch Soap Operas on TV my form of passive entertainment is watching the monitor flash during self-test. My question is: What are the configuration differences that produce the two different responses, KERNEL OK and SYSTEM OK?

TOM VIER ON 05/10

The KERNEL OK is from the UNenhanced //e. System OK is from the newer, enhanced ROMs. The new firmware tests all 128K. I don't know if the old ones do—I've never seen the contd.

source (except 80 col and Monitor).

### GS SOFTWARE INFO

DALE SMITH ON 05/13

I received an ad yesterday from Roger Wagner Publishing, Inc. for a new program for a GS with at least 512K extra RAM and a 3.5" disk drive. It is called SoftSwitch. The program will let you switch between 3 selections with a couple of keystrokes. You can switch between ProDOS 8 and DOS 3.3, combine program features of different programs, revert to earlier states of a program (game), save most programs to disk in mid-operation for later resumption, etc. The key to program compatibility is that those programs that will permit access to the control panel during operation will work with SoftSwitch. Projected release date is 6/15/87. Roger Wagner Publishing, Inc., 1050 Pioneer Way, Suite P, El Cajon, CA 92020, Phone: (800) 421-6526. List price: \$49.95. If you want to order, use the above address with "SoftSwitch Offer" as the first line. Reference: direct mailing of product and offer literature from Roger Wagner Publishing, Inc.

CORY MCNUTT ON 05/15

I posed the question of, "Why does it take so long to port over the programs written in 'C' from machines like the Amiga to the GS" to Jeff J. of Electronic Arts. He is a member of CompuServe and welcomes all questions. He said that even though the BASIC program can be easily ported to the new machine, that in order to take advantage of all of the gs's capabilities a TREMENDOUS amount of extra programming is needed and that it will take sometime before their programmers are comfortable with the new machine and all of its features.—I assume that the same can be said for the Mac's programs coming over to the GS too—only a guess, but I wish they'd hurry!

SAM SWERSKY ON 05/15

You are undoubtedly right—and keep in mind that the aspects of many programs that interest folks MOST (i.e., graphics & sound) are definitely machine-specific (C functions and/or assembly language routines have to be completely rewritten for the programs)! Also, some aspects of the hardware of each machine simply can't be ignored when porting a program. Most Mac programs aren't going to be dealing with color that a //gs program will undoubtedly want, for example. The Amiga's coprocessing chips allow multiple I/O simultaneously without any intervention of the CPU as another (that's why Marble Madness has music playing continuously on the Amiga version but only during non-play sequences on the Apple // version).

### GS ART

PAUL KELBAUGH ON 05/29

Just received my copy of DeLuxe Paint II today direct from Electronic Arts. This was in response to their offer to ship for \$49.95 plus the cover of the Paintworks Plus manual. Whole thing took less than two weeks. As previously reported on this board, the package includes a free copy of a bonus art disk. EA uses the original DeluxePaint II as a key disk and urges making a working copy which requires the key disk for "validation". ALSO included in the package is a certificate which, when signed and sent along with \$20.00 gets you an UNPROTECTED copy of DeLuxePaint II from Electronic Arts.

CORY MCNUTT ON 05/29

I've been working with my Deluxe Paint II the last couple of days and it looks like a SUPER program! The manual, at least so far, appears to be very well organized and allows you to create as you read—giving you hands on experience as you go. The more I read and work with the program, the more happy I am that I waited and did not run out and get PaintWorks Plus—of course the \$50 upgrade from Electronic Arts is a good offer and then you end up with both programs. The Art Disks 1 & 2 that I have also have some pretty impressive graphics. Paul, how would you compare PaintWorks Plus to Deluxe Paint II? I have seen PaintWorks Plus but have never worked with it. I would be interested in your comparisons. Also, I am a little disappointed in the printout from my Imagewriter II, even with a new ribbon—the backgrounds just don't seem to print very well—too many lines and not enough detail—I guess we'll have to wait for a colored LaserJet! P.S. I don't know if you read the part about the memory requirements. It says that 768K is the minimum, but that in order to use the advanced features AT THE SAME TIME (like fixed background and perspective or 3-D, etc.) one meg is needed!

PAUL KELBAUGH ON 05/30

Cory: Not even close, DeLuxe Paint II has it all over PaintWorks plus. On the other hand, I've picked up some nice artwork over on Compuserve for PaintWorks plus but seen nothing for Deluxe Paint II. As you pointed out, I used the Electronic Arts trade-in deal so for the money I'm pleased. Got PaintWorks Plus from a mailorder discounter for \$47 and with the 49.95 for DeLuxe Paint II, I have under a C note tied up in both. Your memory point is well taken. Fortunately, I have one meg on board so I am not restricted by the minimum requirement for Deluxe Paint II. Give me several weeks and I'll tell you which program I gravitate to.

### GS SOUND & OTHER GOODIES

FRANK SORNATALE ON 04/30

When I was in Clinton computer they had these neat speakers hooked into the back of their GS. I thought I would try a set of speakers into the headphone jack and see if they would work—nothing. What am I doing wrong? Do you need some special card or speakers to get the sound through external speakers?

DAN HUGHES ON 04/30

I connected my IIGs to my Fisher stereo through the Auxiliary I/O. You can pick up the parts you'll need at Radio Shack for about \$6. It's not the same as the Bose speakers though. You need jacks and a couple of wires long enough to reach from your stereo to the GS. It's not hard to set up.

KIM BRENNAN ON 05/01

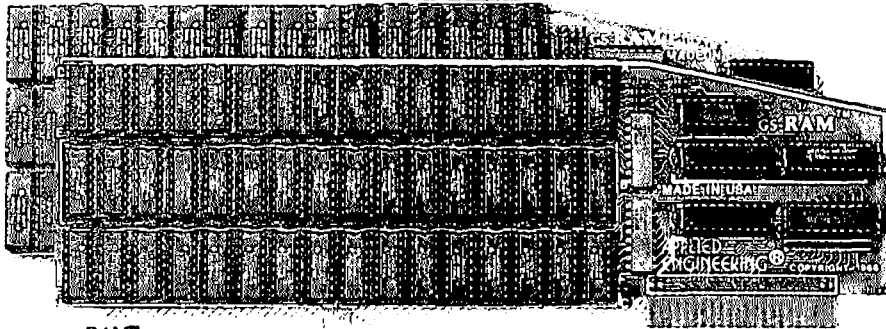
The Bose speakers at Clinton are AMPLIFIED Speakers (i.e., they have their own built in amplifier). If you hook up headphones to that jack they will work. Another alternative is to make (or buy) a cable to connect from the speaker jack to your stereo amplifier (through an auxiliary input), then you will be able to hear the sound. The Supersonic Card from MDIdeas connects to the auxiliary sound connector and allows for stereo sound output from the GS. It sells for \$59.95 and I got mine on Thursday from Bethesda Computers. I have many comments about this card  
contd.



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even have Pinpoint or Macroworks and your favorite spelling checker in RAM for instant response. GSRAM and GSRAM Plus will even display the time and date right on the AppleWorks screen. Nothing comes close to enhancing AppleWorks so much.

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though. First it is NOT a neat installation procedure. The connectors are at the end of loose cables which you must send through the back of the computer to connect with your speakers. Two types of connectors are provided (a plus). One is identical to the GS external speaker jack (except the output will be stereo). The other(s) are standard RCA connectors. Second, quality control on this product is not what I would expect. If you buy it locally PLEASE inspect it before leaving the store. I discovered a cold solder joint (translation: one component was not attached to the board properly). I am fairly handy with a soldering iron and did the repairs myself. Third, no software is provided. There IS a demo copy of Music Construction Set (but I found an annoying quality to most of the selections). However Bard's Tale for the GS (A role playing game) has better sound than the Music Construction Set demo. I keep hoping a real good music program will come out. We'll see.

CORY MCNUTT ON 05/02

I have just ordered the SuperSonic Card—hope mine comes in good shape! Have you tried the Music Studio GS from Activision? I have both the Music Construction Set and Music Studio—Music Studio is BY FAR the better of the two. Now, when Deluxe Music Construction Set comes out it may be another story—but for now Music Studio is it. You can play 15 instruments at once versus 2 for Music Construction Set; you can design your own instruments; and it has far more professional tools than Music Construction Set. Go check it out at a dealer.

BOB RUSK ON 05/02

Cory, I have both Music Construction Set and The Music Studio and will be glad to sell The Music Studio cheap. It won't print real manuscript that you could put in front of a musician, won't double a part, is impossible to edit and tedious to enter data on. O.K., it has the more potent synthesis capability for the moment, but Deluxe Music Construction Set and the allegedly forthcoming offering from Passport Designs will blow The Music Studio into the weeds, as will my antique Passport system running on a ][+ with a Mountain Computer board. One could hope that there will be a trade-in upgrade for Music Construction Set owners who want to opt for the Deluxe version—not certain, but the registration card hinted strongly that this will be the case.

CORY MCNUTT ON 05/07

Bob, I am certainly not a professional musician, and therefore can't argue why a person with an instrument could not play from the printout (since it looks pretty good to me), but in as far as tinkering around with both programs I found The Music Studio easier to use when it came to entering data, and one certainly had more choices of notes and rests to use than in Music Construction Set. I also thought making a change in the key or the time of the music was handled smoother in The Music Studio. I guess I was just VERY dissatisfied in Electronic Art's first attempt in Music Construction Set. I too, have high hopes for Deluxe Music Construction Set, if it's anything like the Mac's version. I also have heard that Electronic Arts will allow us to upgrade to Deluxe Music Construction Set—something they did not do for those of us who purchased Music Construction Set for the //c! When is the Passport Designs program supposed to be out—I

have not heard of it?

CORY MCNUTT ON 05/17

I just received my SuperSonic card from MDIdeas the other day and although I didn't have to solder any wires, I have to agree with Kim that I am rather disappointed with the construction and overall "feel" of it. The wires appear that they could easily break off, especially when you consider that they just hang out the back of the machine! There should have been a metal or plastic clip to attach to the opening in the back of the GS to hold them firmly in place. Also the plugs on the ends of the wires are too BIG to get thru the back! And, of course, the plug on the end of my speakers is too large to come in thru the back! As far as the sound quality goes—except for the Stereo separation—I really don't see all that much improvement. Has anyone here purchased the ConServer from MDIdeas? I was wondering if it is any more polished than their SuperSonic card. I would really like to get one, but hate to buy anything sight unseen. Is it sold locally anywhere so that I could go and look at it? Holding one or two 3.5" drives and also having six outlets and doubling as a surge protector seems like a great idea. I was just wondering how the translation came out!

DALE SMITH ON 05/17

I've seen one on the GS demo unit at Clinton Computer's Laurel store. Looks nice from the outside; inside ???

KEN KNIGHT ON 05/18

What is this ConServer anyway?

DALE SMITH ON 05/18

ConServer is a combination—an external GS fan, socket set for plugging in peripherals with a front switch, and room for 2 Apple 3.5 drives, and it works as a monitor stand, adding about 1.5" to screen height.

### GS CHARACTER SETS

TOM VIER ON 05/20

How do you change character sets in the Control Panel? I sat at a GS yesterday that was giving me a British pound sign for the # character. How do I get back to the standard set?

LEE RAESLY ON 05/21

Control-Open Apple-Escape (All together Now!) gives you your shot at the Control Panel. Up Arrow to Control Panel, then return. Up Arrow to Options, then return. The right arrow goes "Up" through the languages, the left arrow "down".

### GS WARNING!

TOM VIER ON 05/12

This is a reminder to NOT set the RAMdisk Min and Max sizes to different values!!!! That can cause unrecoverable trashing of ProDOS!!! ALWAYS set them to the same value!

KIM BRENNAN ON 05/12

Other comments. When using ProDOS 16 you should not NEED a Ramdisk since most (if not all) of your program should have been loaded into memory at startup.

contd.

## PRODOS TUTORIAL

RICHARD ROWELL ON 05/13

Apple's Disk Operating System ProDOS, under which AppleWorks operates, makes use of pathnames. The purpose of these names is to provide a hierarchical structure for storing many, many files. This structure may include the use of SubDirectories. If you have no more than 20 files on an AppleWorks data disk then you probably don't need a hierarchical organization to keep track of them. As you may have noticed your AppleWorks files are already ordered by Word Processor first, next Data Base files, then finally Spreadsheets. And within these groups the file names appear in alphabetical order. A pathname is the Volume (or disk) name followed by all SubDirectory names and, last, the file name itself. Slashes (/) are used to separate the different types of names. Here's an example:

`/TIPS.1/TEMPLATES/BUSINESS/MORTGAGE`

TIPS.1 is the disk volume name. To find it you can select #5, Other Activities, from the Main Menu, then select #2, List all files on the current disk drive; at the top of the listing the disk volume name will be shown. Sometimes when you are prompted to "Enter the complete pathname" the pathname must be preceded by a "/". The copy disk/program COPY ][ PLUS offered by Central Point Software does a very nice job of showing all files on a disk in a graphic display of SubDirectory, SubSubDirectory and File. Be alert so as not to overlook AppleWorks files on a disk; they may be "hidden" within a Directory or subDirectory. Directories are not AppleWorks files, therefore if you set the location of the data disk as a Slot and Drive or if you set it as a pathname that is simply the disk volume name, AppleWorks will tell you the following fib: "There are no AppleWorks files on this disk." The remedy? Set the location of the data disk as `/DISK VOLUME NAME/DIRECTORY NAME (e.g. /TIPS.1/TEMPLATES)`.

## RAMDISK STUFF!

CURTIS LAURET ON 05/10

I have gotten an AE Ultra board. I've got AppleWorks running fine with the extra memory, clock running o.k, etc. Now, I want to get additional programs to load into the extra RAM, but I am really confused after reading chapter 3 of the AE manual dealing with the RAMDRIVE. I'm not sure where to begin. I want to load programs like the Pinpoint Accessories, etc. Aren't there easier instructions, step by step. For example, do this first, do this second, etc?

PAUL SCHLOSSER ON 05/10

Curtis—there's a program that will copy files to /ram. It's on the AE disk that came with your board. It's 'AUTOCOPY', there's some instructions in the AE manual on how to modify AUTOCOPY to suit your needs, although the instructions aren't the clearest I've ever seen. If you can configure AUTOCOPY to do what you want, then try this: Save a startup program like this:

```
10 PRINT CHR$(4)"-PRODRIVE"  
20 PRINT CHR$(4)"-AUTOCOPY"
```

Copy PRODOS, BASIC.SYSTEM, PRODRIVE, AUTOCOPY, and all the files that you want AUTOCOPY to copy to /ram to a disk. Enter the two BASIC lines and save as STARTUP. If 'AUTOCOPY' is configured correctly, it'll copy the files you've designated, and execute a designated file from /ram. ☺



MUSIC SIG is a special-interest group dedicated to music lovers. We use all software and synthesizers, and run on Apples, Ataris, Commodores, IBMs and Macs. Our meetings are held on the second Saturday of each month, in the early afternoon. Call Gary Larson (337-4267) or Bill Bittle (301) 236-9898 for meeting place and time information, or check the MusicTech BBS bulletin at 490-7484.

Our May meeting was held at the Davis Public Library in Bethesda, Maryland. An introduction to analog synthesis was presented by Carol-Lee Erikson, who many will remember as a featured performer/composer at the April WAP main meeting. Carol's knowledge of analog synthesis is quite complete, and we are appreciative of the time she spent in preparing the program to share some of that knowledge with us.

The next meeting will be held on July 11 at 1:00 P.M. at the White Oak Public Library in Silver Spring, Maryland. Call for directions. ☺

# Service

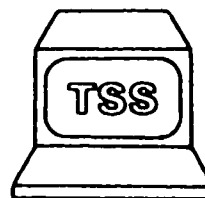
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# The Musical Apple

.... by Raymond Hobbs

Last month I discussed the making of a recording on computer, using an imaginary MIDI synthesizer/computer system. This month I would like to touch on two "stumbling blocks" frequently encountered by novices while designing instruments and making recordings.

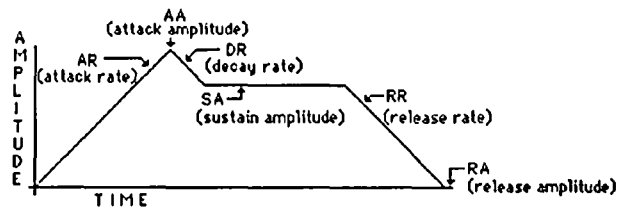
A great deal of time can be wasted in instrument design, especially if the synthesist is using the "trial and error" method. I am probably more guilty of this than most, because I tend to get stalled in details. I can recall wasting the better part of a week trying to get an instrument definition right by fiddling around with first one parameter, then another. Since there are so many things to remember, and so many controls to set, I have found that it's especially important in the music game to start with *simple* before moving on to *complex*.

In a two-oscillator-per-voice setup (far and away the most common), I must select a waveform for each oscillator and, at a minimum, a five-point envelope for each oscillator. Add a vibrato specification and an oscillator offset (detune), and I have two sets of seven controls, plus one overall control (the offset), each one of which can take on from five to 255 unique values—at a minimum! If I go about adjusting these various parameters in a willy-nilly fashion, the chances of lousing the instrument up are so good that a lousy instrument becomes almost a certainty. No wonder I wasted a week fooling around with it! How, then, can the process be simplified so that the instrument definition procedure becomes short and productive?

First, of course, the synthesist should know his or her manuals. The few hours spent in studying the manuals for the system can easily be reclaimed during the first instrument definition process. Just knowing which of the many parameters to adjust first is worth the time spent in reading the manuals. The second point is to attack the major variables first—before trying to "fine tune" anything. I usually go for the envelope definition, since the human ear is much more sensitive to the envelope than to the waveform. Most envelopes are defined as consisting of five points, although more points are generally allowed. We frequently hear of envelopes of the ADSR type—this simply means that the four major stages of the envelope are Attack, Decay, Sustain and Release. These stages refer to the area under the envelope curve between points one and two, two and three, three and four, and four and five, respectively. Normally the parameters dealing with these envelope stages are called Attack Rate, Attack Amplitude, Release Rate, Sustain Amplitude, Fall Rate and Fall Amplitude. All the rates refer to the slope of the envelope curve and the amplitudes refer to the volume levels at which the envelope will change its slope. The anatomy of an envelope is pictured below:

I like to start with a simple assumption about my instruments. The assumption is that every instrument is an organ. Why an organ? The organ has the simplest of envelopes—four points, absolute rates. The attack rate is maximum (as soon as I press the key, the sound is at full volume), the sustain amplitude is

ANATOMY OF TYPICAL ENVELOPE



identical to the attack amplitude, and the release rate is again maximum. I use this instrument because I can hear the sustained note with no distractions. I play a long sustained note and compare it with the sustained sound I wish to create. At this point I am not concerned with attack or decay or release—just the sustained tone. Since there are two oscillators, each one with (possibly) a different waveform and (perhaps) detuned from each other slightly, there can be plenty of variance in tones, but this is the simplest setup for trying out waveforms. I set the volume of one oscillator to zero first, to try to find the principal waveform for a single oscillator, then I can try adding other waveforms to the second oscillator. A tedious enough process, it would be a hundred times worse if I worried about all of the other parameters at the same time! After I have decided on my waveforms, I am ready for the attack phase. The attack will add a great deal of color to the sound, for it describes how the "instrument" is played. If struck, the attack is quite rapid. If bowed, the attack is slow. And so forth. After the attack has been created, the release segment can be formed in a similar manner—the slower the release, the longer the sound "lingers". My envelope creation process is pictured below, segment-by-segment, for a typical five-point envelope:



The sound is still probably not exactly what I want. I still have vibrato to define, and I may want to go back to "fine tune" a few things. The bulk of the work should be complete, though. I also like to keep on hand a few "plain vanilla" envelopes representing major instrument types (strings, woods, brass and percussion) for possible shortcuts.

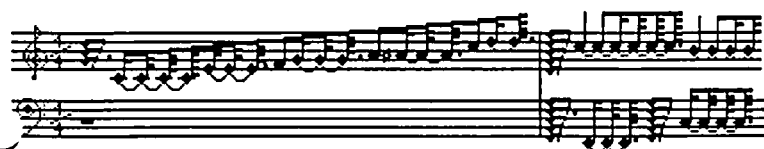
My second subject this month is *Quantizing*. When using a sequencer, as I indicated last month, there are three ways in which music may be put into a sequence. The first procedure is to write the musical score out in the music editor. The second method is to play the music into the sequencer from your MIDI synthesizer as if you were playing into a tape recorder. The last method is called "Step Mode" entry, in which you play the notes in one step at a time, while the computer advances the beat by a predetermined amount.

Each method is fraught with problems. If the music is written  
contd.

into a music editor, it may sound stilted when played. If played in via the MIDI keyboard, a printed score is almost unreadable. It is not a fault of the sequencer or MIDI keyboard—it is just that nobody can get every attack and release exactly on the beat. Using step mode normally results in a composition identical to that which would have resulted by writing the music into an editor.

I prefer to play in the music from my synthesizer, since it lends a “natural” quality to the music when played back. However, when I print out the score, it’s a mess. The two figures below depict a simple MIDI sequence that has been played into the sequencer, and the resulting printout of the score of that sequence:

Meas./Beat/Tick	Event	Value	On	Off	Duration
001:1:080	Note	C 3	32	64	000:0:232
001:1:315	Note	E 3	35	64	000:0:248
001:2:068	Note	F 3	29	64	000:0:243
001:2:302	Note	G 3	30	64	000:0:227
001:3:045	Note	A 3	32	64	000:0:231
001:3:286	Note	A#3	34	64	000:0:242
001:4:033	Note	C 4	35	64	000:0:252
001:4:271	Note	D 4	32	64	000:0:240
002:1:012	Note	C 4	30	64	000:3:471
002:1:024	Note	F 1	29	64	000:0:219
002:1:262	Note	C 2	35	64	000:0:230
002:2:473	Note	B 3	30	64	001:0:028



The effects of imprecision in attacks and releases can be mitigated to a greater or lesser extent by asking the computer to perform an operation known as “quantizing”. Quantizing is essentially a mathematical operation in which attacks and/or releases are “rounded off” to a given fraction of a beat. For example, when quantizing to an eighth note is selected, an attack which takes place 1/32 of a beat too soon will be moved forward to the nearest eighth note—the attack will automatically come on the beat when played back. The same sequence shown above has been quantized in the figures below, and the resulting improvement in the printed score becomes apparent:

Meas./Beat/Tick	Event	Value	On	Off	Duration
001:1:001	Note	C 3	32	64	000:0:240
001:1:240	Note	E 3	35	64	000:0:240
001:2:001	Note	F 3	29	64	000:0:240
001:2:240	Note	G 3	30	64	000:0:240
001:3:001	Note	A 3	32	64	000:0:240
001:3:240	Note	A#3	34	64	000:0:240
001:4:001	Note	C 4	35	64	000:0:240
001:4:240	Note	D 4	32	64	000:0:240
002:1:001	Note	C 4	30	64	001:0:000
002:1:001	Note	F 1	29	64	000:0:240
002:1:240	Note	C 2	35	64	000:0:240
002:2:001	Note	B 3	30	64	001:0:000



When employing quantizing, most synthesists select the value of the shortest note in the composition as the quantizing factor. In the above case, I selected an eighth note for the quantizing factor.

So which should we do? Keep the original played-in sequence for its “natural” flavor, or use the stilted quantized version which results in the correct score? To musicians the answer may be elusive, but to computer types it’s obvious—keep them both! Just save the original sequence, copy it to a file of another name, then quantize the new file. Presto! You can have your cake and eat it, too!

And you can never tell when you’re going to need that score for a copyright! ☺

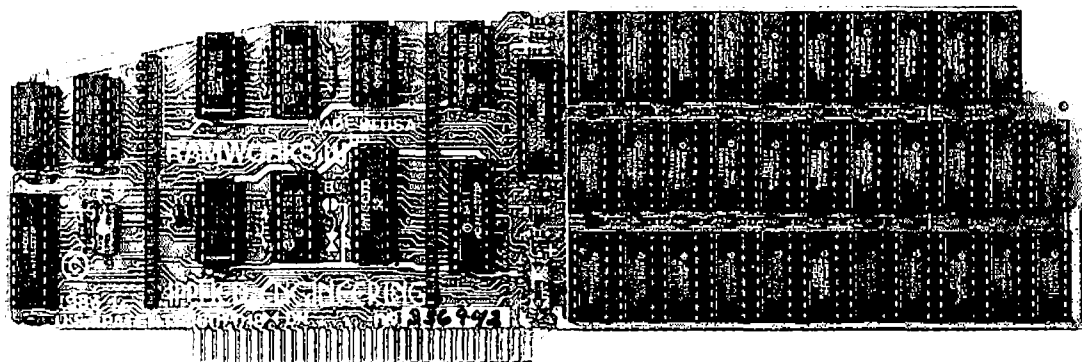
#### Q&A contd. from pg 18

ask you what name to use to save the chart. Type in any legal DOS filename. After the chart is saved to disk, exit the program and load in the graphics dump program. If the graphics dump program does not give you the option of loading in a disk file, load the chart back to the graphics screen by typing “BLOAD your-file-name” (without the quotes, and replacing your-file-name with the name you actually used of course) and then run the graphics dump program selecting a dump of hi-res screen 2. There are actually two hi-res graphics screens in the Apple and I have assumed that graphics screen 2 is being used. It is possible that screen 1 is being used instead. If after following the above procedure the printer prints a whole screen sized page of more or less random dots, then I guessed wrong and screen 1 is being used. In this case change line 9750 above to PRINT CHR\$(4)”BSAVE “FILES”,AS2000,LS2000” and select screen 1 from the graphics dump program.

- Q. What reference book do you recommend to help me get into Applesoft BASIC? I have a good grasp of the fundamentals, but need some insight into other programming features such as PEEK, POKE, etc. which I see referenced in the literature.
- A. Most of the good books on Applesoft are no longer readily available. Bookstores don’t tend to keep old titles on hand. Apple Computer’s “Applesoft Tutorial” may be a little elementary for you but it is available and does contain explanations of some of the more popular PEEK and POKE commands. If you can still find it, William F. Luebbert’s “What’s Where in the APPLE?” is an excellent reference for PEEKs and POKEs. It was originally published by MICRO INK, Inc. Chelmsford, Massachusetts, but I believe they may now be out of business. Another alternative is Call -A.P.P.L.E. In Depth, Number 1, “All About Applesoft”, which is probably still available from A.P.P.L.E. ☺

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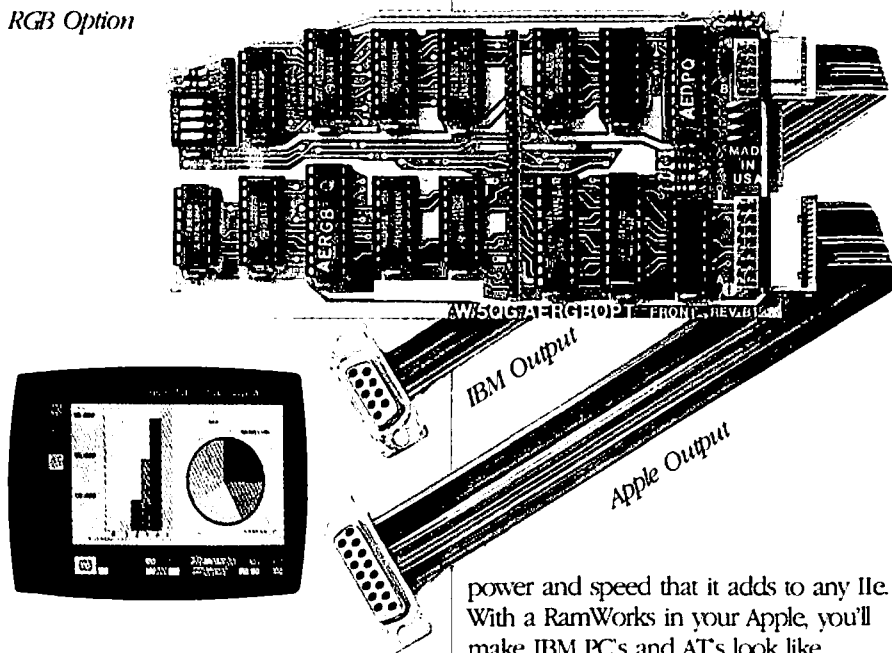
If you've got some other RAM card that's not being recognized by your programs, and you want RamWorks III, you're in luck. Because all you have to do is plug the memory chips from your current card into the expansion sockets on RamWorks to recapture most of your investment!

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RGB color is an option on RamWorks and with good reason. Some others combine RGB color output with their memory cards, but that's unfair for those who don't need RGB *and* for those that do. Because if you don't need RGB

Applied Engineering doesn't make you buy it, but if you want RGB output you're in for a nice surprise because the RamWorks RGB option offers better color graphics plus a more readable 80 column text (that blows away any composite color monitor). For only \$129 it can be added to RamWorks giving you a razor sharp, vivid brilliance that most claim is the best they have ever seen. You'll also appreciate the multiple text colors (others only have green) that come standard. But the RamWorks RGB option is more than just the ultimate in color output because unlike others, it's fully compatible with all the Apple standards for RGB output control, making it more compatible with off-the-shelf software. With its FCC certified design, you can use almost any RGB monitor because only the new RamWorks RGB option provides both Apple standard and IBM standard RGB outputs (cables included). The RGB option plugs into the back of RamWorks with no slot 1 inter-

#### RGB Option



ference and remember you can order the RGB option with your RamWorks or add it on at a later date.

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Steve Wozniak, the creator of Apple Computer

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# I LOVE APPLE MUSIC — SIMPLE APPLE MUSIC: Part 2

by GARY HAYMAN ©1987

In part one we took a brief look at a program that would generate a sound driver (Listing 1) and we were able to hear the notes that Apple could produce on its speaker with the HEAR ALL NOTES program (Listing 2). We also saved to disk the all important SOUND DRIVER program that we will be using in almost all of our programs.

This time out, let's hear a little more sound and play around with them before we get ready to really make music. Let us use our paddles, joysticks, or tablets connected to our Game I/O. I bet you haven't used yours for some time. Well dust it off and plug it in. It will be necessary for the next program as we play around with some of the over 65000 combinations of pitches and durations that our Apple can provide us. Type the following:

```
NEW
10 REM PDL/JOYSTK/TABLET SOUND
20 TEXT : HOME
30 PRINT CHR$ (4);"BLOAD SOUND DRIVER"
40 VTAB 12: PRINT "FREQUENCY"
50 VTAB 14: PRINT "DURATION "
60 POKE 768, PDL (0): POKE 769, PDL (1):
  CALL 770
70 VTAB 12: HTAB 11: PRINT SPC( 3)::
  HTAB 11: PRINT PDL (0)
80 VTAB 14: HTAB 11: PRINT SPC( 3)::
  HTAB 11: PRINT PDL (1)
90 GOTO 60
SAVE PDL/JOYSTK/TABLET SOUND
RUN
```

Listing 3

Listing 3 (PDL/JOYSTK/TABLET SOUND), when run, allows you to use either your paddles, joysticks or graphic tablet devices hooked into the gameport to select notes of different frequencies and durations. The chosen frequency and duration is also displayed on the screen. You can easily change the notes up or down and speed or slow their durations. You will notice that there is a definite break between each note—I will discuss this later. If you want, you can use the program to zero in your joystick. If both numbers read 128, you have centered it. Perhaps you will note at which point the notes get so high that you can't hear them. You might also find some notes that set your Apple buzzing in a harmonic vibration. Play around with it for a while to get used to the various possibilities of sound.

In line 60 we are poking into memory position 768 the value of paddle 0. This is representative of the frequency of the sound. Into memory position 769 we are poking the value of paddle 1. This is representative of the duration of the sound. Then we call our sound driver which starts at 770 (\$302 in hex) and which uses information that is stored in memory positions 768 and 769. This is the basis of producing our sound in most of the programs that follow. POKE a number (1-255) representing frequency/pitch/ tone into 768. POKE a number (1-255) representing duration in 769. Call 770 and produce the sound designated by the poked

numbers.

Next, I want you to hear various notes presented in a random manner. Type the following:

```
NEW
10 REM P. 25 RANDOM NOTES CONTINUOUS
20 PRINT CHR$ (4);"BLOAD SOUND DRIVER"
30 TEXT : HOME : PRINT "25 RANDOM NOTES
  IN 25 RANDOM DURATIONS"
40 F = INT ( RND (1) * (25) + 1) * 10
50 D = INT ( RND (1) * (25) + 1) * 10
60 POKE 768,D: POKE 769,F: CALL 770
70 GOTO 40
SAVE P. 25 RANDOM NOTES CONTINUOUS
RUN
```

Listing 4

Listing 4 (P. 25 RANDOM NOTES CONTINUOUS) when run will produce one of twenty-five notes randomly selected in line 40 and sound it for one of twenty-five randomly selected durations governed by line 50. Again, in line 60 you will find the note/duration/call technique. Another random note and random duration will be selected and the program will continue, driving you crazy until you stop it with a <CTRL-C> or a <CTRL-RESET>.

Let's get something more useful. Suppose I have written a program that will have a lot of text screens to be read one after another. At the bottom of the screen I have the typical "PRESS A KEY", or something more original. As the screen clears and the new text appears I would like a little sound to enliven the reading. How about this. Type the following:

```
NEW
10 REM QUICK NOTES
20 TEXT : HOME : PRINT "QUICK NOTES"
30 PRINT CHR$ (4);"BLOAD SOUND DRIVER"
40 GOSUB 1001
50 END
1000 REM SUB QUICK NOTES
1001 D = 10
1002 FOR X = 1 TO 20
1003 F = INT ( RND (1) * 25 + 1) * 10
1004 POKE 768,F: POKE 769,D: CALL 770:
  NEXT X: RETURN
SAVE QUICK NOTES
RUN
```

Listing 5

Listing 5 (QUICK NOTES) produces 20 random notes of short duration with could be just the thing to announce the text page change in your program or even to signal a correct or incorrect answer to a choice. You can change the values of D in line 1001 and the number of repetitions in line 1002 if you would like to get a different effect.

Now here's something. Since we might want to do this in  
contd.



several of our programs, let us save the quick note portion of the program as a subroutine that we could later transfer into our program using the hold and merge capabilities of our RENUMBER program that I like to use. Do this:

```
DEL 10,50
SAVE SUB QUICK NOTES
```

I like to save my subroutines to a separate subroutine disk. All my subroutines start with line 1000. When I need a subroutine added to my program, all I have to do is place the current program on hold using the &H of the RENUMBER program which is residing in memory. LOAD the subroutine program. Change the line numbers so as not to interfere with other line numbers in my program (I again use RENUMBER to do this) and then merge the two together with the &M command of RENUMBER. This really results in modular programming. Always let the first line of your subroutine be a REM statement identifying it. If you are worried about your program being "REM stripped" at a later date, have your GOSUBs directed to the second line in your subroutines (such as 1001 as I did).

Now when I want this feature in my program, I BLOAD SOUND DRIVER somewhere in the beginning of the program. Bring in my subroutine as I described above and go to it when I need it. Please remember that all subroutines must have a RETURN. I can't tell you how many times I forgot that and got a RETURN WITHOUT GOSUB message.

Let's begin with some music. As a way of introduction I want you to hear some 8 note scales and some 13 note scales. Type the following:

```
NEW
10 REM MAJOR SCALES
20 PRINT CHR$(4);"BLOAD SOUND DRIVER"
30 TEXT : HOME : D = 255
40 PRINT "C MAJOR SCALES - 8 NOTES": PRINT
50 PRINT "(WHITE KEYS FROM C TO C)"
60 FOR Y = 1 TO 4
70 FOR X = 1 TO 8
80 READ F
90 POKE 768,F: POKE 769,D: CALL 770
100 NEXT X
110 FOR PAUSE = 1 TO 2000: NEXT PAUSE
120 NEXT Y
130 END
140 DATA 216, 192, 172, 160, 144, 127, 114, 108
150 DATA 108, 96, 86, 80, 72, 64, 57, 54
160 DATA 54, 48, 43, 40, 36, 32, 28, 27
170 DATA 27, 24, 21, 20, 18, 16, 14, 13
SAVE MAJOR SCALES
RUN
```

Listing 6

Listing 6 (MAJOR SCALES) will play 4 possible C MAJOR scales over your Apple speaker. These are the notes that are represented by the keyboard's white keys only - we will get to the black keys in a moment. Since the scales are from C to C, the top C of one scale is repeated and becomes the bottom C of the next scale. In addition to what you hear here, there are two more lower "white key" notes that are available. We can hear

them later.

You will notice something different here. I have placed the values for the notes I want to hear in the DATA statements (lines 140 to 170). I READ these values in line 80 and plug them into my POKE/CALL routine which you should recognize by now in line 90. In this case my duration "D" will be a constant. It was set in line 30. Since I pretty well know how many notes I will be hearing, I do not have to put Data End test statements into the program. But if I use the DATA technique for more complicated and longer music, I will have to. More on this in a later article.

Well, what about the keyboard's black keys. They make sounds too, don't they. The next program will include them. It is similar to Listing 6 with some slight changes and altered DATA statements. Type the following:

```
NEW
10 REM CHROMATIC SCALE
20 PRINT CHR$(4);"BLOAD SOUND DRIVER"
30 TEXT : HOME: D = 255
40 PRINT "THE CHROMATIC SCALE -
13 NOTES": PRINT
50 PRINT "(WHITE AND BLACK KEYS FROM
C TO C)"
60 FOR Y = 1 TO 4
70 FOR X = 1 TO 13
80 READ F
90 POKE 768,F: POKE 769,D: CALL 770
100 NEXT X
110 FOR PAUSE = 1 TO 2000: NEXT PAUSE
120 NEXT Y
130 END
140 DATA 216, 204, 192, 180, 172, 160, 152,
144, 136, 128, 120, 114, 108
150 DATA 108, 102, 96, 90, 86, 80, 76, 72, 68,
64, 60, 57, 54
160 DATA 54, 51, 48, 45, 43, 40, 38, 36, 34,
32, 30, 28, 27
170 DATA 27, 25, 24, 22, 21, 20, 19, 18, 17,
16, 15, 14, 13
SAVE CHROMATIC SCALE
RUN
```

Listing 7

Listing 7 (CHROMATIC SCALE) will play all the notes from C to C upward in the same manner as MAJOR SCALE, only it will also include the black keys (referred to as the sharp or flat keys). There are now 13 notes in each scale. As before, the top C of one scale becomes the bottom C of the next scale. There are 3 notes left out on the low end. If we include them we will have 52 notes that we can use in our music. That's not too bad for our purposes.

(NEXT: How to read simple sheet music and enter proper notes and durations in your programs.)

(COMING UP: Quick techniques of writing music, creating a music text file collection, other sounds, commercial programs—and much more.)

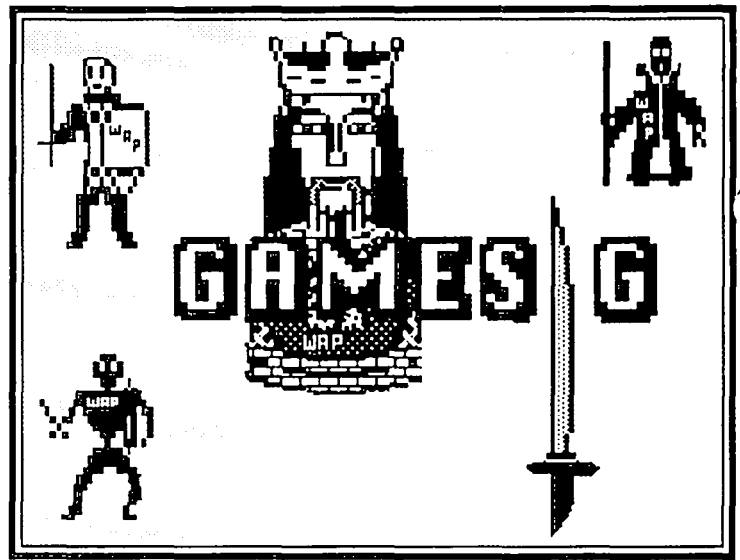
# GAMESIG NEWS

by Barry Bedrick

The first order of business at the June GameSIG meeting was a vote of thanks to Paul and Janice Moore, who once again held the very successful quasi-annual GameSIG party at their home. The party featured the now -traditional quest, won by Chairman Thomas Johnston (with a little help from his friends), 2 simultaneous versions of a murder mystery game program from Electronic Arts (to be reviewed in a future issue), and the also-traditional delicious food, provided through the generosity and culinary talents of the Moores.

The meeting featured demos of SHADOWGATE, the new graphic adventure for the Mac from Mindscape. Reviewed elsewhere in this issue, SHADOWGATE features the same outstanding use of the Mac interface in a game system as its predecessors, DEJA VU and UNINVITED, and the same excellent graphics, animation, and sound. We also saw and passed out for review SPACE QUEST, a conversion to the Mac of one of Sierra's innovative graphic adventures (see also KING'S QUEST I, II, and III) in which you control the movement of your character. A new version of MIGHT AND MAGIC, now distributed by Activision, was received and will be reviewed.

Charles Don Hall filled in for the absent Ron Wartow in reporting on available or forthcoming games. (Although Ron was ostensibly not present, it was suggested that the somewhat moribund cicada perched on a monitor, reminiscent of the Monty



Python parrot, was the unfortunate outcome of Ron's careless misuse of the Cicadidos spell from WIZARDRY. Attempts to communicate were, however, fruitless.) Charles reported that Infocom has two new text adventures coming: STATIONFALL, a sequel to PLANETFALL, and THE LURKING HORROR, based on the work of H. P. Lovecraft, the Stephen King of his day (in theme, not popularity). Also, STARFLEET II, by Cygnus, lets you play the role of the bad guys from STARFLEET I.

GameSIG reviews in this issue are of SHADOWGATE, PAINTWORKS PLUS, BARD'S TALE II, and STARGLIDER. Next GameSIG meeting will be at 7:30 pm, WAP office, July 2. ☺

## SHADOWGATE: A Review

by Steven Payne

At last! Mindscape has finally released SHADOWGATE (Mac 512K, SE or II, \$49.95 list), the third in an award-winning series of text and graphic adventures, a worthy successor to DEJA VU and UNINVITED. This time around, you are the "seed of prophecy, the last of the Line of Kings," commissioned by Lakmir the Timeless (of the Druidic Circle of Twelve) to save the land of Tarkus from the evil Warlock Lord (also known as Talimar the Black). As you discover through the course of the game, the power-hungry Talimar, once part of the Circle of Twelve, was expelled long ago for his machinations. Now, somewhere within the heavily fortified castle Shadowgate, he threatens to raise up the dreaded Behemoth to destroy the earth. Your mission, should you accept it, is (apparently) to find five magical items in the castle which will enable you to defeat the Warlock Lord and save Tarkus.

I say "apparently" because, though I haven't quite finished, the plot seems a little murky, and not radically different from what you find in many other adventures. Still, what make Mindscape "MacVentures" so special are the gaming system, the puzzles, and the graphics. The system, essentially the same as in DEJA VU and UNINVITED, is a model of Macintosh "user-friendliness." The game is almost entirely mouse-driven, with boxes and windows for the player, the player's inventory, graph-

ics, text, exits, any "opened" objects, and eight standard commands (examine, open, close, speak, operate, go, hit, and consume). Many of the windows have scroll bars and size boxes, and all can be moved around on the desktop. Thus, the player can travel from scene to scene simply by double-clicking on the open doors shown in the graphics window or the corresponding squares in the "exits" window. Similarly, picking up or dropping objects is as easy as "clicking and dragging" them to and from the inventory.

If anything, the game seems larger and the graphics more splendidly detailed than ever before. For example, in the library alone, the desk and scrolls can be opened, the magical tome on the desktop can be examined and "operated," and dozens of individual volumes in the bookcase can be read. At various points there are appropriate sound effects (thunder, creaking doors, blood-curdling screams) and even a bit of animation (will that meowing cat ever capture the rat he chases so relentlessly around the castle?).

The puzzles are not always logical (Why does a shooting star kill a wyvern but not a hellhound? Why does a magic flute open a secret panel instead of charming a snake?), but they are endlessly inventive. Apparently similar problems may require quite different solutions; not all torches or rugs are alike, for

contd. on pg 43

# PAINTWORKS PLUS: A Review

by Kim Brennan

So you've finished Ultima 15 and Phantasie 14 now what? Well, how about Paintworks Plus? That isn't a game, you say, or, wait—is it? It certainly has a lot of similarities to most games, colorful graphics, short on text, and copy protection, and all in all can be just as satisfying (or vexing) as any game.

To run this program you only need a 512K Apple IIGS with a 3.5 drive. A color monitor, of course, is preferred. Paintworks uses key disk copy protection and hence can be installed on a hard disk. It runs under ProDOS 16. I reviewed it on a 1.25MGS with a Sider Hard disk. The program is supplied on a single 3.5 disk, with a 150-page Tutorial/Reference Manual.

Let's cover the basics first. This is the first paint program making use of the Apple IIGS's Super Res Screen. It works in the 320 mode (ie 320h X 200v pixels). It makes use of the GS's various toolboxes and hence looks remarkably like most of the Mac Paint programs—except for the color on the screen. With that color you can do remarkable graphics. And print them out too, if you have an Imagewriter II printer equipped with a color ribbon. On the screen you can select 16 colors of the GS's 4096 to work with. Printing does a good job of representing the screen, though it tends to be a shade less intense on paper—loses something in translation, I guess.

To work with all those colors, Paintworks Plus has a lot of tools. Brushes, Pencils, Spray Cans, Straight lines, Outlines and Solid figures. These are the standard painting tools made famous by MacPaint. You also have your palette of colors and patterns. Patterns can be in color and you can edit the patterns yourself.

You also have your editing tools, the lasso and the edit box. The lasso is for irregular shapes and the box is for everything else. However, not all edit commands will work with the lasso. And there are some real nifty edit commands—several of them are not even noticeable by just pulling down windows. Like the Grow/Shrink edit. This is where you choose a section of the screen and can enlarge it or shrink it down—not just to see it

better but to actually enlarge/shrink that section of your painting.

You also have, of course, the Fat bits or Zoom window. This is where one can edit the painting on an individual pixel basis. There are convenient shortcuts to get into and out of the Fat bits mode. And many other modes.

In fact there are so many shortcuts to various actions that you may occasionally stumble on them all to unaware, especially when first learning Paintworks. The one that bit me was the Erase Screen shortcut—double click on the eraser and the entire screen is erased! Fortunately, Undo returned my erased picture—though I must admit it didn't do much to slow my heart rate.

Another nice idea in Paintworks is the Revert File option. This will put back on the 'cass' the last saved form of your painting. Unfortunately, I got an error message (I/O Error No \$0040) when I made use of this command once. I had used it other times with no errors.

Another plus in Paintworks Plus is Animation. By carefully creating a painting and then slightly modifying it for several additional paintings, one can then create an animated sequence. I've seen some that are quite remarkable, but the demo one supplied on the disk is quite humble (a ball bouncing).

The weakest part of Paintworks Plus has to be the text. This is of course logical, since it is a Paint program, but I thought that the fonts were rather dreadful in appearance (yes, I was filled with dread the moment I saw them). In truth each of the fonts only looks good at one point size (which is bold faced to indicate which size).

One last caveat. Since it is possible to edit all of the colors on the screen, it is entirely possible that someday you may edit the screen into unreadableness (is that really a word?). There is, however, a very handy public domain Classic Desk Accessory called Color Map Fixer that will correct the palette to the default palette. I've used it many a time.....



# THE BARD'S TALE II—THE DESTINY KNIGHT

A Review by Ray Hakim

This fantasy role-playing game has a look and feel similar to the original BARD'S TALE I. Yet it is a much larger game which incorporates a number of advances to the playing system. In the original BARD'S TALE the game is played out in the dungeons, sewers, and castles of a single town—Scara Brae. In the Destiny Knight (Electronic Arts—distributors), your champions must travel the wilderness, and explore the dungeons, castles and tombs of 6 towns, to recover the pieces of the Destiny Wand. Then you can face the evil archmage Lagoth Zanta.

In this game, as in the first BARD'S TALE, a team of up to 7 characters of mixed race and training gain experience, gold, and treasure by battling with a large assortment of monsters. (Leave space in your team, as you can recruit monsters). Experience is measured in the Review Board and, when sufficient,

will allow you to be promoted.

Warrior classes gain in ability to hit and to avoid enemies' blows with each advancement. Wizard classes—from conjurer to archmage—gain spells and improved spell-casting ability with seniority. Each can progress through 7 spell levels, with the highest levels being most potent. Senior members of one spellcaster class can then elect to study another wizardly profession. Having mastered conjurer and magician spells, a character can then proceed to master Wizard, and ultimately, Archmage spells. (This is a new and most powerful class for the Destiny Knight.) I recommend that you learn all seven levels of spells in one class before going on to the next, as you cannot go back later.

Two other character types are also available. These are the contd.

Bard and the Rogue (thief). The Bard can fight but his magic, and greatest strength, is in his songs, which can protect your characters, drive them to a frenzy, or attack enemies. Musical instruments are his weapons. He is often a crucial member of the party. The rogue is a thief, and while important, is most needed early on, as spellcasters can use a TrapZap spell to remove traps from areas, and from treasure chests.

Fighter types have the ability to hit with both melee and distance weapons (i.e., bows and arrows), and distance between combatants is noted during any fight. This use of short and long distance weapons is new to BARD'S TALE II. There are new songs for the Bard as well.

Beginning the game is easy—transfer in your strongest characters from BARD'S TALE I, Ultima, or Wizardry scenarios for a quick start. With these, the first dungeon is a snap. The alternative is to use the prebuilt weakling party, or make your own, and build them up in the starter dungeon. This can take a while. Once you emerge victorious, you are given a lot of experience points to bring you up quickly.

All dungeons, castles, etc., have the same kind of structure. Your party is given a perspective view of the area you are in, with

the distance you can see varying with the light source employed. In fights, you see an animated image of one of the monsters, and you choose your action from a menu of possible actions for each character. You must map all spaces in a dungeon, as clues are placed in specific spots in each. Typically, the puzzles of this game make use of these clues. Monsters can be anywhere. Pieces of the Wand are hidden in special parts of mazes, called Snares of Death. Once you enter one, you get a fixed amount of time to solve your way out. If you succeed, you get a chance to search for the piece of wand.

I like fantasy adventures, such as the BARD'S TALE II, with their mapping and puzzle-solving components. I suggest Destiny Knight for more experienced players, who won't be overwhelmed by the sheer size of the environment being searched. All clues must be written down, since some of the puzzles ask you to recall the clues and carry out non-logical actions.

My disks had a major glitch: in a 2-drive system, if you leave the game disk in Drive I and then enter the starter dungeon, the program locks up. Using a single drive, everything works well. The company knows of this problem, and I expect newer disks have been fixed. ☞

## STARGLIDER: A Review

by Steven A. Muchow

Time has a way of playing tricks on the mind. At first, STARGLIDER, from Firebird, seems to be a harmless video game in a flashy package—innocuous to most, too simple for others. But, with time, the game begins to develop higher levels of sophistication and pleasure. When you open the package, you are inundated with information to bring the game to life, in the form of a poster and a novella by James Follet. The poster is forgettable but the novella is well worth reading, both to get a feel for what you will be doing and for a few chuckles. James Follet is an unknown in my book, but I liken him to a young Robert Asprin.

Now if you don't like reading, you'll still need the book, because the copy-protection on this game requires you to enter a particular word chosen at random from a specific page, paragraph, and line. You are given three chances to input a correct word before you are told that you are a bad typist and your Apple enters the Twilight Zone. You need not fear that there is no write-protect tab on the disk; there are no copy-protection worms to clean your disk.

Once into the program, you are sent back to the days of STELLAR SEVEN or BATTLEZONE. The object is simple, use your AGAV unit to wipe out the whole (!?) Egron invasion fleet, making pit stops at four hanger bays for laser recharging and missile loading, and occasionally buzzing an energy tower power line to refuel. As you make your presence known to the Egrons, the difficulty of the game increases—they begin to notice and exploit your weaknesses. Even if you don't get past 10,000 points, there is still a lot of action going on to get an adrenalin rush. The high scores are saved to disk and as soon as the game is finished, you can return to playing without having to go through the reboot process (and the copy-protection).

The game may be played from a keyboard or with a joystick, which can be set two different ways. There is also a provision to redefine the keys to personal preferences. The game has PAUSE and ABORT GAME features. I'm not an arcade gamer, but STARGLIDER has me hooked. I found that it is not unusual for someone who's all thumbs to play for twenty minutes or more, and then see a real joystick jockey meet a swift end. It turns out that with planning and foresight, this game can fill many hours, and its 'intelligence' will surely satisfy the demands of all levels of playing skill.

There are a couple of minor problems with the game and its documentation. First, the copy-protection idea needs to be a bit more specific about what it considers to be a paragraph. I don't consider one word at the top of a page to be a paragraph; they do. Second, the playguide, has a slightly different control console, which may or may not be confusing to you. Personally, while I could easily extract the proper information, it was just a bit irksome. Third, the docking procedure as listed in the playguide is ridiculous. Read the story to find out why. Fourth, you must successfully enter one of the four docking bays to discover the strengths and weaknesses of your enemies, though it does make sense if you've read the story. A poster showing these ships could have been substituted in place of the useless one packaged with the game. Fifth, The Apple II instructions are written with a ][+ in mind, not a //c or //c. The illustration is the old ][+ board. I think most people will have no trouble figuring out what works on their machines; it's just a bother. Sixth, when you save a score list, you must have the disk in the drive, or you enter the Twilight Zone and must reboot. And finally, I feel the ABORT GAME feature should be switched with the PAUSE GAME feature. Most games use the ESC key to pause; guess what this game

contd. on pg 43

# SOME THOUGHTS ON THE SIZE OF HUMAN RAM

by Phil Shapiro ©1987

The demonstration of two gigantic memory storage devices at the May 23rd WAP meeting, got me thinking about the memory storage capacity of the human brain.

It would seem that the human brain ought to compete easily with the 600 Megabytes of the CD-ROM device we saw. Whether the memory storage capability of the brain equals or exceeds the 6 Gigabytes of the WORM (Write Once Read Mostly) device, is a little more interesting to consider. Just think of the thousands of pages of print you've read in your lifetime. Add to that the fund of knowledge gained from that other I/O device—your ears. Pile on top of that your countless non-verbal impressions, formed by the hundreds every waking hour. Not to mention all those half-baked ideas (that take up only half the memory storage space of the fully baked ones?). Surely the total adds up to Gigabytes, even by taking only conservative estimates.

For that matter, how many kilobytes are consumed by each impression? By each opinion? By each whim? Some of these questions will forever remain grist for the mills of the philosophically bent. Yet, some of these questions come tantalizingly close to having real answers.

For example, can the human brain's long-term memory exceed the 6 Gigabytes of the WORM device? The answer must be yes, for the simple reason that the human mind is an infinitely large container. Need some extra RAM for that brain of yours? Well, wishing really makes it so. There is always place for a new fact, a new idea, a new opinion. Each day of our lives is a living example of the ever-expanding knowledge base of the human mind. Except for those who spend their entire days staring point-blank at a white wall, each of us engages in day-to-day activities which expand the knowledge base of our minds. It's inevitable. The mind hungers for stimulation, and feeds itself on new ideas.

Okay, so human RAM is theoretically limitless in size. But is it practically limitless in size, too? Here the answer is not so clear. We've all experienced mental fatigue of one sort or another. After a full day of "information accessing", we all get that old, familiar "information-saturation" feeling. So if there's a limit to the rate at which information can be sent to the brain, then there must be a limit to the size which RAM could possibly grow to in a given lifetime. Limits, once again, rear their ugly heads.

But while we may get tired of inputting facts and figures into our minds, seldom do we ever tire of accessing new ideas. Just think of how ridiculous it would sound for someone to cry out, "Stop! I can't input one more idea!". Curiosity springs eternal. So it would seem that the brain's saturation point for ideas is far above the brain's saturation point for facts, figures, and other bits of raw data.

Which brings us back to wondering about the kilobyte size of ideas. Unlike facts, figures, and other bits of raw data, "ideas" have no equivalent memory size in the mechanical world. Experience with artificial intelligence work does show, however, that what we know as "higher thought" uses phenomenal

amounts of computer memory to achieve the intricate branching patterns of human thought. Those chess-playing programs gobble up memory.

So it's very possible that one "idea" could take up far more human memory than the words of the sentence used to represent the idea. That is, an idea is probably much more than the sum total of the ASCII numbers of the letters of the sentence representing the idea. Just think about it: one idea can often be expressed in a number of different linguistically equivalent sentences. Therefore there can't be a direct and immutable relation between an idea and one of the many sentences that could equally well express the idea.

So, if an idea can be expressed in many different, linguistically equivalent ways, then the idea must in some way be greater than any of its worldly representations. It only follows that if an idea is greater than the sum of the words in its worldly representation, then the idea must take up more space in human memory.

Then there's the phenomenal capacity of the human mind to express its ideas in the many hundreds of human languages on the face of the Earth today. Does the bilingual person, then, have twice the human RAM as a single-language person? How about those United Nations instantaneous interpreters, capable of accessing the same thought in five different languages at the blink of an eye? Do they possess Gigabytes, or what?

I'd say they beat the WORM device hands down. ☺

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Starglider contd. from pg 42

does? Of course, since you can redefine the keys, this is only a minor complaint.

Despite these minor quibbles, I found STARGLIDER to be quite enjoyable, and a worthy follow-up to Firebird's previous release, ELITE. Buy it and enjoy. ☺

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Shadowgate contd. from pg 40

example. There are a fair number of red herrings, and the game does throw a few curve balls (besides all the secret traps and passageways, in at least one scene not all of the currently available exits are indicated in the "exits" window). Also, as Ron Wartow has pointed out to me, you die much too frequently, though it is relatively easy to recover a saved position. Most of all, the game is fairly tough, even for an expert adventurer. But if you enjoyed DEJA VU and UNINVITED, you will no doubt love SHADOWGATE. After reluctantly criticizing Mindscape in the last issue for INDIANA JONES IN REVENGE OF THE ANCIENTS, I am delighted to recommend another of their products, which clearly proves they are capable of offering some of the finest electronic entertainment around.

*Now back to the game . . . I've got the talisman, the silver orb, the spike, and even the platinum horn . . . and there's the Behemoth with the Warlock Lord . . . but where's the Staff of Ages? Oh, no . . . fried again!* ☺

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# TRADEMARKS: WHAT DO THEY HAVE TO DO WITH COMPUTERS

by Harvey Kaye

There have recently been references in this Journal to the subject of trademarks and their use in connection with computers. For example, on the TCS recently, (and in May it also appeared in "The Best Of The Apple Items From TCS" by Lou Pastura, p. 36) there was a question posed by one member and answered by another as to why Apple requested that when its trademark "AppleWorks" or any other one of its other trademarks are used, there be a designation that it is a trademark. Usually, trademark owners want everyone who places the trademark into print, note that it is one which is registered with the U.S. Patent and Trademark Office (PTO) by using an "R" within a circle—like so: ®

Also, you may have noticed that in all Apple ads there are notes stating that "Apple" is the registered trademark of Apple Computer Inc. For example, see the Clinton Computer ad on page 1 of the May Journal in which the terms "Apple" is used followed immediately by ™. Later, there is reference to the "brand new Apple Macintosh SE." After the term "Apple" is an ®, and between "Macintosh" and the "SE" there is the ™. At the bottom of the page it states "Apple ....are registered trademarks of Apple Computer, Inc. Macintosh is a trademark of Apple Computer, Inc." Why are these statements made in these ads? Read on.

Rights in trademarks are obtained under the common law (basically decisional law, made by judges, as distinguished from statutory law made by various legislatures) and rights are obtained by actual use of the mark. No amount of federal or state registration of trademarks will convey rights in a mark unless there has been use of the mark.

The purpose of a trademark is to identify the source of goods and services and develop goodwill by customers in the source of the product or service. The greater the goodwill the more valuable (and protectable) the mark. Trademarks are the brand names a manufacturer or seller places on its goods or services to distinguish them from the goods and services of others. After reading this article regarding trademarks you might ask: "Why then should someone seek to federally register a trademark?" Good question! One aspect of using trademarks has not yet been communicated to you and it is important. Using trademarks provides protection only in those geographic areas where the mark is used and known. Therefore, if a mark is used and known only in Washington, D.C., a business in the same field in another geographic area of the country, such as California, may also use this mark on the same goods and not be committing trademark infringement. Why? Because there is no goodwill in California in the D.C. firm's mark since consumers in California have not heard of it and it has no special meaning to them. However, it does have meaning to local California customers of the California company. But, if the trademark is federally registered this provides notice to the outside world that the D.C. firm considers it their trademark and the U.S. government agrees that there are

rights in the mark. One in California who uses the same mark as someone on the East Coast cannot be heard to complain that he did not know of the existence of the mark, because he should have searched the trademark registration records in the U.S. PTO before adopting his mark. Federal registration also provides some procedural advantages when one goes into court to enforce his trademark rights, e.g., the mark is presumed to be valid and the burden of proof is on the alleged infringer to prove that it is not. On the other hand, if a trademark is not registered, then in court, the owner, in the first instance, has to prove that he has trademark rights in the mark. Apple has protected the term "Apple" in connection with computers, and when computers were being sold in the U.S. with the term "Pineapple" on them, Apple complained in court that this was trademark infringement. Apple was able to stop the sales of the computers which used the term "Pineapple" on them, because the use of this term in connection with computers was confusingly similar with the term "Apple" used on computers. This is the test for determining whether or not there is trademark infringement. The court found that the addition of the prefix "Pine" to the trademark "Apple" presented a likelihood of confusion. One of the possible effects of the use of the prefix may be to suggest that the computer kits are manufactured by licensees or subsidiaries of Apple. The court concluded that continuing infringement would result in loss of control over Apple's reputation and loss of goodwill.

In another case "Comcet" was used by a corporation engaged in sale of communications computers and the Communications Satellite Corporation used the service mark "Comsat." The court found that the defendant's use of Comcet as a trademark for its products by marketing a computer bearing the mark COMCET 60 infringed the defendant's service mark "Comsat". You will recall that the purpose of a trademark is to identify the source of goods and services and develop goodwill by customers in the source of the product or service. When a trademark no longer does this it no longer acts as a trademark and is not entitled to protection. If the trademark no longer does this because it has become generic, the originator of that trademark loses his rights to it. If a trademark is used without being designated a trademark, the trademark owner could eventually lose his rights to the mark. The words "aspirin" and "escalator" and "linoleum" used to be trademarks, but became generic because they were used to designate all products in the field and no longer distinguished the goods of any one manufacturer. Therefore, it is prudent for each trademark owner to police the use of its mark so that the mark will not be weakened and eventually become generic. Thus, companies such as Apple try to assure that their marks are properly used, and we should cooperate with Apple and other companies in using their trademarks in a proper manner. ®



# STOCK SIG NEWS

by Andrew D. Thompson

The May meeting consisted of 7 reports ranging from matters technical to matters even more technical.

## 1. MUTUAL FUND SUB-GROUP REPORT

The Sub-Group met on April 21 and reviewed the range of national guru projections, from Robert Prechter's long-term "buy" to Joe Granville's slightly bearish short-term hold. Troy Klein gave an overview of his market projections based on measures of volatility in the futures market. Andrew Thompson updated members on his price and asset momentum ranking method for short-term trading among Fidelity Select funds. Ferd Hassler shared his longer-term analysis of which no-load or low-load mutual funds showed the strongest performance in both bull and bear markets. Using Forbes' and American Association of Individual Investors' ratings as to mutual fund performances in both up and down markets, Hassler found the best performances were turned in by Loomis Sayles Capital Development fund, Tudor, Value Line Leverage Growth, Fidelity Magellan and Twentieth Century Select funds. All 5 funds showed percentage gains for the year and most recent quarter quarter (ending March 31, 1987) greater than the 20% average gains made by the 25 funds reviewed.

Starting in July, the Mutual Fund Sub-Group will meet in the WAP office on the 4th Tuesday of each month.

## 2. INTEREST IN CYCLE ANALYSIS REMAINS HIGH

A. Peter Kasper reviewed the April 6th projections of Mercari, Inc. and indicated that although the actual performance of the NYSE fell consistently below their forecast numbers, in hindsight their projected trend has been on target. As of May 11, Mercari projected a continuation of a relatively flat market over the next several months. Longer term, Kasper and Steve Rinchart projected a somewhat downward trend through November, at which time they expect the market to rise. For the near term, Kasper said their analysis had found a strong 10 day cycle was in evidence during April but seemed to have declined in the first half of May. If it reemerges, Kasper said, its cyclic rises and falls, with 10 trading days between peaks, will be evident even without computer analysis and traders can play the market accordingly.

B. John VanHorn, using Fourier analysis, reported he also found a 10 day cycle but his work indicated that cycle has not been declining in strength.

C. Irv Lowen presented his research which combines cycle analysis and non-linear, third-order regression and which identifies the stock market's trend for the next 3 to 5 days. Lowen projected the S & P 500 would bottom at the 288 level on 15 May and rise to the 294 level by May 22.

## 3. OPTIONS ARE CONSERVATIVE INVESTMENT

Although an admitted A. F. Hutton broker, Apple Pi member Dan Wages gave a thoroughly "objective" presentation of winning strategies for playing the options market. He explained that playing the options market correctly is actually more conservative than investing in stocks per se. Historical studies, Wages

indicated, found 80% of all options expire unexercised. Most of these investors simply buy and hold the options, and accordingly, these are the people who lose their money. The same studies indicated that selling options gave the investors a better probability of making money. Wages then demonstrated, by using his personally designed Mac software and his charts, his strategy which combines the purchase and sale of puts and calls, and, by trading them across the life of the options, increased his probability of success. "By selling options, you get other people to help you make your purchases.

The participants requested that Wages make an in-depth presentation at the June meeting and further explain how he uses the Mac to increase his probability for success.

4. Bob Popejoy gave a brief show-and-tell demonstration of the Pocket Quote Pro hand-held quotation provider which displays Telemet data gathered from FM radio signals. The device gives real-time quotes on indices, 15 minute delay or real-time on stock quotes, and can be programmed to track an extensive portfolio and give alerts when indices or stocks hit certain levels. The cost is \$400 and monthly access charges are \$28 for 15 minute delayed stock quotes, he said.

## 5. MARKET TECHNICIANS BEARISH

Jack Upper, akin to Santa, arrived at the meeting just off a plane from the annual Market Technicians Association meeting. Along with his sack full of sample technical and chartist publications which he distributed to members, Upper summarized the short-term projections of the MTA participants as somewhat bearish. Those national gurus, including Ned Davis, Martin Pring and Ian Otley, said they were concerned about inflation-related developments such as the rising Consumer Price Index, the rising commodity prices and continued decline in bond market. This bearish senario was not without ambiguity, however. Although one national guru gave a sell signal in early May, he said he had difficulty believing his own analysis and so remainly primarily in equities and moved only 5% of his assets to a cash position. Upper will give a fuller report at the June 11 Apple Pi meeting. ☞

## Button-Down Guide contd. from pg 16

assembly language routine, " 60 RTS ;RETURN ". It is having this single-byte instruction terminating the assembly language program which enables its operation as a subroutine in your BASIC program. The "RTS" stands for "Return from Subroutine", and acts exactly like the RETURN statement which returns a GOSUB back to the main program.

Line 40 shuts down the operation.

Now. What can be done when the listing is just the assembly language instructions without the corresponding machine language instructions? Well, I'm just going to have to postpone that one for another article, because my cicada is singing like crazy, and my GS must respond.... ☞



# MacNovice Column

by Ralph J. Begleiter

## "Hide and Seek"

Occasionally a new Macintosh user discovers the "loss" of a document—just-created in the maze of files and folders on the electronic desktop. Often, this happens to MacNovices who've begun working productively with their computers within minutes of unpacking them, and before reading their Macintosh users' manual.

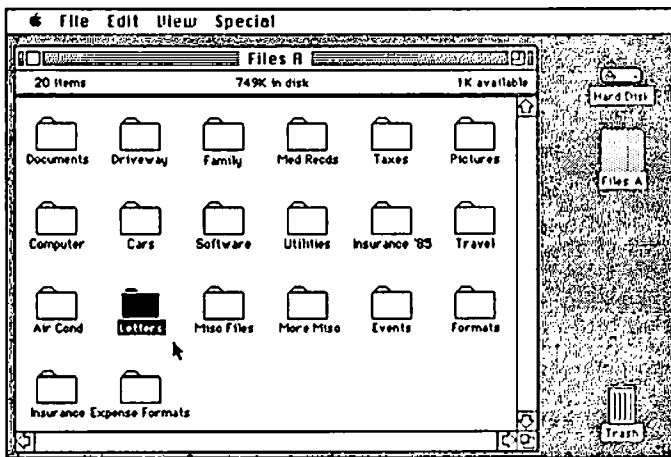
Because the Mac is so easy to use, there's nothing wrong with getting to work right away. But it's worth learning to take advantage of the Macintosh filing system to avoid losing documents and to make finding them fast and efficient.

Macintosh users who work with older Macs, such as the 128K or 512K machines, use a simple filing system which was developed when storage space was limited to 400K on one disk. Users with more recent machines, such as the Mac Plus, "enhanced" 512K Mac, SE or Macintosh II, use a more complex filing system capable of handling more files. That's because 800K disks and hard disk drives can hold so much more information.

Making the switch from the older, simpler filing system (known as MFS—for "Macintosh Filing System") to the newer one (called HFS—for "Hierarchical Filing System") isn't always easy. And delving into the HFS system without previous Macintosh experience make take a bit of understanding. But the difference between the two filing systems can make finding a newly-created document baffling at first.

On the surface... at the electronic desktop level... there's very little apparent difference between the two filing systems. The desktop in both cases contain the same kinds of icons:

- Disks
- Folders
- Files (documents or programs)



Ordinary Desktop looks about the same in both old and new Macintosh filing systems.

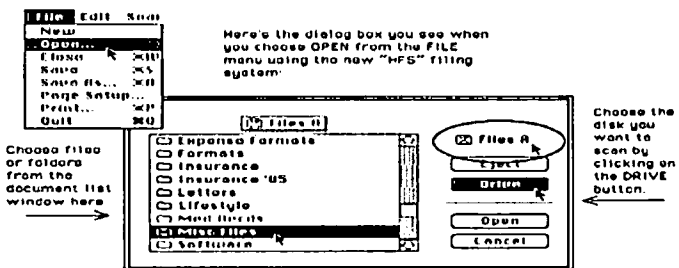
No matter which filing system you're using, it's easy to find what you're looking for. Just OPEN the folders, one by one, until you locate the document you seek. If you've placed documents in folders that make sense, you won't have to search very far.

But the confusion can easily set in when you're not at the electronic desktop point. Instead, you're working within a Macintosh program, such as MacWrite, and you're looking for a certain document after you've chosen the OPEN command from the FILE MENU.

Here's where differences become apparent between the older, simpler MFS filing system and the newer, more capable but complex HFS filing system. Using the older MFS system (on all 128K Mac's and most 512K machines), choosing OPEN presents you with a *list of all Macwrite documents on your disk, no matter what folders they're stored in*. By scrolling through the list, you can easily find the document you're seeking.

Users of newer Macintoshes (equipped with the latest internal programmed-memory ROM chips), find that the HFS filing system presents you with a *list only of the MacWrite documents which happen to be stored in the folder you most recently opened*. And *this* is where it's easy to get lost in the maze of folders and disk space available to you.

To find a document in this maze, you must pay attention to two "clues" right before your eyes. Look carefully at the dialog box you see after you've chosen OPEN from the FILE menu.



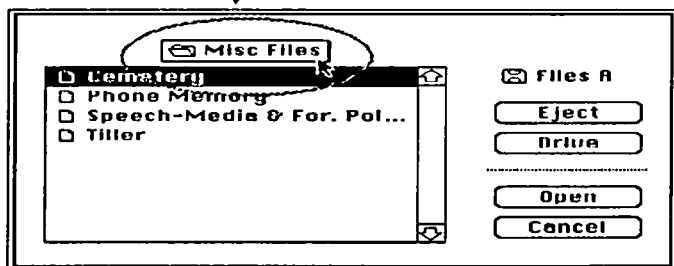
The name you see in the upper right-hand corner of the dialog box is the name of the *disk whose contents this dialog box is currently displaying*. If this name is of the disk you want to be searching, fine. If it's the name of *another* disk, then CLICK on the button called DRIVE. Clicking this button will tell the Mac to take a look at your other disk drive(s) to see if there are other disks available to search. Each time you click DRIVE, Mac will switch the list of documents to show those on disks in different drives. You'll see the list change right on your screen. The Mac will scan your internal disk drive, any external drives you have connected, and any hard disk drives you're using. Clicking on DRIVE is identical in both the MFS and HFS filing systems.

Once you've selected the correct *disk* to be scanning for your document, look for the other "clue" to the whereabouts of your document. This one doesn't appear on Macintoshes using the older, MFS filing system. This clue is the icon-and-name in the rectangular box directly above the list of documents.

Many MacNovices don't realize that it's important to CLICK on this rectangular box to let it help you find your lost document.

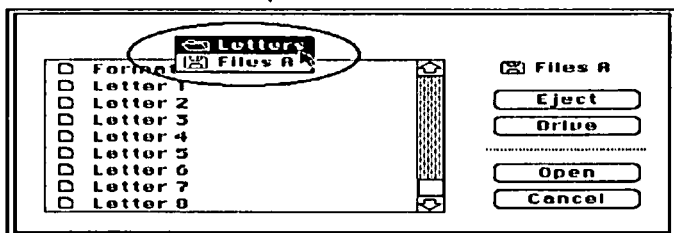
When you CLICK here, and HOLD DOWN the mouse button, you can display a list of *folders* in which your document might be buried.

This rectangle shows which folder is open now.



The HFS filing system doesn't "see" all the MacWrite documents on your disk at one time. It only "sees" the documents inside the folder which happens to be open. The rectangle above the document list tells you which folder is open (note the icon of an OPEN folder). By clicking on the rectangle, you reveal the "nest" of folders in which the currently-open one resides. You can also DRAG the mouse down the list of folders in the rectangle to return yourself to any of the previously opened folders... or, if you drag all the way to the top of the rectangle, you'll return to the disk window which contains *all* folders.

Click in the rectangle to reveal the "nest" of folders leading back to the disk window which you're scanning.



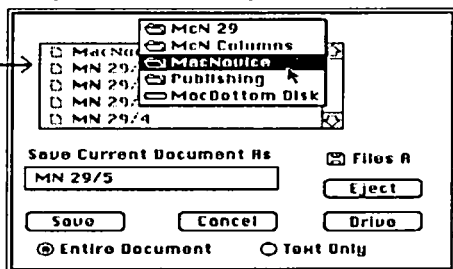
In the document list window, you may also see a list of *closed folders*. DOUBLE CLICKING on any of these closed folders will OPEN it, revealing (in the document list window) whatever documents and folders may be nested *inside* the folder you just opened. In addition, the folder you just opened will have joined the list of OPEN FOLDERS you'll find when you CLICK on the rectangle above the document list.

Actually, this HFS filing system mechanism is harder to describe than it is to *use*. Just experiment a bit. Don't forget the analogy to your *real* office filing system: documents are placed inside folders. These folders might be grouped together with other, related folders inside file drawers (large folders), which are in turn located inside filing cabinets (disks).

Now, what does all this have to do with "losing" your files? You can see that because the Macintosh hierarchical filing system doesn't "see" all your documents at once any more, it becomes important to *tell your Mac where to file new documents*.

Before you click

be sure you've found and selected the correct folder here in which to place your new document.



Many MacNovices simply click SAVE immediately when creating a new document. This tells your Macintosh to file the new document inside whatever folder happened to be open last. That could be your MacWrite folder—or any other folder. It probably *won't* be the folder in which you expect to find your document the next time you need it. So, when you QUIT to the desktop, you seem to have "lost" your new document. It isn't lost, of course, just misfiled. Search through the folders you had open last. You'll find it.

Then, in the future, be sure to pay careful attention to the new HFS filing system when you SAVE a new document. You'll keep everything in its place—a lot easier to find when you need it!

## PI SIG NEWS

by Robert Golden

The June meeting was held on Monday June 1, in the WAP conference room. After a short question and answer session, we formed a workshop centered on two Apple IIGS systems brought in by members.

Demonstration programs from WAP Volumes 2001 and 2002 were displayed. Some of these were described by Ted Meyer in the June WAP Journal. The method of getting them to run and the time it took was a bit more than it would take on the ][+, if it were possible, but the results were well worth the difference.

Settling down to more serious interests, we attempted to use the Apple II GS Programmer's Workshop to link two routines, "Turtle" and "Turtle Demo", under a shell and thus create a "new program" which could then be executed. This was to be the first, tentative, step toward programming the IIGS using shells. It was immediately apparent that the IIGS requires precise obedience to rules for linking, that one must remember exact definitions and notation, and that the IIGS can be most unforgiving of small errors. Experimenting with slight changes in format resulted each time with being "thrown into the monitor". David Todd and Ray Hobbs provided informal and interesting guidance. Their two computers working on different aspects of the same problem were far more effective than one alone, from a teaching standpoint. Todd emphasized that it was important to set the TML Pascal prefixes correctly, and that both searching the documentation and creative experimentation would provide solutions to most problems encountered. He also noted that the pink background sometimes seen with the IIGS Desktop was due to a video chip in distress.

We plan to explore further the programming aspects of the IIGS in the July meeting. Solutions generated in June by the members for the problems encountered June 1, will be presented and used to organize our first approach. Hopefully, we shall see the start of very basic programs with a few applications built in.

	<b>A</b>
<b>1</b>	<b>Excelling on Your Mac</b>
<b>2</b>	<b>Part 13</b>
<b>3</b>	<b>by</b>
<b>4</b>	<b>David Morganstein</b>

As usual, let's start with a couple of quickies. Most of these can be found in Tips for Microsoft Excel by Doug Cobb. Let's say you want to move a selection of cells, that is, select them, copy them and put them somewhere else. First, do the select and the copy. Then place the cursor in the upper left hand corner of the area where the cells are to be moved and do a Paste. The copied values are moved.

Need to do a fast insert? The usual method is to select the cells above which (or to the right of which) cells are to be inserted and then select Insert in the Edit menu (or strike the Command-I keyboard abbreviation). You can insert an entire row by selecting the box at the left with the row number or you can insert an entire column by selecting the box at the top of the column. A shortcut: hold down the option key before making the selection. When you release the mouse button, Excel automatically does the insert command.

If you are using a special format, and plan to do some copying, be sure to format the cells before you do the select and copy. In this case, the format will be copied along with the formula.

Do a lot of Fill Downs or Fill Rights? Usually this is done by entering the formula you need in one cell, then selecting the cells below (or to the right) into which you Fill. A shortcut: hold down the Option key and select all the cells first, including the one at the top (or to the left) into which the formula is entered. When you hit the enter key, the formula will be entered into the lead cell and then filled into the remaining ones. The first law of Mac. When in doubt, try holding down the Option key and see what happens...

**More On Databases and Array Functions.** In our last installment, you saw the following piece of a spreadsheet. My son, Joshua, is keeping track of his investment with Excel. He is an astute collector of comic books who maintains an inventory of his holdings and their value, his sales and his (what else) profits. If he can use Excel, its time for you to get in there and try! He constructed a database containing the Title, Comic Number, His Cost, Value (which changes almost monthly) and if sold, the Selling price. As new comics are purchased, they are entered at the bottom of the list and the database is resorted. To assess the value of his investment, he needs the total value of what is in the collection, plus any proceeds from sales, less the price he has paid. Let's look at several steps of the process.

	A	B	C	D	E
1	Title	#	Cost	Value 4/87	Sold For
2	Amazing Solderman	121	\$10.00	\$10.00	
3	Amazing Solderman	208	\$2.50	\$1.00	\$3.00
4	Amazing Solderman	210	\$2.00	\$1.00	\$1.75
5	Amazing Solderman	217	\$1.50	\$1.50	\$1.75
6	Amazing Solderman	218	\$1.50	\$1.50	\$1.75

We'll assume you can build a database by deciding on the

variables to be included, giving them names and typing those names into the top row of the rectangular area used for storing the values of these variables. If you don't need any of the special Database Functions (like DSUM), that's all there is to it. If you do need them, one more step is required, selecting the entire area and choosing the Set Database option under the Data menu.

Let's move on to a common problem of expanding an already initiated file. Let's say you will be entering items, that is new lines, over a period of time and will need summaries of the data such as column totals. In Josh's problem for example, he needs the total of the Cost column (C). In the screen shot below, Josh gets the total he has spent using the familiar Sum command.

C207		=SUM(C2:C205)	
<b>JoshCollectio</b>			
	<b>A</b>	<b>B</b>	<b>C</b>
201	X-Men	106	\$15.00
202	X-Men	107	\$15.00
203	X-Men	220	\$0.75
204	X-Men	221	\$0.75
205	=====	=====	=====
206			
207	<b>Total</b>		<b>\$665.35</b>

Notice however that the sum goes from row 2, clearly the first row of the database to row 205. Notice further that row 205 is two rows below the last entry in the file appearing in row 203. What is this all about? Here we have a simple solution to the problem of expanding the file. All calculations referencing the whole file will run from row 2 to row 205. Josh set up 205 as a "place holder". In fact, it is filled with a special character, here the "=" though you can use just about anything, as a reminder that 205 is the last row in the database.

To insert a new record, select row 205,

<b>JoshCollection6/1/87</b>					
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
201	X-Men	106	\$15.00	\$18.00	
202	X-Men	107	\$15.00	\$18.00	
203	X-Men	220	\$0.75	\$0.75	
204	X-Men	221	\$0.75	\$0.75	
205	=====	=====	=====	=====	
206				\$750.65	\$57.50
207	<b>Total</b>		<b>\$665.35</b>	<b>\$808.15</b>	

and do an Insert command.

The results can be seen below, an empty row for a new entry without having to change the formulas in the subsequent cells. The formula in cell C208 now references C2:C206, as desired.

contd.

File	Edit	Formu	Format	Data	Options	Macro
A205	Can't Undo	%Z	=====			
	Cut	%H	JoshCollection6/1/87			
	Copy	%C				
201	X-Men	%U	06	\$15.00	\$18.00	
202	X-Men	%B	07	\$15.00	\$18.00	
203	X-Men		20	\$0.75	\$0.75	
204	X-Men		21	\$0.75	\$0.75	
205						
206	Delete...	%K			\$750.65	\$57.50
207	Total	%I		\$665.35	\$808.15	
208						
209	Fill Right	%R				
210	Fill Down	%D				
211						

JoshCollection6/1/87					
	A	B	C	D	E
201	X-Men	106	\$15.00	\$18.00	
202	X-Men	107	\$15.00	\$18.00	
203	X-Men	220	\$0.75	\$0.75	
204	X-Men	221	\$0.75	\$0.75	
205					
206					
207				\$750.65	\$57.50
208	Total		\$665.35	\$808.15	

column which contained only ones and zeros. A one would denote the item was still in inventory while a zero would indicate that it had been sold. Next we could multiply this column, item by item, by column D, the value of the item obtaining a column containing the values of those items still in inventory. Last, we could sum this last column. A much easier way, using an array operation is shown below.

D206		={SUM((E2:E205=0)*D2:D205)}			
JoshCollection6/1/87					
	A	B	C	D	E
202	X-Men	220	\$0.75	\$0.75	
203	X-Men	221	\$0.75	\$0.75	
204					
205					
206					\$750.65
207	Total		\$665.35	\$808.15	

Cell D206 is to contain the sum of the column D values for only those items still in inventory, denoted by a zero value in column E. The expression E2:E205=0 generates a column of ones and zeros which are maintained by Excel for computational purposes but which do not appear in any spreadsheet cell. This "vector" of ones and zeros is multiplied, item by item, by column D (rows 2 thru 205) by the array function. Again, the product is held by Excel but does not require space in the spreadsheet. The sum is obtained of the resulting cell by cell multiplication. Those familiar with vector operations know this as the "dot product" of two vectors or as the sum of cross-products. Remember, to enter array functions, hold down the command key before hitting the enter key.

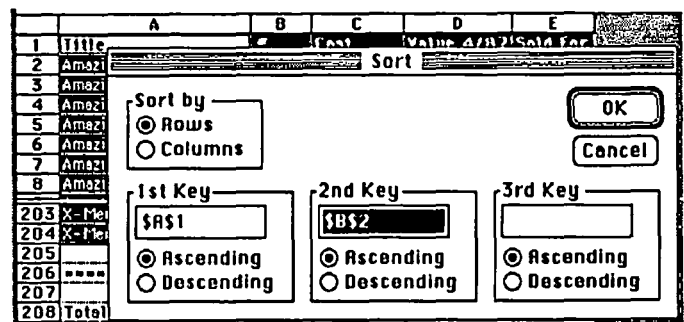
(As an aside, Bob, a WAP member, sent me a macro he had entered from a book. It didn't work. One problem I found was that a pair of array formulas shown in bold in the book had been entered without use of the Command key. They were not interpreted by Excel as array formulas and moved individual cells rather than a whole set as planned. The result? Chaos! Aren't computers fun?.)

We're back to the straightforward Sum for the amount of money Josh has reaped from his sales.

E206		=SUM(E2:E205)			
JoshCollection6/1/87					
	A	B	C	D	E
202	X-Men	220	\$0.75	\$0.75	
203	X-Men	221	\$0.75	\$0.75	
204					
205					
206					\$750.65
207	Total		\$665.35	\$808.15	

After a new record is entered, the database can be re-sorted to maintain the order Josh wants, numerical sort of comic number within alphabetic sort by title. This is done with the Sort option under the Data menu. Before choosing Sort, select the area of the spreadsheet containing the data to be sorted. Include ALL column containing data which must remain together! This manual selection by the user of both the rows and the columns is a weakness in the sort operation. If you leave out one column, it will not be sorted along with the other columns, completely destroying the database. (Something I would never tell you I had done...ahem...) Unfortunately, the Sort command does not work on the Database defined with the Define Database command, say as a default. This would eliminate this potential problem.

The Sort dialog box allows you to select up to three Keys (variables) to use in sorting the selected area. As you can see below, you can sort by rows or columns, with the three keys being used in either ascending or descending order. Josh sorts on column A as the first key and column B as the second key.



An interesting approach, using an array function, can be used to compute the sum of the current value for only those items still in Josh's inventory. Column E contains the proceeds from any sales. If any value in this column is zero, the item is still in inventory. We want to sum column D for those item still in inventory. A space wasting method would be to create a new

# VIEW FROM THE HILL: Macintosh Programmer's Workshop

by Rich Norling

During 1986 there were so many programming languages and environments introduced for the Macintosh that there could have been a "programming language of the month" award issued every single month. But this year a quiet change has been occurring that will profoundly affect Macintosh software developers.

## Programming Environments

Companies that sell programming languages actually provide more than just an application (compiler or interpreter) that translates code from a language people understand to the computer's detailed commands. They also provide a working environment in which the user of the language writes programs. The environment commonly includes at least a text editor and a mechanism for linking several pieces of code into a single application.

Many providers of languages have cut corners in the past, and merely used the Edit and Linker applications that Apple shipped with its original Macintosh Assembler. Neither of those was particularly startling in its capabilities; they were used because they were available.

Edit, in particular, is not what you would call a modern power tool for professional use. Its performance is fairly speedy, but I don't know any professional writer or programmer who wants to entrust hundreds of lines of text to a text processor that does not provide a way to Undo an action that might have just deleted the entire text.

One language provider who moved away from Edit and Linker was Think Technologies, which provided its own programming environment for Lightspeed Pascal and Lightspeed C. The Lightspeed environments use the concept of a "programming project." They make much of the Linker's activity invisible to the programmer (that's an improvement because linking of programs is sort of an unnatural activity, anyway, and there's no reason for programmers to concern themselves with it).

## Enter MPW

Apple's Macintosh Programmer's Workshop (commonly referred to as "MPW") appeared last year in its first version, available only through APDA, the Apple Programmers and Developers Association. MPW includes a full programming environment including integrated editor, linker, assembler, Pascal and C compilers (available separately), and many other specialized programming tools. Even though MPW provided the most complete programming environment on the Macintosh, I quite frankly did not like Version 1.0.

MPW contains a text-based script language, input/output redirection, and other Unix-like structures. That gives MPW a lot of power, but Version 1.0 provided few of the conveniences in the user interface to which Macintosh users have become accustomed. I firmly believe that programmers are people, too, and should be entitled to the benefits of the Macintosh user interface. Using MPW 1.0 reminded me too much of CP/M and other anachronisms, so I kept most of my software development work in the more comfortable Lisa Workshop environment.

## MPW 2.0

This year, MPW is realizing its potential with Version 2.0, now in Beta test. Every part of MPW has undergone improvements, but the most important thing is that MPW has now become more Mac-like without sacrificing its original power. A new tool allows you to gain access to any MPW tool through a well-crafted dialog box interface that builds the text command line for you.

In addition, the editor has benefitted significantly from the addition of better dialog boxes to control searching and replacing text, and from the addition of markers that help you move quickly from one place to another in your text. Instead of guessing that the text you want is now "about half way" in the document or on a particular page, you can actually mark it and assign a name that appears on a menu of markers.

I usually mark procedure names, so when I want to find Procedure PrintWindow, all I have to do is choose PrintWindow on the Mark menu and the text scrolls right to it! I grew accustomed to markers while using the editor in the Lisa Workshop, but I must say that the MPW 2.0's implementation of markers is the nicest I have seen anywhere. MPW even displays the marker names on the menu in the order they appear in the text.

The MPW 2.0 editor has so many features that I often use it instead of a word processor for notes and memos that don't need to use several fonts. But that's only the beginning of the reasons why you should now switch to MPW if you write programs on the Macintosh.

Most large computer programs have "hot spots" in the code where they spend most of their execution time. Typically, these "hot spots" include less than 5-10% of the total code in the program. It is not necessary to optimize the entire program to speed up its execution; you can identify the "hot spots" and concentrate your optimizing there. Version 2.0 of MPW contains a performance measuring tool that helps the programmer locate these "hot spots" in the code in which the program is spending the most time.

It is clear that Apple has made a strong commitment to providing and improving MPW. I expect that Apple will continue to add new features after Version 2.0, including additional tools for debugging program code after it is written.

## Many Languages

The MPW Pascal and C compilers are extremely powerful, and the Assembler has such strong macro capabilities and template definitions (yes, you can define record templates that look almost like Pascal) that you can make your Assembler source code look much like a high-level language if you want to.

The MPW Pascal compiler had its origins as the Lisa Pascal compiler, with new features continually being added. It now has more extensions and improvements than any other Pascal compiler on the Macintosh, including object extensions (MacApp was written for this compiler) and a new peephole optimizer that reduces code size by about 4%. Seems like every time I try to move some of my code from this compiler to one of the others,

I discover that I am using some feature that the other compiler does not allow.

I haven't used the MPW C compiler extensively, so I am not the best source of advice on its merits. However, I do know that at least two of the current providers of C compilers are writing versions of their compilers to run in MPW. The likelihood is that if it's not already there, your favorite C compiler will soon be available in the MPW environment.

One of the true strengths of the MPW environment for professional software developers is that you can write different parts of a single application in different languages. You can already link Pascal, C, and Assembler code together into a single application. In addition, the future will bring C++, Modula, FORTRAN, and probably BASIC into the MPW environment. That will make MPW the truly universal Macintosh programming environment in which you can write pieces of code in whatever language you wish.

MPW is a large, powerful programming environment. Because of its size, it does not run well with less than a megabyte of memory. Plan to use it on a Macintosh Plus or larger machine. Right now, MPW (version 2.0b1) is available only from APDA. Version 2.0 is expected to be available in a few weeks. If you are a "power programmer" I highly recommend it.

#### Macintosh II

If you switched from a 128K or 512K Macintosh to a Mac Plus or SE, you probably noticed that you weren't spending as much time waiting for the machine. Well, let me tell you about the Macintosh II—this is "not waiting."

Frankly, I had become accustomed to those gentle little half-second pauses when using my Macintosh Plus. The pauses weren't long enough to be irritating, and perhaps even provided little moments for relaxation in the midst of word processing or writing program code. With the Macintosh II executing most code 3 to 4 times faster than a Macintosh Plus, I found I missed those little pauses. The rhythm of my work changed. Instead of automatically pausing for thought after choosing a file to open, I could proceed immediately to search for the spot in the file I wanted.

The computer no longer dictates the pace of my work. Instead, I can jump quickly from one file to another, or scroll immediately to another place in a document. Because of the fast reaction time, I spend less time thinking about how to get the computer to do something, and more time thinking about what I want to do.

This speed is especially important when writing. Whether I am writing words or program code, my inspiration tends to come in bursts. When I am ready to write a paragraph, or several paragraphs, the Macintosh II allows me to type them as quickly as I can without any waits for scrolling, screen refreshes or other distractions. I am free to spend most of my time thinking about what I am creating, instead of concentrating on the mechanical processes involved.

My original view was that the speed and power of a Macintosh II would be overkill for simple word processing. I have changed that view. The speed and power of the Macintosh II is important when I have thousands of lines of program code to compile, but it is also wonderful when simply working with text.

If you spend much time writing, you owe it to yourself to try

a Macintosh II. I think you'll find that it speeds the process of getting your thoughts on paper, thus giving you the freedom to spend your time thinking and creating. To quote a slogan I heard somewhere, the Macintosh II truly gives you the "power to be your best."

*Rich Norling is coauthor of StatWorks™ and Cricket Graph, and the author of Pict-O-Graph™, a new Macintosh application that draws picture graphs. He wrote the book Using Macintosh BASIC, published by Osborne-McGrawHill. Rich is President of Language Systems Corp.*

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# DEVELOPER'S VIEW...68020 vs the 80386, more SCSI disk drives...

by Jim Lanford

## SCSI Disks

The capacity of SCSI disk drives for the Macintosh is increasing while the prices are dropping. Computer Age in Silver Spring has a 30 Meg drive for the Mac for \$699. If you show your WAP card, the price lowers to \$675. A friend of mine bought one of these drives and brought it by. I pulled the cover and discovered that the disk drive is made by NEC and the controller is made by Adaptec. If you add up the prices of a power supply, case, fan, and misc cables, this drive is less expensive than buying the parts. Not to mention putting them together yourself.

It is not worth building a hard disk from scratch unless you have some of the parts or you can get a great price on a disk drive from a PC owner. A great price is: \$0 to \$50 for a 10 Meg drive and \$50 to \$150 for a 20 Meg drive. If you already have an old working Tecmar, Corvus, Sunol or Devong (remember them), it is worth the conversion effort. You will use everything but the old controller card and cable. All you have to do is remove any controller cards in the case, install an Adaptec 4000a, hook up a SCSI cable to the Mac and run the format / driver installer routine. You will then have a SCSI drive which will auto boot on a MacPlus, SE and II.

## Macintosh II Video Memory.

Some of you have called to say that you had trouble convincing the receptionist at New Image Technology (301/464-3100) that they sell the NEC 41264 dual ported video RAM chips for the Mac II. These are the chips needed to allow the Mac II video card to display 256 colors. They are just plugged into the eight empty sockets on the card. New Image does have them. As a favor to developers and WAP members, New Image will sell you eight chips for less than half of what Apple sells them for. If the receptionist gives you a hard time, ask for Mike Fritz.

## Mac II color monitors.

Some people have written in other journals that the NEC Multi-sync does not work with the Mac II. As I wrote in my March column, the NEC does work. You must remember to set the switches in the back to analog and manual or it will not sync. The Sony Multi-scan should be set to analog. In the DC area, the NEC costs about \$500 and the Sony \$600. The Sony has better color and smears less. If you do make your own cable, make sure to use shielded cable to reduce video interference.

## 68020 vs the 80386.

On paper, the Motorola 68020 (used in the Mac II, Levco Prodigy and Radius accelerator) and the Intel 80386 (used in the IBM PS/2 model 80, Compact 386 and every announced "Klone" at Comdex) are about equal. But independent tests on real hardware are showing the 68020 beating the 386 by 20 to 40%.

While that speed difference is nothing for the Klone makers to worry about, the fact that Intel recalled their 386 chips is definitely causing concern. Further, the fact that Intel says "sorry, please wait until the fourth quarter" is hitting the entire PC industry very hard. It will probably hit Apple hard too,

pushing demand for the Mac II higher.

Those of you with manufacturing backgrounds will be saying "hey, what about second sources?" The Intel 386 has no second source! Intel convinced everyone that a second source was not needed. In the computer and electronics industry, wise manufacturers demand a second source for every component they put in their equipment. This is why you will find some of the 68000 microprocessors in the Macintosh manufactured by Motorola and some manufactured by Hitachi. Apple is using multiple sources for almost all of its parts. IBM has purchased the masks for both the 286 and 386 chips from Intel. It will be interesting to see if they are going to make their own part for the 386 or wait for Intel like all the Klone manufacturers.

## Finder 5.5 and System 4.1, Apple's free upgrade to the SE ROMS.

Apple did provide a software upgrade path for Mac Plus owners. Finder 5.5 and System 4.1 gives the Macintosh Plus most of the ROM features of the SE: hierarchal menus, pop-up menus, text edit extensions (style and font mix etc.), script manager (great for non-Roman alphabets), and AppleTalk extensions. These do take up RAM space, so while this new System and Finder will work on any Mac with the 128K ROMS, such as the 512Ke, some applications may run out of RAM. Levco, Dove and others do have memory upgrades with an optional SCSI port. If you are using an original 128K or a 512K Macintosh, and you are going to want to use the newer software, you should upgrade to at least a 512Ke. If you are using a 512Ke with no hard disk and are not sharing a LaserWriter, then I recommend that you stick with the reliable Finder 5.3. The new Finder and System will not fit on a 400K floppy and do not leave much room on an 800K floppy. With hard disks getting less expensive all the time, Apple is apparently assuming that serious Macintosh users will be getting a hard disk. Apple reports that 85% of all SE's are purchased with the 20 Meg hard disk option.

## Used Macintosh Prices.

The news weekly *Computers & Software News* has a column which gives the used computer prices as reported by the Boston Computer Exchange. The average price varies +/- \$100 to a high and low. This information will be about 6 weeks old when you read this, but it has not been varying much over the last month.

128K Macintosh \$625

512K Macintosh \$825

512Ke Macintosh \$1200

Macintosh Plus \$1375

Considering that New Mac Pluses have been selling locally for under \$1600, the value of the Macintosh family seems to be holding up in the marketplace.

*Jim Lanford is the architect of MacLabeler™, Micro Dynamics MARS™, Posillaste™, and other software for the Macintosh II. He has implemented ground stations for Spartan I and other real-time 68020-based testing systems for various satellites. Jim is president of Micro Dynamics, Ltd., the largest Macintosh software company in the DC area.*



# DEALER'S CORNER

by Dave Ferris, Levco

I have recently been evaluating the cost of various approaches to get "68020" performance by buying the Mac II or upgrading the Mac Plus or SE. In each case the requirements include the 68020 processor, the 68881 coprocessor and a 20 Meg hard disk. The question is what is the cost differential between buying the Mac II after selling your Mac Plus versus upgrading your Mac Plus. Additionally one can buy an SE (to get the new 256k ROMs) and upgrade it.

The following results are based on some discount prices offered to WAP members by local stores and the 15% discount offered by your local Levco representative (me). Note this does not represent a thorough investigation of the lowest price on Apple products.

The following are the various system costs:

		<u>Total Cost</u>
Mac II		\$5500
Mac SE	\$3095	Levco upgrade \$1550
\$4645		
Mac+ (owned)		Levco upgrade \$1890
Hard disk \$800	\$2690	
Mac+ (owned)		Levco upgrade \$1890
Hard disk(owned)	\$1890	

An additional assumption is that the value of a used Mac Plus with and without hard disk is \$1300 and \$1850 respectively. The savings by upgrading the Mac Plus versus the Mac II approach is shown below.

## SAVINGS

Upgrade Mac+ versus buy Mac II  
and sell Mac + with hard disk \$1760

Upgrade Mac+ versus buy Mac II  
and sell Mac + (no hard disk) \$1510

The upgrade route right now seems attractive from a cost standpoint versus laying out the money for the Mac II. An additional option is to buy the SE and upgrade it while selling your Mac Plus. This approach is attractive as it provides the expansion capability, new ROMs, and a new warranty for an additional cost of only \$650 to \$900 over upgrading the Mac Plus.

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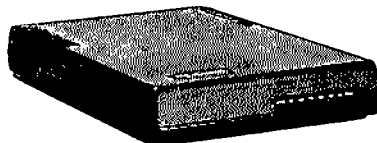
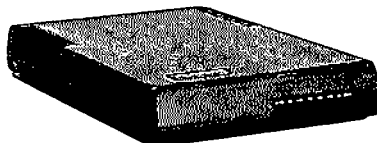
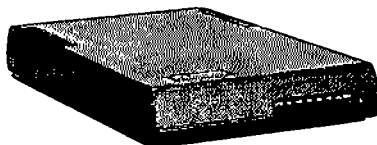
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# DON'T UPGRADE TO FINDER 5.5/ SYSTEM 4.1...UNTIL YOU READ THIS FIRST!

by Tom Warrick

Apple Computer released in May a new version of its Macintosh System Software: Finder version 5.5 and System version 4.1, as well as a new set of printer drivers (the ImageWriter, AppleTalk ImageWriter, LaserWriter and Laser Prep files) and utilities (Font/DA Mover and other files). Before we get into discussing whether you should upgrade your disks to the new system software, let us briefly review the bidding to see what the latest versions are:

Name	Version	Size
<b>System Tools</b>	<b>2.0</b>	
TeachText	1.0	15K
<b>System Folder:</b>		
AppleTalk ImageWriter	2.6	41K
Clipboard File	1.0	4K
Finder	5.5	79K
General	3.1	13K
ImageWriter	2.6	36K
Key Layout	2.1	4K
Keyboard	3.1	2K
Laser Prep	4.0	25K
LaserWriter	4.0	50K
Monitors	1.0	17K (II only)
Mouse	3.1	4K
Scrapbook File	2.2	12K
Sound	3.1	4K (II only)
Startup Device	3.1	3K (II; SE w/ int. HD)
<b>System</b>	<b>4.1</b>	<b>312K</b>
<b>Update Folder:</b>		
Read Me	2.0	4K
<b>Utilities Folder:</b>		
Apple HD SC Setup	1.3	26K
Installer	2.4	32K
<b>Installer Scripts:</b>		
Mac +, 512Ke, 512K Script	4.1	5K
Macintosh II Script	4.1	6K
Macintosh SE Script	4.1	5K
<b>Utilities Disk</b>		
Apple HD SC Setup	1.3	26K
Desk Accessories	2.0	16K
Disk First Aid	1.2	38K
Font/DA Mover	3.5	35K
Fonts	2.0	132K
HD Backup	1.0	24K
<b>System Folder:</b>		
AppleTalk ImageWriter	2.6	41K
Clipboard File		1K
Easy Access	1.0	4K
Finder	5.5	79K
General	3.1	13K
ImageWriter	2.6	36K
Key Layout	2.1	4K
Keyboard	3.1	2K
Laser Prep	4.0	25K

LaserWriter	4.0	50K
Monitors	1.0	17K (II only)
Mouse	3.1	4K
Startup Device	3.1	3K (II; SE w/ int. HD)
<b>System</b>	<b>4.1</b>	<b>210K</b>
TeachText	1.0	15K
<b>Update Folder:</b>		
Read Me	2.0	1K

You can get these files on two 800K disks from your authorized Apple dealer (it's free, but bring your own disks) or from the Washington Apple Pi public-domain software library (at the same price per disk as other WAP Mac disks). Make sure you get both disks, as you will need the new version of Font/DA Mover to work correctly with System 4.1 and the new versions of the fonts in the Fonts file on Utilities 2.0. (You should replace your old versions of those fonts.) Also, Apple says that you should not use Switcher with System 4.1.

**Who should use Finder 5.5 and System 4.1?** A fair question, since not even Apple wants everyone to upgrade to Finder 5.5 and System 4.1. This is an adaptation of Apple's chart showing the system software you should be using, depending on what type of Macintosh you have:

## Recommended System Software Configurations

	Macintosh 128	Macintosh XL	Macintosh 512	Macintosh 512E	Macintosh Plus	Macintosh SE	Macintosh II
System 2.0/Finder 4.1	☺						
System 3.2/Finder 5.3		☺	☺	☺	☺		
System 3.3/Finder 5.4			☺	☺	☺		
System 4.0/Finder 5.4				☺	☺	☺	
System 4.1/Finder 5.5				☺	☺	☺	☺

- ☺ The best system software to use with this Macintosh
- ☺ Okay to use with this Macintosh
- ☺ The best system software if you're using AppleShare
- ☺ Okay to use with AppleShare

I have a slightly different view, for reasons I will explain below. I would say this:

1. *If you have the old, 64K read-only memory (ROM) chips, i.e., if you have a Macintosh 128 or 512 (unenhanced), or if you have a Lisa/Mac XL, use the version recommended by Apple.*
2. *Likewise, if you have a Macintosh SE or II, upgrade to Finder 5.5/System 4.1. Your Macintosh is designed to work properly only with the new Finder and System.*
3. *If you have a Mac 512 enhanced or a Mac Plus, upgrade to the Finder 5.5/System 4.1 if and only if you have a hard disk. If you do not have a hard disk, do not upgrade—stay with Finder 5.3/System 3.2. Here is where I disagree with Apple, which would recommend you upgrade if you have a Mac Plus but not otherwise. (Note that if you use AppleShare, you cannot use Finder 5.3/System 3.2; use Finder 5.4/System 3.3, as Apple recommends.)*
4. *If you use a LaserWriter or LaserWriter Plus, use the new LaserWriter 4.0 and Laser Prep 4.0 files from Apple. These files are much faster than previous versions. Using these versions is especially important if you share a LaserWriter with another Macintosh user, as using different versions of these files on different Macintoshes will require you to re-initialize the printer (which usually means physically turning the LaserWriter off then on, then waiting for it to print out a test page) every time a user on the network wants to use a different version of the LaserWriter printer driver. Apple says that LaserWriter 4.0 and Laser Prep 4.0 will work with earlier versions of the System file.*

\* \* \*

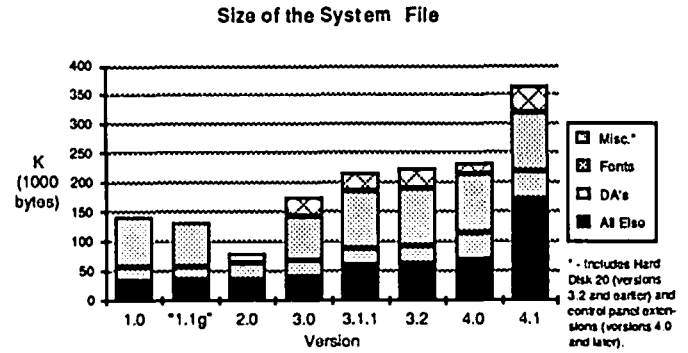
I must first note a caveat with regard to upgrading to System 4.1, particularly for Mac 512 enhanced users. The new version of the System file forces your Macintosh to devote more of its memory to the "System heap," an area of memory not available to your application but, rather, reserved for use by the Macintosh and the System file while your application is running. It is possible to reduce manually the size of the System heap by changing your disk's boot blocks (FEdit Plus will allow you to do this), but this is highly risky as it may cause your applications to bomb because the Macintosh needed more memory in the System heap.

The effect of increasing the size of the System heap while reducing the amount of memory available to your applications means that applications that keep their documents entirely in memory while they are in use (Excel is one such application; I believe OverVue is another) may not be able to load large documents that previously just barely fit into the amount of memory available on your Mac. If you have any very large Excel spreadsheets or OverVue databases, I recommend trying them out with the new version of the System file to see if they still fit. Similarly, if you run out of memory in the future, consider trying System 3.2 to see if the extra memory will let you work with your document.

\* \* \*

The second and more serious problem created by System 4.1 has to do with disk space. System 4.1 is significantly larger than previous versions of the System, even System 4.0. The difference is dramatic. In the following chart, I have noted a number

of components of the System file separately for purposes of comparison.



The sizes shown in this chart were derived from versions of the System file as "pristine" as I could find them. (With the early files I am not altogether certain that the file I was looking at was a faithful copy of the original, as-shipped version. Also, to measure sizes consistently, I used the version of Font/DA Mover to count the size of the fonts or desk accessories in each System. While not altogether accurate, it provides a reasonable basis for comparison.)

First, the number and size of fonts and desk accessories that a Mac user uses are a matter of individual taste; the size as shipped by Apple is only somewhat important. (The introduction of the LaserWriter and, later, the LaserWriter Plus did, however, dramatically increase the number of fonts that users of Apple's laser printer needed to have in their System files.)

Of somewhat greater importance are the miscellaneous files that, strictly speaking, are an integral part of the System file even though they might physically lie in separate files. This category includes the Hard Disk 20 file, which is used to give the Macintosh 512 (unenhanced) the ability to use Apple's Hierarchical File System (HFS), which enables the Mac 512 to work with double-sided external drives and many brands of hard disks. With System 4.0 and later, Apple has shipped separate "Control Panel Extension" files, which provide information to the Control Panel desk accessory. Some of these small files can be dispensed with on some computers—for example, only a Macintosh II needs the Monitors and Sound files.

The core, though, which is everything else, has grown significantly. The "all else" portion of the System file contains code routines that could not fit into the ROMs of early Macs, patches to fix bugs in the ROMs, and, in System 4.1 in particular, a number of patches to the ROM that give older Macintoshes some of the features found in ROM on the Mac SE or Mac II. The "all else" portion of the System file more than doubled in size between versions 4.0 and 4.1. Indeed, the "all else" portion of System is now more than four times what it was when Finder 4.1 and System 2.0 ruled the waves, in late 1984.

The ideal solution would be to be able to remove those portions of the System file that your Mac Plus, SE or II does not need. For example, the System file contains the Chicago 12 font, but Mac Plus, SE and II owners have the Chicago 12 font in ROM. The same is true with a number of bug fixes, features and other fonts.

But this is not easy to do, as it is difficult to tell what can safely be dispensed with. Tim Buehrer, a former chairman of Washington Apple Pi's Macintosh Programmers' Special Interest Group,

contd. on pg 64

# PASCAL NEWS

by Robert C. Platt

The May PIG meeting featured an excellent presentation by Michael Hartman on working with ProDOS files from Apple Pascal 1.3. APDA now distributes interface tools. When this unit is used by your program, you can access ProDOS directory information as well as ProDOS files. The version of the Access Tools which Mike received would only work with disks initialized under ProDOS version 1.0.1. However, Apple has been promising to fix this bug.

PIG meetings are open to anyone interested in Pascal or Modula-2 on either the Mac, the Apple II or the III. Please bring your latest programming accomplishments and/or mystifying bugs. Our next meeting in Thursday, July 23, at the WAP Office.

**Book of the Month.** Past PIG Chairman Jim Harvison called and recommended Sawyer & Foster, *Programming Expert Systems in Pascal* (Wiley 1986) \$20, as interesting reading. Who knows, maybe we can write a Pascal-based expert system to code Pascal programs.

**Visit to SirTech.** Ron Wartow, eat your heart out! In an effort for the PIG to out perform the GameSIG column, your reporter toured the officers where *Wizardry* games are created. Bob Woodhead demoed his Mac II complete with an extra-large color monitor. His Mac II, Mac SE, IIGs, and PC Clones are all tied together with a local area network. Game publishers, such

as SirTech, are an excellent example of users who most need a universal operating system, such as the p-System. Versions of Wizardry run on most popular computers, and each machine implementation is based upon a home brewed version of the p-System. Bob provided me with a color Mandelbrot program for the Mac II, which will be added to the WAP library. (No Ron, he didn't give me a Mac II version of *Wizardry*.)

**CAI Driver.** As I reported previously, the SigMac Programmers are working on a Computer Assisted Instruction (CAI) driver as a group programming project. In a prior column, I showed a short program which demonstrated the use of Picture Comments to implement features of the driver. Steve Seaquest, another SIG member, has focused upon the question of how to branch between the various frames of a CAI lesson or between lessons. His sample is based upon instructional frames created as dialog boxes using ResEdit. In the final program, the authoring mode of the CAI driver would generate the frames. Listing 1 is the TML Pascal source to his demo. It is worth careful study as an example of using dialogs, creating your own resource types, and using resources for maximum flexibility. Steve's companion article describes what the program does. I will give you a few highlights on how the listing does it.

```
PROGRAM Playback;
{SL Playback.Rsrc }
{SB+ }
{ST APPL πCAI }
USES MacIntf;
TYPE TJumpHdl = ^TJumpPtr;
TJumpPtr = ^TJumpRec;
TJumpRec = RECORD
NbrEntries: INTEGER;
Entry: ARRAY [1..5] OF
RECORD
fResStrNbr: INTEGER;
fResType: ResType;
fResID: INTEGER;
END;
END;
TXrefHdl = ^TXrefPtr;
{ (str list of ext'l lesson filenames) }
TXrefPtr = ^TXrefRec;
TXrefRec = RECORD
NbrEntries: INTEGER;
{The strings that follow are referenced by StringPtr }
END;
VAR CurrDialog: DialogPtr;
CurrItem: INTEGER;
CurrJumpHdl: TJumpHdl;
CurrResFileName: Str255;
CurrResFileNbr: INTEGER;
CurrResID: INTEGER;
CurrResType: ResType;
CurrResStrNbr: INTEGER;
CurrStrOffset: INTEGER;
CurrStrPtr: StringPtr;
CurrXrefHdl: TXrefHdl;
i,j,k: INTEGER;
```

```
Lits: RECORD
CASE INTEGER OF
1: (ALRT,DLOG,JUMP,PREV,QUIT,STRL,fil1,fil2: ResType);
2: (Init1,Init2: SFTYPEList);
END; PrevResFileName: Str255;
INTEGER; PrevResType: ResType;
SFLoc: Point; TempResFileName: Str255;
INTEGER; TempResType: ResType;
TEMPRESID: Str255);
FUNCTION StrToLst (SFTYPEStr:
: SFTYPEList;
VAR i: INTEGER;
Temp: PACKED ARRAY [1..16] OF CHAR;
BEGIN FOR i := 1 TO 16 DO
IF i <= LENGTH (SFTYPEStr) THEN
Temp[i] := SFTYPEStr[i]
ELSE
Temp[i] := ' ';
StrToLst := SFTYPEList (Temp);
END;
PROCEDURE StudentChoosesLesson;
VAR reply: SFReply;
BEGIN SFGGetFile (SFLoc, 'Choose a Lesson', NIL, 1, StrToLst ('Lssn'), NIL, repl
IF reply.good THEN BEGIN
CurrResFileName := reply.fname;
CurrResFileNbr := OpenResFile (CurrResFileName);
CurrResType := Lits.DLOG;
CurrResID := 128;
PrevResFileName := CurrResFileName;
PrevResType := Lits.QUIT;
PrevResID := 0;
END
ELSE
CurrResFileNbr := -1;
END;
PROCEDURE Report (pStr: Str255);
```

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```

VAR sPort:      GrafPtr;
    sRect:      Rect;
    sWindPtr:   WindowPtr;
    sWindRec:   WindowRecord;
BEGIN
GetPort (sPort);
SetRect (sRect,25,50,450,100); { why is SetRect in "l,t,r,b" order? }
sWindPtr := NewWindow (@sWindRec,sRect,'Press any key to continuc.',
    TRUE, DocumentProc, POINTER (-1), FALSE, 0);
SetPort (sWindPtr);
MoveTo (20,20);
DrawString (pStr);
Repeat UNTIL KeyPress;
CloseWindow (sWindPtr);
SetPort (sPort); END;

BEGIN
{      INITIALIZATION      }
MaxApplZone; MoreMasters; MoreMasters; MoreMasters; MoreMasters;
MoreMasters; MoreMasters; MoreMasters; MoreMasters; MoreMasters;
MoreMasters; MoreMasters; MoreMasters; MoreMasters; MoreMasters;
MoreMasters; MoreMasters; MoreMasters; MoreMasters; MoreMasters;
MoreMasters;
InitGraf (@thePort);
InitFonts;
InitWindows;
InitMenus;
InitDialogs (NIL);
TEInit;
InitCursor;
Lits.Init1 := StrToLst ('ALRTDLOGJumpPrev');
Lits.Init2:= StrToLst ('QuitSTR#');
SFLoc.h   := 82;
SFLoc.v   := 124;
{      Playback Loop      }
StudentChoosesLesson;
WHILE CurrResFileNbr <> -1 DO
    BEGIN
        CurrXrefHdl := TXrefHdl (GetResource (Lits.STRL, 128));
        IF CurrXrefHdl = NIL THEN
            { The Xref object (STR# 128) isn't necessary if the LessonFile
              { doesn't make any external references, but we create a dummy
              { one anyway to keep the program's logic consistent.
            BEGIN
                CurrXrefHdl := TXrefHdl (NewHandle (2));
                CurrXrefHdl^.NbrEntries := 0;
            END;
        WHILE CurrResType <> Lits.QUIT DO
            BEGIN
                IF CurrResType = Lits.DLOG THEN
                    BEGIN
                        CurrDialog := GetNewDialog(CurrResID, NIL, POINTER(-1));
                        IF CurrDialog = NIL THEN

```

```

        BEGIN
            Report ('Told to jump to DLOG, but couldn't find it!');
            LEAVE;
        END;
        ShowWindow(CurrDialog);
        SetPort(CurrDialog);
        ModalDialog(NIL, CurrItem);
        DisposDialog(CurrDialog);
    END
ELSE IF CurrResType = Lits.ALRT THEN
    CurrItem := NoteAlert (CurrResID, NIL)
ELSE
    BEGIN
        Report ('Told to jump to unknown resource type!');
        LEAVE;
    END;
    CurrJumpHdl := TJumpHdl (GetResource (Lits.JUMP, CurrResID));
    IF CurrJumpHdl = NIL THEN
        BEGIN
            Report ('Couldn't find Jump resource!');
            LEAVE;
        END;
    IF (CurrItem < 1)
    OR (CurrItem > CurrJumpHdl^.NbrEntries) THEN
        BEGIN
            Report ('Button number outside jump table range!');
            LEAVE;
        END
    ELSE
        BEGIN
            IF CurrJumpHdl^.Entry[CurrItem].fResType = Lits.PREV THEN
                BEGIN
                    TempResFileName:= CurrResFileName;
                    TempResType:= CurrResType;
                    TempResID:= CurrResID;
                    CurrResFileName:= PrevResFileName;
                    CurrResType:= PrevResType;
                    CurrResID:= PrevResID;
                    PrevResFileName:= TempResFileName;
                    PrevResType:= TempResType;
                    PrevResID:= TempResID;
                    IF CurrResFileName = PrevResFileName THEN
                        CYCLE
                    ELSE
                        LEAVE;
                END;
            PrevResFileNam      := CurrResFileName;
            PrevResType         := CurrResType;
            PrevResID           := CurrResID;
            CurrResStrNbr:=CurrJumpHdl^.Entry[CurrItem].fResStrNbr;

```

contd.

```

CurrResType:=CurrJumpHdl^.Entry[CurrItem].fResType;
CurrResID:=CurrJumpHdl^.Entry[CurrItem].fResID;
IF (CurrResStrNbr>0)
AND(CurrResStrNbr<=CurrXrefHdl^.NbrEntries)THIEN
BEGIN
  CurrStrOffset:=2;      { after NbrEntries }
  FOR i:=1 TO CurrResStrNbr DO
  BEGIN
    CurrStrPtr:=StringPtr (LONGINT (CurrXrefHdl^)+
                          CurrStrOffset);
    CurrStrOffset:=CurrStrOffset+1+Ptr
                  (CurrStrPtr)^;
  END;
  CurrResFileName:=CurrStrPtr^;
  LEAVE;
END;
END;
END;
END;
CloseResFile(CurrResFileNbr);
IF CurrResFileName=PrevResFileName THEN
  StudentChoosesLesson
ELSE
BEGIN
  CurrResFileNbr:=OpenResFile(CurrResFileName);
  IF CurrResFileNbr=-1 THEN
    Report ('Jump to LessonFile failed!');
  END;
END;
ExitToShell;
END.

```

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## SUMMER WAP TUTORIALS

by Robert C. Platt

Remember that our regular Macintosh tutorials continue through the summer. The introductory Apple II tutorials will resume in the fall. We are also pleased to announce two special tutorials for August. Call the office or send in the form at the back of the WAP Journal to reserve a place.

**Making Music with Your Macintosh** — *Judy Moore* - Saturday, August 1, 10 a.m. - noon. Work with Professional Composer, DeLuxe Music Construction Set, Music Type and Performer. Bring your own software and Mac. Judy Moore, a high school teacher and member of MusicSIG, is repeating this popular tutorial.

**Word Perfect on the Apple II** — *Lee Raesley* - Saturday, August 8, 9 a.m. - noon. Word Perfect is one of the most popular word processors in the MS-DOS world. It is now available on the //e, //c and IIGs. Learn the basics of this application from one of WAP's most experienced instructors. Bring your machine, WordPerfect and a blank disk.

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# "PLAYBACK" PROGRAM DOCUMENTATION

by Steve Seaquist

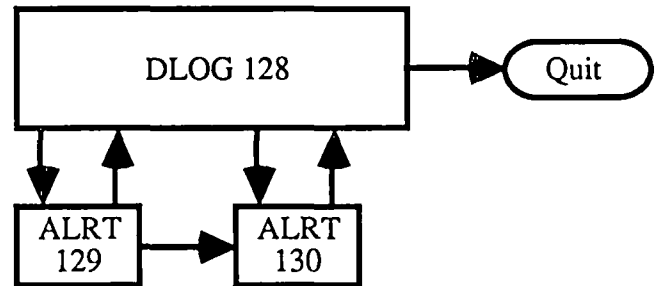
I wrote the Playback program to demonstrate that a custom "Jump" resource would be an elegant (simple and efficient) way to control frame flow in a Computer Aided Instruction (CAI) lesson. I did this as part of the Washington Apple Pi, Macintosh Programmers' Group (SigMac) CAI project. This documentation is mainly to convey to other SigMac members how it works, but can also be used by anyone who has a copy of Playback and wants to start building lessons right now (if they know how to use ResEdit).

My design is to keep Dialogs (DLOGs and ALRTs), their Item Lists (DITLs) and their Jump resources in synch by resource IDs. For example, the LessonFile must be entered at DLOG 128, which uses DITL 128, and jumping from that Dialog is controlled by Jump 128.

In addition, my current limited implementation of this design allows flow control only by PushButtons. By decree of Inside Macintosh (User Interface), the default PushButton of a Dialog must be Item #1 in the Dialog's DITL, because the Dialog Manager returns the value 1 as "ItemHit" if the user presses Return or Enter. (The default button typically says something like "OK". It's common programming practice to make a Cancel button Item #2, though this isn't required by IM.) To simplify the task of writing Playback and demonstrating how the Jump resource could be used, I simply take the ItemHit returned by the Dialog Manager and use it to index into the Jump resource's jump table.

Playback's custom Jump resource currently has the following format:

## "Demo" LessonFile Flow



Resource	Jump 128	Jump 129	Jump 130
NbrEntries	3	2	1
First Entry	0, ALRT, 129	0, DLOG, 128	0, DLOG, 128
Second Entry	0, ALRT, 130	0, ALRT, 130	
Third Entry	0, Quit		

Because the LessonFile is entered at DLOG 128, Playback initially uses Jump 128 to decide how to respond to PushButtons. If the user pushes the second button, for example, Playback will index 2 deep into Jump 128's jump table and retrieve "0, ALRT, 130", which is another way of saying

```
fResStrNbr [2] is 0,
fResType [2] is ALRT, and
fResID [2] is 130.
```

Because fResStrNbr is 0, it will stay in the same lesson. Playback calls the Toolbox routine GetResource to get the next frame if fResType is DLOG or ALRT, and if fResID is in the range of 128 thru 32767 (the Macintosh standard for user resource IDs). Because fResType is ALRT and fResID is 130, it will get ALRT 130, but it could just as easily get DLOG 12345, if the author wishes it to. Once in ALRT 130, it will use Jump 130 to control flow, which in the Demo lesson can only jump to DLOG 128.

The keyword Quit means "quit the lesson", not "quit the program". This allows the user to play back as many LessonFiles as he/she wants without having to reenter the program from the Finder. Pressing Cancel in response to the SFGGetFile (request for LessonFile

name) quits the program.

If the LessonFile is improperly constructed, Playback will take certain standard actions, as follows:

- If a resource that Playback needs doesn't exist, Playback does a Quit.
- If the jump table's entry contains garbage, or if the index is out of range, it does a Quit.
- The fResType field is case-sensitive, so "dlog" is not equivalent to "DLOG".

(Note: This is required by the Macintosh Resource Manager's case-sensitivity...sorry.)

contd.

```
TYPE
TJumpHdl      = ^TJumpPtr;      { GetResource returns a handle, so Jump ... }
TJumpPtr      = ^TJumpRec;      { ... resource is referenced via that handle. }
TJumpRec      =
RECORD
NbrEntries: INTEGER;
Entry:       ARRAY [1..5] OF
RECORD
fResStrNbr: INTEGER;      { non-zero for inter-Lesson jumps }
fResType:   ResType;      { DLOG, ALRT, Prev or Quit }
fResID:     INTEGER;      { If fResType = DLOG or ALRT: ID # }
END;
END;
```

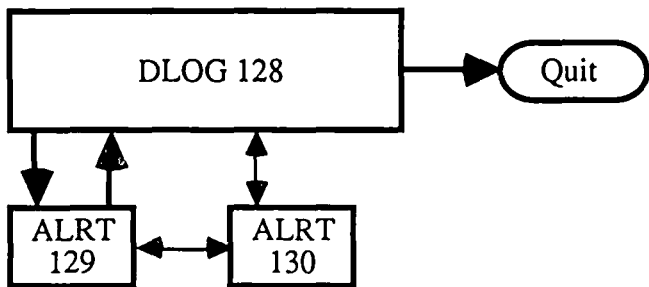
The "jump table" is the ARRAY of "Entry" subrecords. (Its nominal range of 1..5 is misleading. It can actually contain any number of entries because it's indexed by variables. The TMPL "Jump" that allows ResEdit to create and edit Jump resources also allows for any number of entries.) All fields of the Entry subrecord refer to resource information elsewhere in the same LessonFile. For example:



**The "Prev" feature:**

I originally constructed the Beginner lesson, before it was called "Beginner", simply to illustrate the Prev feature, as follows:

**"Beginner" LessonFile Flow**



Resource	Jump 128	Jump 129	Jump 130
NbrEntries	3	2	1
First Entry	0, ALRT, 129	0, DLOG, 128	0, <u>Prev</u> , 1
Second Entry	0, ALRT, 130	0, ALRT, 130	
Third Entry	0, Quit, 0		

The Beginner lesson differs from the Demo lesson only in the first Entry of its Jump 130 resource, but it significantly affects the flow diagram of the lesson. Playback keeps track of the previous frame, and if the user pushes a button (whose item number indexes into the jump table) to an Entry where fResType = "Prev", Playback will jump to the previous frame. In the Beginner lesson, that means

- if it got to ALRT 130 from ALRT 129, it will return to ALRT 129, and
- if it got to ALRT 130 from DLOG 128, it will return to DLOG 128.

For right now, Playback can go back only one level to the previous frame. Later, however, it will keep an audit trail of all frames that a user played back, and it should be possible to go back to frames 2, 3 or many more levels previous. I can't think of a situation where an author would want to do that, but just in case some author can, the fResID field says how many levels back to go and it's currently limited to 1.

**The "inter-Lesson jump" feature:**

An author would typically do inter-Lesson jumping from more-complicated to less-complicated lessons. In a lesson on multiplication, for example, if a student's answers indicate that he/she doesn't understand addition well enough, the author may want to jump directly into the addition lesson without telling the student of the changeover. There may also be situations where the author may put the student into a more-complicated lesson, or one which isn't harder or easier—just different. Playback's inter-Lesson jump feature allows for any of these possibilities. To illustrate it, I constructed 3 interlocking lessons, called "Beginner", "Intermediate" and "Advanced". (My Prev example became the Beginner lesson.)

**The External LessonFile NameList (STR# 128):**

Playback uses the STR# 128 resource as a stepping stone to external LessonFiles. The buzzword for this technique is "indirection". If we kept the external LessonFile name in the jump

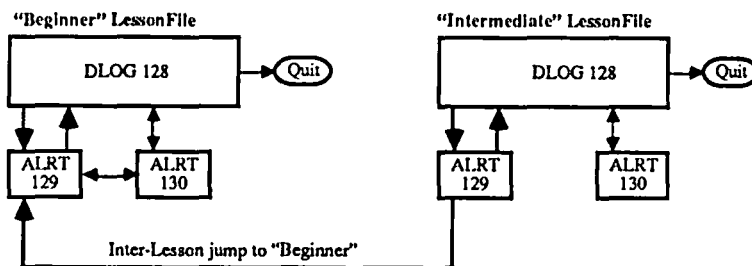
table of each frame that needed to do an inter-Lesson jump, we would be big trouble if the author wanted to change the name of the external LessonFile being jumped to. We would have to require the author to go to every frame that does an inter-Lesson jump and change the LessonFile name in every one of them!

Thinking ahead to such a headache, I programmed Playback to handle a non-zero fResStrNbr in the jump table as an index into the STR# 128 resource and to pick up the external LessonFile's name from there. This means that a lesson would have a list of LessonFiles it could inter-Lesson jump to, and changing that list would affect all inter-Lesson jumps. I call this list the External LessonFile NameList. For now, that's just an English language logical equivalent of saying "STR# 128".

The STR# (Pascal string list) resource is a standard Macintosh resource type. It begins with an integer that says how many strings there are, followed by that many Pascal strings packed together one right after the other. That is, the strings are not stored as an ARRAY [1..n] OF Str255.

In the case of the Beginner, Intermediate and Advanced LessonFiles, for example, I have defined the STR# 128 resources to be (in hex and char notations) as follows: 00, 03, 08, 'B', 'e', 'g', 'i', 'n', 'n', 'e', 'r', 0C, 'I', 'n', 't', 'e', 'r', 'm', 'e', 'd', 'i', 'a', 't', 'e', 08, 'A', 'd', 'v', 'a', 'n', 'c', 'e', 'd'. The length byte of the second string (0C) is not on a word boundary, but it doesn't have to be. Playback breaks strings out of the jumble by using a StringPtr variable (calculating the string addresses from the pointer pointed-to by the resource handle, the 2 byte offset and the sum of previous string lengths). The authoring program can build the LessonFile's STR# 128 resource using the same technique.

**"Intermediate" LessonFile Flow**



Resource	Jump 128	Jump 129	Jump 130	S T R #
128				
NbrEntries	3	2	1	3
1st Entry	0, ALRT, 129	0, DLOG, 128	0, Prev, 1	"Begnr."
2nd Entry	0, ALRT, 130	1, ALRT, 129		"Intermed."
3rd Entry	0, Quit, 0			"Advanced"

Because Jump 129, Entry 2 has a non-zero fResStrNbr, Playback will do an inter-Lesson jump using that value to index into the External LessonFile NameList. The value is one, it indexes in one-deep into the NameList and gets "Beginner", it switches LessonFiles and then jumps to ALRT 129. When you play back the Intermediate LessonFile and press the button to do this jump, you may detect a slight pause and disk whirring while it reads in the Beginner LessonFile.

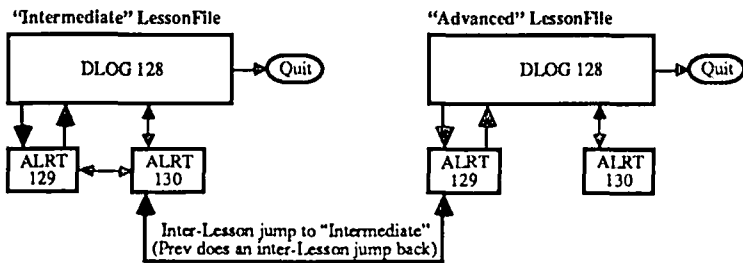
Note that I have constructed the lessons in such a way that it's impossible to get back to the Intermediate lesson without quitting the Beginner lesson. I could just as easily have defined an inter-Lesson jump back to Intermediate, but chose not to.

contd.

**Will the Prev jump feature work immediately after an inter-Lesson jump?:**

Yes. To illustrate this, I constructed the Advanced LessonFile to jump to the Intermediate's ALRT 130, which simply does a Prev jump without any knowledge of how the user got there:

**"Advanced" LessonFile Flow**



Resource	Jump 128	Jump 129	Jump 130	S T R #
128				
NbrEntries	3	2	1	3
1st Entry	0, ALRT, 129	0, DLOG, 128	0, Prev, 1	"Begnr."
2nd Entry	0, ALRT, 130	2, ALRT, 130		"Intermed."
3rd Entry	0, Quit, 0			"Advanced"

The Intermediate LessonFile doesn't have "Advanced" in its External LessonFile NameList. It just so happens that it did, but it's not necessary. Playback remembers which LessonFile to return to, so a Prev is a Prev is a Prev. It returns to the previous frame, even if that means changing files back again.

**Inter-Lesson jumping under HFS:**

The entry in the External LessonFile NameList will be passed as-is to the Toolbox routine OpenResFile. Therefore, if only the filename is given, the LessonFile it names must be in the same folder as the current LessonFile, or in the "Blessed folder" (System folder), or in the root directory, or in one of the remaining directories in the "Poor Man's Search Path" (PMSP). The most convenient way is to keep interdependent lessons in the same folder. The PMSP contains up to 5 default directories to be searched and can be set using the SetPaths desk accessory, which is distributed with TML Pascal level 2.0 and higher. Another possibility is to give the full "VOL:Folder:Folder: ...:Folder: LessonFile" name in the NameList, but this approach is much more cumbersome to correct when you copy lessons to a different folder.

**Epilogue:**

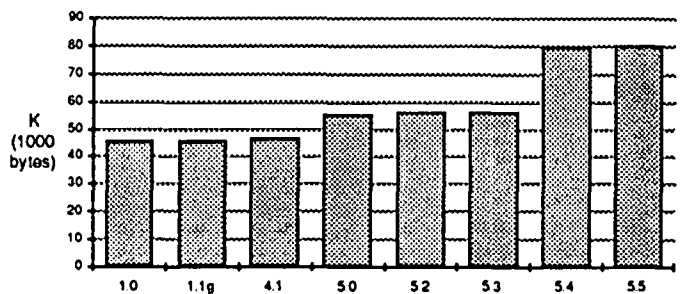
I hope there's enough info here to show how to build these resources, either manually (to build lessons with ResEdit), or in the authoring program's memory (to build handles to pass to AddResource). ☺

**Finder Upgrade contd. from pg 57**

once experimented with removing resources one at a time from the System file (using ResEdit—not for the fainthearted!) until the System crashed. Then he would replace the removed piece of the System file and try to get things running again. Then he would try to remove something else. By doing so he was able to reduce the size of the System file in a material way, but obviously this is not something everyone can do.

On a hard disk, these problems are truly trivial, but to those who have only external disk drives, especially 400K ones, every single byte of disk space is precious. In this case, System is not the only file that has grown considerably from the "older days" of 1984. Finder itself has undergone a similar progressive increase:

**Finder Size**



Here the increase is less dramatic, but no less significant for the user who would like her disk space back. The printer drivers show a similar slope upward in size as time goes on.

The problem becomes particularly acute in connection with large, powerful applications like Microsoft Word 3.0 (339K) and, particularly, Microsoft Excel (394K). In order to run these on a single double-sided disk, the System file must be virtually stripped of fonts and desk accessories, and the System Folder stripped of seldom-used printer drivers—hardly an ideal situation. Having the System Folder on one disk and the application and data files on the other is workable, but represents a throw-back to the days before single-sided drives. Reviews of Excel in those days downgraded the package for not fitting onto a system disk; the more things change, the more they stay the same. (Fortunately, hard drives are now inexpensive enough so that the problem is much less serious.)

In the short term, the only solution is to get a hard disk or not upgrade your Finder and System files unless you have to.

In the long term, it would be desirable for Apple Computer to permit and encourage users to remove unwanted bits and pieces of the System file. This would, to be sure, violate Apple's long-standing objective that a disk should be able to run on any Macintosh. But now that there are seven different types of Macintoshes out in the world, this objective is, to many, a limitation rather than a benefit.

Ready for some fun news: There's another upgrade coming ☺

# MACINTOSH BITS AND BYTES

by Lynn R. Trusal

## Creating Tree and Bullet Charts Using MORE and MacDraw

**MORE** is the most recent software package from Living Videotext, Inc., of Mountain View, CA 94043. It derives its origins and lineage from **Think Tank** which is available for both the IBM and Macintosh. **Think Tank** was the first of a new kind of software programs called "outliners or thought processors." It seemed to be most popular among those who had a need to organize class presentations or speeches and helped by better organizing the thought processes necessary for such talks. Since our thoughts often do not flow from the brain in an organized fashion, the outline function of both **Think Tank** and **MORE** made the task more orderly. Many Macintosh users may think they have no need for such a program, but unless we understand what a program can do, we are not able to see that it might be useful.

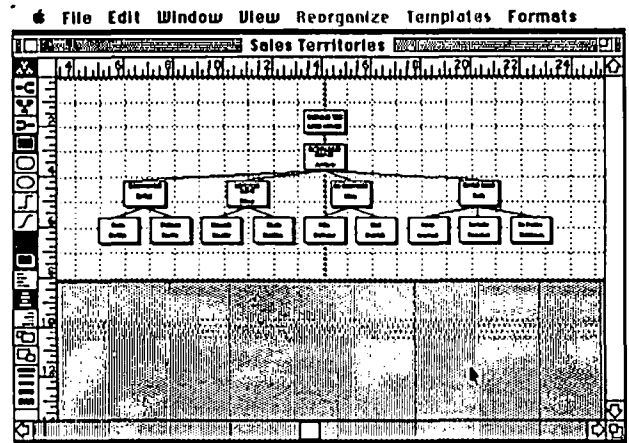
I will describe how **MORE** and **MacDraw** can be used to prepare quick tree charts. This is useful for organizational charts, and flow diagrams used to graphically illustrate certain kinds of data. **MORE** considerably shortens the process that I previously used to do only with **MacDraw**. Since tree charts are usually not text intensive, they lend themselves to an outline format and this is where **MORE** begins to shine. In this regard, **MORE** functions like **ThinkTank** and the user can quickly enter text that will eventually be contained in boxes of the tree chart. Subordinate text is indented from main text and so on until the outline contains all the points for the chart. Once this is completed, the "tree chart" option is chosen from the "Reorganize" menu and the outline is instantly changed to a tree chart format with boxes containing the text.

Not all desired organizational chart styles can be laid out exactly as desired using **MORE**. **MORE** makes boxes subordinate to other boxes based on their position in the outline. If your particular organizational chart does not lend itself to the outline format you will need to use **MacDraw** to customize it. The following is an example of a sales territory organization that begins as an outline and is later converted to a tree chart.

**Figure 1** is a sample "Sales Territory" outline prepared in **MORE**. Each indented line of text is subordinate to the preceding line.

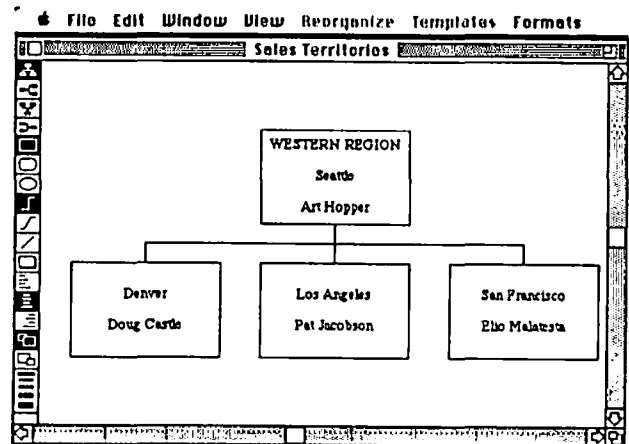


**Figure 2** illustrates the overall tree chart layout after the above



outline was converted to the chart by selecting the "tree chart" option from the "Reorganize" menu. By using the pallet tools on the left side of the screen, the attributes of the chart may be customized. The user has the option of increasing the size of the boxes in two dimensions, adding shadowing to the box, changing the shape of the box, changing the kind of lines that connect boxes or the thickness of the box lines. In addition, the fonts, font style and orientation of the tree may also be changed.

**Figure 3** demonstrates a higher magnification view of a portion of the above chart with plain square boxes and straight



line connections between boxes.

**Figure 4** shows some of the options available to customize the tree chart layout. In this figure, all the boxes have been made black and shadowing has been added. The font has also been changed but right angled lines still connect the boxes.

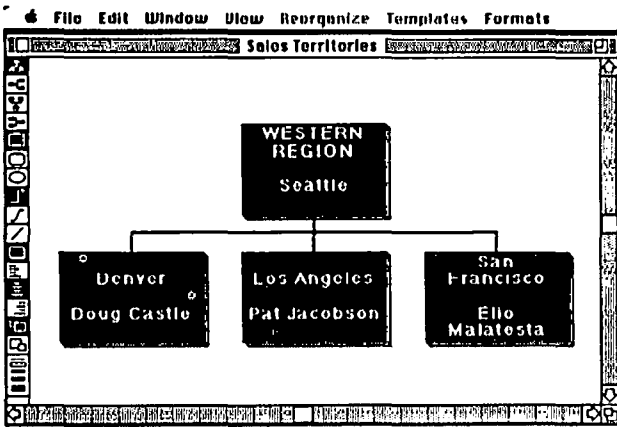
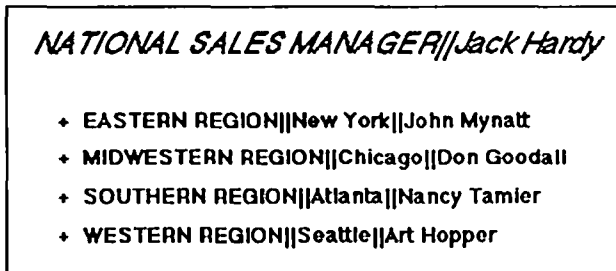
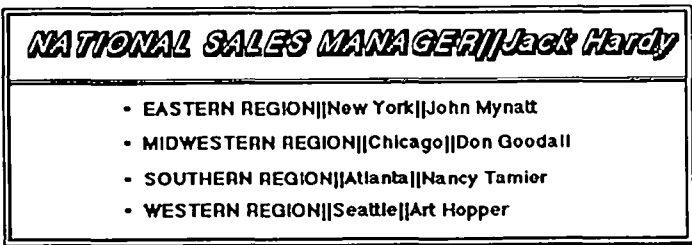


Figure 5 is a sample bullet chart of the same "Sales Territory" information presented in the previous tree chart. The layout is plain with no addition of options available in MORE. The palette at the bottom of the figure allows easy on-screen selection of fonts, font sizes, font styles, point sizes, border patterns, shadowing and bullet designations.



press (spacebar) to hide controls

Figure 6 demonstrates some of the special formatting permitted in MORE to include the addition of font changes, style changes, border patterns, and different "bullets" preceding the text lines.

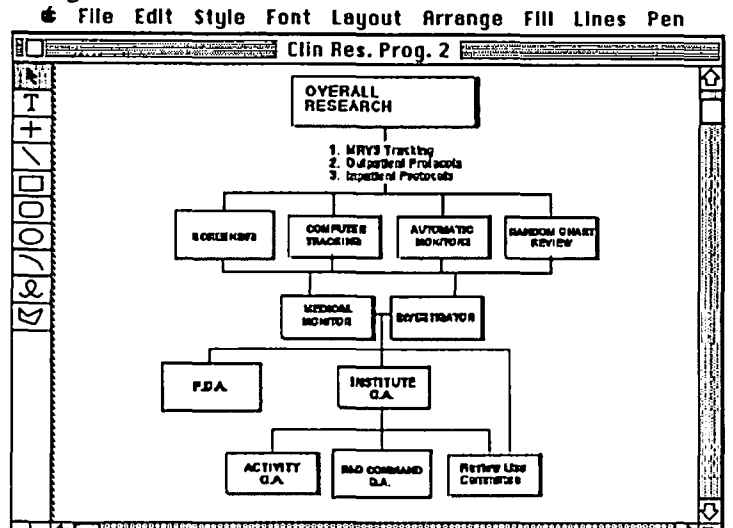


press (spacebar) to hide controls

The above figures give you a pretty good idea what can be done with MORE itself. As I mentioned earlier, if you desire tree charts modified from what is possible within MORE you may use a special feature of MORE to "export" the chart to a

MacDraw PICT format for customizing.

Figure 7 is an example of a general tree chart outline that was partially created in MORE and exported to MacDraw for custom organization.



If you have a Macintosh Plus and Switcher, the process can be speeded up even more. MacDraw can function with 128 K of RAM while MORE needs 312 K. SuperPaint can't be used with MacDraw and Switcher because it requires more than 600 K of RAM by itself. A 1.5 or 2 meg RAM upgrade would be needed. Once MORE and MacDraw are opened in Switcher, they may be saved for future use by using the "save set" Switcher command. This creates a special icon you may label as "More/Draw" or an equivalent. The next time you desire to use both MORE and MacDraw, just double-click on this icon and both applications will be automatically open. Once a tree chart is created in MORE, merely "copy" it to the clipboard, switch to MacDraw and "paste" the tree chart into a MacDraw window. In this manner, you can eliminate the need to use MORE's "export" command for transfer to MacDraw.

I have not been able to completely cover all of the options and possible combinations permitted by MORE but I wanted to give the reader a taste of what can be done with this exciting program. If your organization has the need to prepare "bullet or tree" charts you should order MORE without delay!

### Using MacDraw to Customize Cricket Graph Output

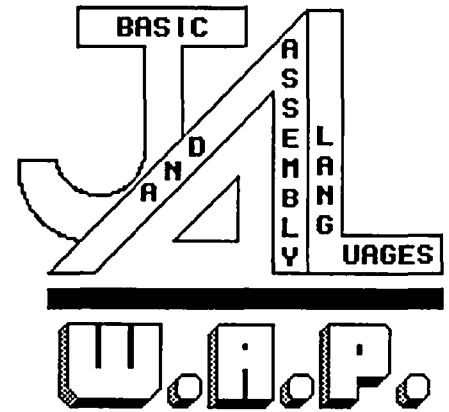
Just as MacDraw can be used to make custom changes in MORE tree charts, it may also be used to customize graphs created by Cricket Graph. As good as Cricket Graph is, it still does not afford the user all of the options or layouts that are sometimes called for. The first figure is an example of a graph created in Cricket Graph, while the second figure is the same chart after making changes in MacDraw that were not possible in Cricket Graph. The process can be speeded up by using Switcher and quickly switching between the two applications to make the needed changes. Cricket Graph graphics can be copied to the clipboard for transfer to MacDraw or they may be saved in the "PICT" format in Cricket Graph and then opened up in MacDraw directly. The "PICT" format is MacDraw's text save format.

contd. on pg 81

# Oh no—he's back !!

by

John A. Love, III



Microsoft's BASIC Interpreter, Version 3, has been out now for about 7 months ± an hour or so. I wish to conclude from this statistic that anyone who is the-least-bit interested in programming in BASIC is reasonably familiar with this significantly-enhanced version. Furthermore, since each of the following four(4) program listings is prolifically laden with comments, I will here emphasize only the critical background material pertaining to Version 3 and ignore that which you should have mastered via your use of Versions 2.1 and prior.

I'm currently in the process of developing some commercial software for an educational testing service. In the process, I had discovered a requirement for inputting some PICTURE Resources attached directly to the BASIC text file. In order to accomplish this, of course, I needed to develop separate code to create said PICT Resources (see Listing 1 and Listing 2). My ultimate goal was the BASIC code shown in Listing 3, wherein you can automatically scroll your Company's Logo within what-I-call your *Entry Credits Display* that the user sees shortly after double-clicking your application's Icon. Within this Entry Credits Display, the user sees the title of your software, your name and your Company's Logo bouncing back & forth. It's a neat touch, even if I do say so myself.

Finally, NOT related to any of the above, is Listing 4, wherein I accomplish two things. First, I input Icon data that I then save as an ICON Resource & attach directly to the BASIC text file. Second, I enable the user to drag the resulting Icon around the Window Port. Another neat touch !!

In all cases, I attached the necessary CODED resources directly to my BASIC text file using either ResEdit or the application Statement Mover supplied with Version 3 of Microsoft's BASIC Interpreter. In this vein, please name each file that which is specified in each listing's LIBRARY statement. Furthermore, since I am either inputting or writing Resources (PICT and ICON) from/to my BASIC text file, I specify the same file name in the following OpenResFile statement.

So far it appears simple enough. Just two more critical items of required interest:

- Note that I specified single precision, vice integer, when I named the required LIBRARY Resource, for example OpenResFile! Since most of these LIBRARY Resources require integer variables or parameters to be input and output, instead of specifying % as a suffix for these integers everywhere, I executed a DEFINTA-z at the very beginning of the code. However, now I have a problem with the names of the LIBRARY CODED Resources. You see, when the Microsoft BASIC Interpreter

executes the LIBRARY statement, a variable such as "OpenResFile" is created and more than 16 bits of information is stuffed into this variable. So, at least single precision must be specified. Voila — the !

- Any parameter/variable used in the Resource's calling sequence must be pre-defined if simple, or DIMensioned if an array whose size is  $\geq 10$ .

Now, the code.

Listing 1 creates a PICT Resource using your own input HEX data. We first create an empty PICTURE for a specified rectangular frame via the OpenPicture and ClosePicture combination. In between, we execute any BASIC QuickDraw statements except other LIBRARY functions. The latter are a no-no !! At the end of this sequence we have successfully defined a filled PICTURE with a given Handle. We then draw it on the screen and subsequently attach it to our BASIC text file. Note that you must specify a unique ID for each PICTURE, an impediment I avoid in Listing 2. Once my new PICT Resource is successfully attached, I dispose of its Handle to avoid Heap problems.

In Listing 2 my source of data is the Clipboard. Note the UniqueId call. Also, I use SavePicture instead of AddPicture because I'm working with a string and NOT a Handle. Then, I add a little twist that I could have easily implemented in Listing 1 — namely, I ask the user for a name which I then assign to the PICT. By the way, I use GetRes AFTER I execute SavePicture for the sole purpose of creating the Handle required by SetRes-Info. Also, I could have used DisposePicture rather than ReleaseRes to un-clutter the Heap.

Listing 3 uses my just-created and named PICTURE Resource to have some fun. Follow the bouncing ball, folks!!

Finally, Listing 4 presents some educational fun with Icons. The reason for the obvious lack of prosaic attendants to these last two listings is that I am fulfilling my promise stated at the beginning—namely, I am deleting all explanations for the fundamental BASIC syntax, for example, WHILE—WEND loops, PUT statements, the MOUSE function, etc.

contd.

### Listing 1

' Creates a PICTure Resource by inputting HEX data {Version 1}.

' This program file contains the following CODEd Resources :

' LIBinit  
' OpenResFile  
' CloseResFile  
' SetRect  
' OpenPicture  
' ClosePicture  
' DrawPicture  
' AddPicture  
' DisposePicture

' You must change the following for EACH run :

' DIMension size & DATA

' ID #

CLS : CLEAR : DEFINT A-z

LIBRARY "Create PICT.1" ' Version 1.

RefNo = 0 : OpenResFile! "Create PICT.1",RefNo

OPTION BASE 1

DIM BitArray(14) ' Integer data count + 2 for the width  
& height.

FOR bit = 1 TO 14

READ BitArray(bit)

NEXT bit

' The 1st two integers are the width & height of the Bit Image  
in # of bits.

The actual Bit Image then follows.

DATA 16,12

DATA &HFFFF,&HFF7F,&HFE3F,&HFC1F

DATA &HF80F,&HF007,&HE003,&HC001

DATA &HF80F,&HF80F,&HF80F,&HFFFF

WINDOW 1,"",(30,30)-(480,330),3

MOVETO 130,15 : PRINT "Here's your PICTure Resource!!"

SetRect! rec(1),10,30,10+2\*BitArray(1),30+2\*BitArray(2)

' Magnify the Bit Image times 2.

PictH! = 0 : OpenPicture! rec(1),PictH!

PUT (rec(2),rec(1)),BitArray(1)

ClosePicture!

DrawPicture! PictH!,rec(1)

AddPicture! RefNo,PictH!,200 ' ID = 200 (change each  
time, also).

DisposePicture! PictH! ' Un-clutters the Heap.

CloseResFile! RefNo ' What is opened, must be close !!

STOP

### Listing 2

' Creates a PICTure Resource by inputting the data on the

' Clipboard after a "Copy" operation to the Clipboard.

' {Version 2}

' This program file contains the following CODEd Resources :

' LIBinit  
' OpenResFile

' CloseResFile

' SetRect

' UniqueId

' SavePicture [ Watch Out !! =====>  
Fails when Clipboard > 3K ]

' GetRes

' SetResInfo

' ReleaseRes

' Change for EACH run : Rectangle

CLS : CLEAR : DEFINT A-z

LIBRARY "Create PICT.2" ' Version 2.

OPTION BASE 1

RefNo = 0 : OpenResFile! "Create PICT.2",RefNo

PICTresource:

WINDOW 1,"",(30,30)-(480,330),3

MOVETO 130,15 : PRINT "Here's your PICTure Resource!!"

SetRect! rec(1),10,30,275,255

' Change according to the scale of your Clipboard art.

OPEN "CLIP:PICTURE" FOR INPUT AS #1

' From the Clipboard.

ClipImage\$ = INPUT\$(LOF(1),1)

CLOSE #1

IF ClipImage\$ = "" THEN BEEP : BEEP : MOVETO  
160,200

: LPRINT "Nothing on Clipboard !!" : GOTO endProg

UniqueIdNo = 0 : UniqueId! "PICT",UniqueIdNo

' Insure that there is no conflict !!

SavePicture! RefNo,UniqueIdNo,ClipImage\$

PICTURE (rec(2),rec(1))-(rec(4),rec(3)),ClipImage\$

' OR, GetPicture & DrawPicture.

BEEP : BEEP

MOVETO 10,275

INPUT "Enter name of your PICTure ?? ",PicName\$

PictH! = 0 : GetRes! RefNo,"PICT",UniqueIdNo,PictH!

' Returns a Handle.

SetResInfo! PictH!,UniqueIdNo,PicName\$

' Assigns your just-input name.

ReleaseRes! PictH!

endProg:

CloseResFile! RefNo ' Now, everything is closed.

STOP

### Listing 3

' Demonstrates a moving Logo on your Entry Credits Display.

' This file contains the following CODEd Resources :

' LIBinit

' ChangeCursor

' OpenResFile

' CloseResFile

' GetNamedRes

' SetRect

' OffsetRect

' DrawText

' DrawPicture

```

' DisposePicture
'
' AND my Logo created as a PICTURE Resource using
  "Create PICT.2"
CLS : CLEAR : DEFINT A-z
OPTION BASE 1
LIBRARY "Scrolling Logo"
RefNo = 0 : OpenResFile! "Scrolling Logo",RefNo
Watch = 4 : ChangeCursor! Watch ' ID # of Watch
  Cursor in the System File.
LogoH! = 0 : GetNamedRes! RefNo,"PICT","Initials
  Logo",LogoH!
true = -1 : false = 0
notYet = true ' Use these constants for scrolling the Logo.
deltaX = 50
ON TIMER(2) GOSUB TimerEvent : TIMER OFF
  ' When ON, every 2 seconds.
  ' _____ Entry Credits Display [exceptionally quick using
    "DrawText" rather than "PRINT"].
WINDOW 1,"", (10,30)-(500,330),4 ' 490 by 300, with a
  shadow border.
MOVETO 123,45
CALL TEXTFONT(0) ' Chicago Font.
CALL TEXTSIZE(36) ' 3 times normal Size.
DrawText! "Miracles etc."
CALL TEXTSIZE(24) ' 2 times normal Size.
MOVETO 120,80
DrawText! "by John A. Love, III"
CALL TEXTSIZE(12) : CALL TEXTFONT(1)
  ' Default values.
MOVETO 160,140
DrawText! "Click 'OK' or press <CR> and,"
MOVETO 160,160
DrawText! "then, select from the Menus."
' _____
SetRect! LogoRect(1),20,180,240,290
DrawPicture! LogoH!,,LogoRect(1) ' Original size, starting
  at a specified corner.
' DrawPicture! LogoH!,LogoRect(1) ' Scale to given
  Rectangle.
SetRect! but(1),310,270,480,290
CALL BoxedButton (1,"Copyright (1987) [OK]")
  ' ID# and the title.
INITCURSOR : BEEP ' Decision time, folks !!
DialogActive = true
TIMER ON ' Start scrolling your Logo.
WHILE DialogActive ' OK or <CR> exits.
  EventType = DIALOG(0)
  IF EventType = 1 OR EventType = 6 THEN DialogActive =
    false : GOTO endActive
  GOSUB ScrollLogo
endActive:
WEND
TIMER OFF ' Stop the scrolling.
' _____ Bye Bye !!
WINDOW CLOSE 1
DisposePicture! LogoH! ' Un-clutters the Heap as you
  continue.

```

```

' _____
' Your LONG program has just begun !!
' _____
CloseResFile! RefNo
STOP
' _____
' Sub-routines & sub-programs :
' _____
TimerEvent:
  notYet = NOT notYet
RETURN
' *****
ScrollLogo:
  IF notYet THEN RETURN
  CALL ERASERECT (VARPTR(LogoRect(1)))
  OffsetRect! LogoRect(1),deltaX,0 ' Only back & forth,
    NOT up & down.
  DrawPicture! LogoH!,,LogoRect(1) ' Original size,
    starting at a specified corner.
  ' DrawPicture! LogoH!,LogoRect(1) ' Scale to given
    Rectangle.
  notYet = NOT notYet ' Wait for next TIMER Event . . .
  deltaX = -deltaX ' . . . and, then, reverse throttle.
RETURN
' *****
SUB BoxedButton (Id,title$) STATIC
SHARED but()
  BUTTON Id,1,title$(but(2),but(1))-(but(4),but(3)),1
  LINE (but(2)-1,but(1)-1)-(but(4),but(3)),,B ' A double
    box around the Button.
  LINE (but(2)-3,but(1)-3)-(but(4)+2,but(3)+2),,B
END SUB

Listing 4
' "Create ICON Resource"
' by: John A. Love, III
' Washington Apple Pi Users' Group
'
' Creates an ICON Resource by inputting HEX data.
' This program file contains the following CODEd Resources :
'
' LIBInit
' OpenResFile
' CloseResFile
' ChangeCursor
' SetResInfo
' SetRect
' UniqueId
' SaveIcon
' GetIcon
' DrawIcon
'
' You must change the HEX data for EACH run.
CLS : CLEAR : DEFINT A-z
LIBRARY "Create ICON Resource"
RefNo = 0 : OpenResFile! "Create ICON Resource",RefNo
WatchCursorId = 4 : ChangeCursor! WatchCursorId
  ' Tick Tock !!

```

contd.

```

OPTION BASE 0
DIM IconData(63)
DIM OldImage(201) ' See Page 147 of MS BASIC's
User Manual.
READ IconName$
FOR word = 0 TO 63
  READ IconData(word) ' Data only, NOT the Mask.
NEXT word
DATA Disk
DATA &H0000,&H0000,&H3FFF,&HFFFC,&H41FF,&HFF82
DATA &H41FF,&HE382,&H41FF,&HC182,&H41FF,&HC182
DATA &H41FF,&HC182,&H41FF,&HC182,&H41FF,&HC182
DATA &H41FF,&HE382,&H41FF,&HFF82,&H40FF,&HFF0
DATA &H4000,&H0002,&H4000,&H0002,&H4000,&H0002
DATA &H4000,&H0002,&H4000,&H0002,&H4000,&H0002
DATA &H43FF,&HFFC2,&H4400,&H0022,&H4400,&H002
DATA &H4400,&H0022,&H4400,&H0022,&H4400,&H0022
DATA &H4400,&H0022,&H4400,&H0022,&H4400,&H0022
DATA &H4400,&H0022,&H4400,&H0022,&H4400,&H0022
DATA &H3FFF,&HFFFC,&H0000,&H0000

```

```

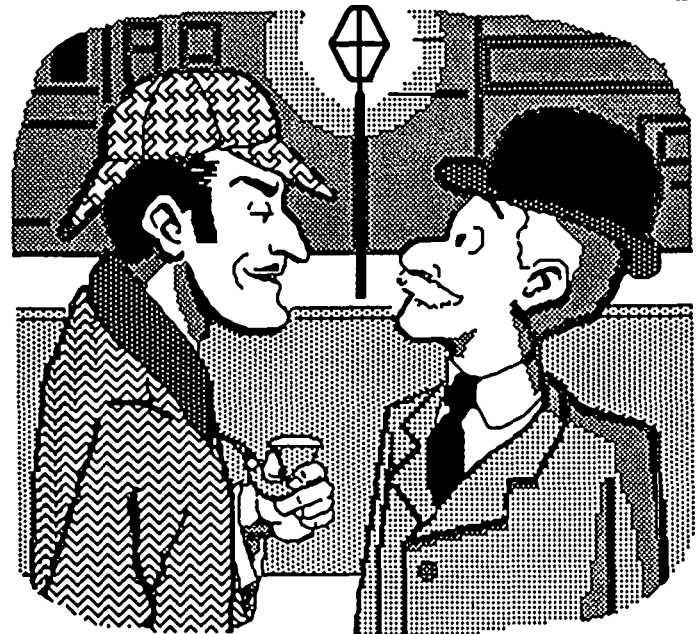
UniqueIDNo = 0 : UniqueID! "ICON", UniqueIDNo
SaveIcon! RefNo,UniqueIDNo,IconData(0)
IconHandle! = 0 : GetIcon! RefNo,UniqueIDNo,IconHandle!
SetResInfo! IconHandle!,UniqueIDNo,IconName$
Show:
  WINDOW 1,"", (10,30)-(490,330),3 ' Global coordinates.
  wTop = 0 : wLeft = 0 : wBottom = 300 : wRight = 480
  ' Local coordinates for this Window.
  LOCATE 2,11 : PRINT "Drag the new ICON around to test
  its appearance."
  ' I could have presented the following message prompt in an
  ' active, but un-selected BUTTON (State #1). However, if
  ' I then dragged my Icon across this BUTTON, the Icon
  ' would disappear behind the BUTTON rather than appear
  ' over it. I still need a State #1 BUTTON though in order for
  ' the DIALOG (0) function to register my pressing a <CR> to
  ' exit this "Show" routine. So I create one, but one that is
  ' infinitesimally small so it can't be seen. It just has to be
  ' "there" folks !! Take out a magnifying glass and see for
  ' yourself !!
  MOVETO 180,280 : PRINT "Press <CR> to Quit"
  SetRect! rect(0),150,265,330,285
  ovalwidth = 5 : ovalheight = 5 ' Dimensions of the
  rounded corners.
  FRAMEROUNDRECT VARPTR(rect(0)),ovalwidth,
  ovalheight
  BUTTON 1,1,"", (477,297)-(478,298),1
  State = MOUSE(0) ' Quantifies values for MOUSE(1)
  & MOUSE(2).
  r(0) = MOUSE(2) : r(1) = MOUSE(1) : r(2) = r(0) + 32 : r(3)
  = r(1) + 32 ' Top, Left, Bottom, Right local coordi-
  nates.
  GET (r(1),r(0))-(r(3),r(2)),OldImage ' Save image
  BEFORE plotting Icon [GET image within (x1,y1)-
  (x2,y2) and store in the array = OldImage].
  DrawIcon! r(0),IconHandle!

```

```

INITCURSOR : BEEP ' Wake up, folks !!
GetNextEvent:
  IF DIALOG(0) = 6 THEN ExitShow ' <CR> exits
  the program.
  State = MOUSE(0)
  IF MOUSE(2) < r(0) OR MOUSE(2) > r(2) OR
  MOUSE(1) < r(1) OR MOUSE(1) > r(3) THEN
  GetNextEvent
  ' Nothing to drag if starting outside of Icon.
  WHILE MOUSE(0) < 0 AND DIALOG(0) <= 6
  ' Must drag !!
  IF MOUSE(2) < wTop OR (MOUSE(2)+32) > wBottom
  OR MOUSE(1) < wLeft OR (MOUSE(1)+32) >
  wRight THEN 10 ' Don't drag outside of
  enclosing Window.
  PUT (r(1),r(0)),OldImage,PSET ' Put old image
  back BEFORE plotting Icon again at a new place
  (force Copy transfer mode, rather than the default
  XOR mode).
  r(0) = MOUSE(2) : r(1) = MOUSE(1) : r(2) = r(0) + 32 :
  r(3) = r(1) + 32 ' Local coordinates of moved Port.
  GET (r(1),r(0))-(r(3),r(2)),OldImage ' Save image
  of moved Port.
  DrawIcon! r(0),IconHandle!
  FOR delay = 1 TO 500 : NEXT delay ' A small
  enough delay to eliminate some of the screen flicker
  during the drag operation.
10 WEND
GOTO GetNextEvent
ExitShow:
WINDOW CLOSE 1
CloseResFile! RefNo
STOP

```



"Good news, Inspector! I have finally succeeded in destroying Professor Moriarty's laboratory, thus ridding the world forever of his fiendish thinking machine, with its 8 meg of RAM, its 25-MHz clock speed, . . ."



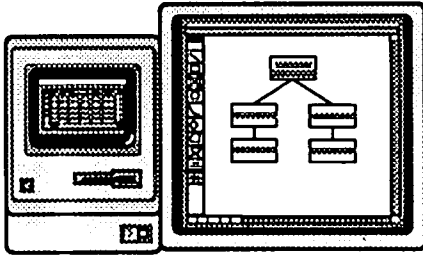
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9 AM to 9 PM  
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## WorkStation Rental

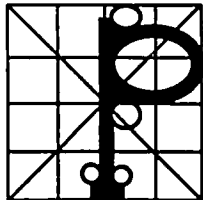
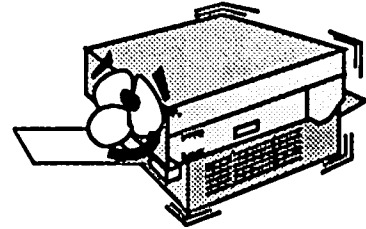
Macintosh workstations are available starting at \$10.00 per hour depending on hardware configurations. Price also includes use of the latest popular software.

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We have the largest selection of Type faces for the LaserWriter on the East Coast. Over 300 fonts are available for your use. We print on Hammermill LaserPlus paper for better camera ready copy.



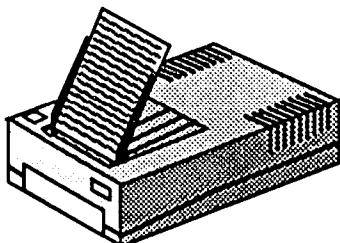
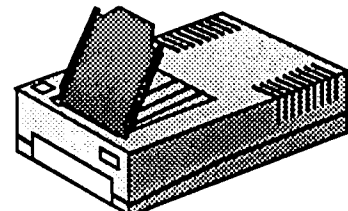
## LaserFonts/LaserSampler II

MacTography sells all the currently available PostScript fonts. Call for a listing of fonts and prices. The **LaserSampler II**, published by MacTography, is a useful reference guide on all the current PostScript Fonts. Two Volume set **\$39.95**.

## Scanning Service and Sales

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Scan your art work and photographs into the Macintosh. Fast, accurate scanning, saved in MacPaint SuperPaint, TIFF, EPSF format. Self service or Full service available.

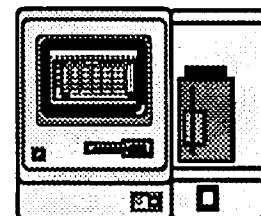


## OCR Service—PC Scan Plus

With OCR software from Dest we can read typewritten pages into MacWrite or ASCII for use on the **Macintosh** or **IBM**. Self service or Full service. When Available we will have OCR from Abaton and New Image Technology.

## IBM to Mac File Transfer

With the Dayna FT 100 we can transfer data from the IBM 5.25" disk to the 3.5" Macintosh format. Some programs can be transferred with formatting retained. Self service or Full service.



# MACMEMORY UPGRADES

by Peter Trinder

## Overview

I read Lynn Trusal's brief report about the TurboMax in the June Pi and it reminded me that I had not seen anything else written about this product or the other memory upgrades from MacMemory. I upgraded my 512 enhanced Macintosh to 2 Mb by adding a Max2 board. I have now sold that and replaced it with their newest upgrade board called TurboMax. I thought you might like to hear about my experiences.

## Max2

The Max2 is a daughter board that will fit onto either a 512 or 512e and will expand the memory to 2Mb. If it is installed onto a 64k ROM machine the memory is divided 512/1.5Mb; the 1.5Mb is in a RAM disk. (I think this is correct but as mine was on a 512 enhanced with the 128k ROMs I never tested it with the old ROMs). In my case the Max2 provided me with 2Mb of contiguous memory. A disk including a Ram Disk and Imagewriter spooler called MaxPrint is included.

The board is normally supplied already mounted on a genuine Apple motherboard on an exchange basis. In the USA you send back your old board to MacMemory or their agent; in the UK there is not as far as I know a postal arrangement. I had mine supplied as a raw kit and had to modify the motherboard myself. I enlisted the aid of the company service engineer and we worked through the instructions step by step. I did the reading and he did the surgery. It took us 1 hour of concentrated chip removal, solder sucking, placing in new sockets and finally fitting the new daughter board into the new locations provided on the motherboard. After fitting we set the voltage to the correct level, a very important procedure often forgotten. We were gratified by the About Finder showing 2048K!

It is possible to add additional 2 Mb to the Max2, something that I never did because of the high cost of the Megabit chips. The chips required are the ones with 16 legs, not surface mounted ones. It is also possible to modify a 128K board to add a Max2; instructions are provided and kits are available to special order.

I find that 2Mb is just nice. I use PageMaker, Word and Excel in Switcher all day with no problem. Alternatively, I set 512K Ram Cache and the Mac will reload the last application in no time at all.

One feature missing from the Max2 is a SCSI port. MacMemory now has the MaxPort which adds this to a 512e Macintosh, either with the Max2 or without. I doubt whether any other make of SCSI port will work because of the physical limitations imposed by the Max2 board. The MaxPort clips onto the 68000 and a ribbon cable goes to an auxiliary board located on top of the disk drive case. From this board, a second cable goes to the external port. MacMemory designed this to fit into the battery compartment in place of the cover. The connection is a Centronics type not a DB25. I did not like the location, so I carved a neat hole in the same location as the SE external Bus port. We are fortunate at work to have a number of old Mac backs, so I had a backup in case of errors.

I have one recommendation if you have the Max2 and MaxPort and that is to have the MaxChill fan fitted. I felt that the Mac was getting rather hot. The MaxChill is very quiet and will not worry those who love the Mac for its peaceful silent operation. The combination of Max2 and MaxPort worked flawlessly and I can recommend these as an excellent buy.

## TurboMax

This upgrade consists of a daughter board which attaches to the motherboard of a 512e OR MacPlus, a new drive housing, an additional auxiliary power supply and a rotary fan. The board has a 68000 CPU running at 16 MHz, a faster SCSI port, an additional 1.5 Meg of RAM and an optional 68881 maths chip. It also has a built-in interface for the E-Machines Big Screen. The RAM chips are on SIMMS and there is a pair of empty slots for two 1 meg boards to increase the RAM to 4 Mb. The new disk drive housing is ready drilled to take an internal hard disk.

Installation is relatively simple. It involves making only two solder connections—these are for the new power supply. Otherwise it is just a fitting job. Clear instructions are provided so that it is unlikely that any problems will occur. The first operation is the strip the Mac of back, motherboard and disk drive mount. You then solder in the PSU connection. The PSU has a jumper for 110/220v selection so that it can be used in Europe. It is, of course, essential to set this before anything else. It comes set to 110v.

The next operation is to connect and setup the auxiliary power supply to the TurboMax board. Then, very carefully, because everything is laid out on the bench, turn on the power and set the correct voltage on the TurboMax (4.9v). This is done without the TurboMax being connected to the Macintosh board. Then attach the Killy clip to the Mac's 68000. This clip is a high class clip and can only be attached once. If you have a ceramic 68000 CPU (mauve coloured) make sure it has little plastic spacers at each end. Some ceramics are actually on the board and are unsuitable for attaching the clip. (The black plastic 68000's are fine.) So it is wise to check this with whomever is going to fit the kit. I did not find this as difficult as I had thought. Following the procedure laid down in the manual, it snapped into place very easily.

With the clip on, you attach 3 standoffs to the TurboMax. Three little plates with instant adhesive are located on top of some chips on the Mac motherboard. You then lower the Turbo onto the Mac board carefully inserting the connecting clips into the Killy clip and resting the bases of the stand-offs on the plates you have just attached to the motherboard. This is not difficult but you must be careful.

At this stage you have to re-assemble, check that the Mac is working and set the voltage between pin 5 of the mouse port and the chassis to +4.9v. Next, install the fan in the top right hand side of the case and connect everything up. I then cut a hole in the back of the case for the SCSI. This takes almost as long as installing the TurboMax! Interestingly, they provide a 25pin connector so

the standard Apple SCSI cable will work.

The exchange disk drive mount has space for a 20 or 40meg drive. MacMemory supplies a Connor drive. There are several different versions of this drive, so I would suggest that MacMemory ones should be used. They are called TurboDrive 20 and 40. I will try to get hold of a suitable drive to try it out. The SCSI cable has got a connector built in so it is a simple matter to install.

If you have a 512e, you use the TurboMax SCSI port. On a MacPlus the you have the choice of using the Apple port or the TurboMax port by altering a jumper on the TurboMax. This does mean opening the case.

I had some initial problems with my SCSI which is a Qisk. They are 20 and 40 meg units. Very well made with neat metal cases, a SCSI device number selector on the front panel, and a security key like a car ignition on the front. They use a fast driver and initially my drive would not work off the TurboMax port. However, I have temporarily reinitialised with Apple's new SCSI 1.3 from the new system stuff and it goes very fast. The Qisk makers have subsequently tweaked their driver and we have tested a Qisk40 with a 1 to 1 interleave with Disk Test. For the Standard Qisk, 100 32K Reads were done in 9.6 seconds. With a 1 to 1 interleave we got this down to 5.5 seconds!

The TurboMax gives you a total of 2Meg on a 512e board and 2.5Mb on a Plus, in both cases expandable to 4 meg as I mentioned earlier. There is also MacMemory's CrashSaver built in to the board. If you have a RAM disk and there is a bomb it recovers everything intact. I set up a RAM disk with System, Finder, Printer Driver and Excel. I selected ShutDown the Mac, rebooted, and in about 2 seconds there was the Finder as I had left it!

Every program that I have tried so far runs perfectly. Except they run significantly faster. I hear that on a 68020 there is some software that needs to be patched to run, which is not surprising. On the TurboMax this is not a problem. I have the 68881 fitted and at the present 2 meg of RAM. Excel 1.03 and 1.04 (which I don't have yet) use this chip and the performance enhancement is astonishing. Scrolling, opening dialogs and other normal Mac events all happen with noticeable increase of speed.

Oh I almost forgot—there was one incompatibility. After I installed the TurboMax, it was near midnight and I was keen to see what happened. I was totally frustrated when on booting I lost the keyboard response. I tried everything I could think of but to no avail. So I called MacMemory, told them I have System 4.1. "Got Easy Access?" he asked. "Yes", I replied. "Well throw it away", he said. And that was the problem! Since then I am totally delighted with the enhanced performance.

*Peter Trinder lives in England, and manages an Apple Dealership in Maidenhead. He has been a member of Pi since 1980.* ☺

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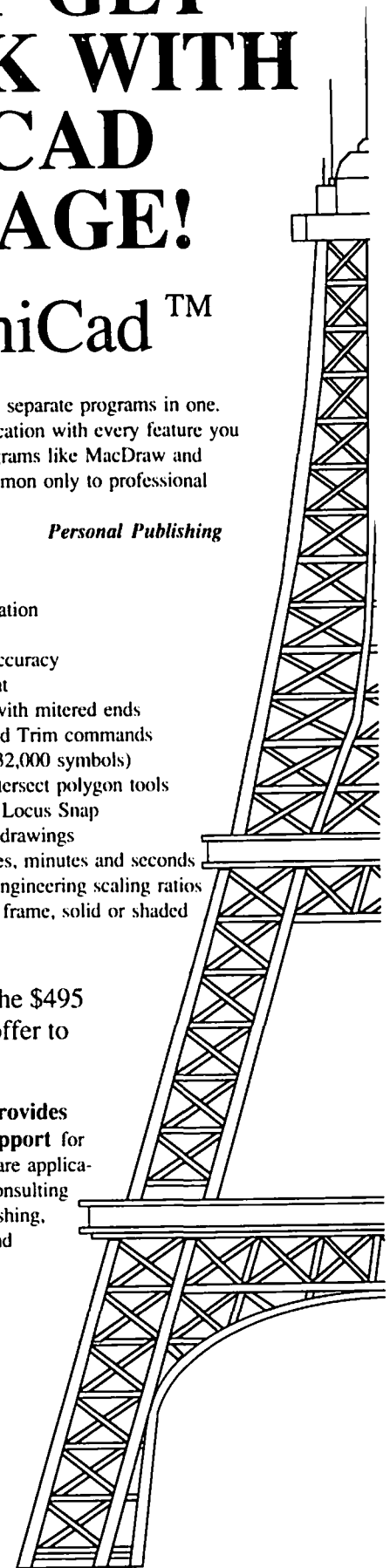
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# BEST OF THE MAC ITEMS FROM TCS

by Bill Baldrige

## Accessories

**BILL BALDRIDGE** on 12/12

The only advantage the Fanny Mac has over the System Saver is its low profile. Other than that, the SysSaver also has built-in surge suppression, but in addition, it has two outlets into which one can plug peripherals (printer, modem, hard disk, etc.) and switch them on from the front of the SysSaver. Add to this the added quietness of the Kensington unit, and I think that unless the low profile of the Fanny Mac is important, the SysSaver is by far the better unit.

**MARK BERRY** on 02/15

I bought a Fanny Mac over the System Saver because of the price and the low profile. The profile is important to me as I have a Macstation II. The System Saver wouldn't fit under the Macstation.

**DOUGLAS E CANTON JR** on 02/16

How does it work/compare noise wise?

**MARK BERRY** on 02/18

It works fine keeping the upper left nice and cool and best of all—no power supply problems(knock on wood!). I couldn't really say about the noise level because I haven't heard any other fans. I vaguely remember reading a review in one of the Mac mags saying it was in the middle noise-wise. It doesn't bother me much.

**PAUL CHERNOFF** on 02/21

I got a Fanny Mac a month ago, and it has kept my Mac cool, though I believe that it causes occasional interference on my screen. While the noise does not bother me, it makes more noise than my IBM AT clone does at work.

**BILL BALDRIDGE** on 03/22

A hint for those wishing to retain the integrity of those valuable disks in transit: Stop by your local tobacconists and ask for La Corona Whiffs; they come in a flat tin (or metal container, if you don't speak british). The dimensions of this can (to really get colloquial) are so close to those of a 3.5 inch diskette you'd swear it was made for this purpose. For a really tight fit, just use the plastic sleeve the disk came in. The can will hold two comfortably or three if you want to force feed it (but you'll have to tape it closed). Lastly, as to what to do with the "little cigars" which come with the tin...many ideas come to mind, but most can just toss them, or give them to someone who has the habit. Cost: around \$1.75-\$2 (but can <grin> be re-used many times). (Ed. Note: Seems we had advice eons ago not to use the plastic envelopes—static electricity producers.)

## Business Accounting

**SEAN GRIFFIN** on 02/15

I've been using Dollars & Sense since Jan. 1985 and I think it's great. The manual is only so-so. But there is a book I found at B.

Dalton's called either "Understanding Dollars & Sense" or "Using Dollars & Sense" that made lots of things clear. I prefer to set up my own accounts, and probably my biggest mistake early on was to misunderstand the "monthly amount" column under Account Definitions. Instead of entering figures for assets and liability accounts, I just entered zero. So my budgets were screwy and my cash flow often in the wrong direction. The other mistake I made at first was making too many accounts, leaving my finances unnecessarily complex. The book I mentioned earlier does a pretty decent job of explaining how and why to keep things simple without sacrificing access to the info you need.

**CHASE RIDGELY** on 03/25

We have just purchased Great Plains hard disk accounting software for work. Our choice was limited to this program since as home builders we need an intergrated job costing pack. Thus far, Great Plains has not been very supportive of their product and their help has at times been disinformation. I hate to say this but I probably should have listened to our CPA and bought a MS-DOS machine [BIG MISTAKE! - ed.]. Great Plains refused to answer our questions and directed us to a local CPA firm to demo the program. It was encouraging knowing local support would be coming from someone who denied the existence of Switcher. After we decided to find someone familiar with the program on the Mac the CPA firm had the audacity to bill us for the demo. 2 weeks ago after spending \$1500 on the package and several weeks learning the manual I saw a Mac version of hard disk accounting at Mac Corner. Phone calls to Great Plains and we find out ,yes since last November they have had a Mac release—no we can't exchange our version for the Mac version since we didn't pay for the upgrade despite the fact they said it didn't exist when it did. We have now sent the program back for the upgrade—anyway, thus far Great Plains has been a great pain. The people at Layered have been wonderful even though we don't own their program. Also, if anyone knows of job costing programs that use the Mac interface I would be interested to know.

**DAVID GURSKY** on 03/25

Sorry to hear about your experience with Great Plains. I'm afraid I can't be of much help though, as I have no idea what Job Costing is. A person who might be able to help you is WAP's Treasurer, Ed Meyerson. His number ought to be in the Journal. He and his wife are CPAs by profession and Ed gave a demo of two Mac accounting packages at last month's General meeting. Actually, now that I think about it, another option is so-called "vertical software". I'll spare you the gory explanation, but what you also should consider is calling one of the big local dealers (Clinton would be your best bet), explain to them what you are looking for, and ask them to check with the listing of vertical software on AppleLink. I did this recently for Dental software, through Clinton's Tyson's Corner office, and had my listing that evening. Whatever you do, when you have some more information, come contd.

on back and let us now what you found out!

#### Data Bases

KEVIN PARKER on 03/14

I am looking for an inexpensive database or file system that could handle a directory of members for a small (<200 people) organization, with the capability of listing members by membership status, zip code, etc. I am thinking about getting Microsoft Works because I could also use a spreadsheet. The other possibility is to buy two separate programs, like Reflex and MacCalc, which would be cheaper but probably they don't work together as well. I have MacLion, but it doesn't seem to run on my enhanced Mac and it's not very good, anyway (I got it on clearance for \$30, so it wasn't much of a loss). Any suggestions?

DAVID GURSKY on 03/15

Kevin, If you don't need relational capabilities (i.e. you have in your database a list of people which contains a state of residence, and a list of states. In a relational database you can logically connect a given record in the person list with a given record in the state list, by the common state field) then take a look at Record Holder. It has gotten consistently good reviews, and its dirt cheap (\$50 Retail!) And I would not go with MS Works as I find it to be an expensive solution, and if you're going to spend the bucks, you can find two separate packages that would do the individual tasks better and link them with Switcher!

NICK ROBERTSHAW on 04/07

News! Record Holder will export a database that Microsoft Word 3 can read for mail merging. This is much better for formatting to the laser than Record Holder's report formats.

FERNANDO SALAZAR on 03/26

David, some questions about Double Helix... I've been using (single) Helix 2.0 for about a year, and I'm very pleased. Question 1: is it possible to upgrade to Double Helix? and Question 2: are Helix 2.0 collections compatible with Double Helix?

DAVID GURSKY on 03/26

The answer to both of your questions is yes. To upgrade to Double Helix, you'll need to contact Odesta. And yes, Helix Collections are upwardly compatible with Double Helix Collections. There is a version of the "Update Collection" application shipped with DH that will read and modify Helix Collections to Double Helix format. I have done so with all my collections and have had no problems. Given my above caveat, I strongly recommend upgrading from Helix to Double Helix. DH is a superior product, and it is where Odesta is focusing their attention.

ALLAN BALLIETT on 04/07

Dave, are you a member of the Helix users association? I called the guy who runs it and he said he would send me an info packet and application but I've seen zip. But what a wonderful database!! What I find so unbelievable is the abstract stuff that DBaseIII programmers are subjected too! HELIX makes relational databases FUN and EASY. Of course, I'm going to need another 20 mg hard disk if I enter much more inventory!!

DAVID GURSKY on 04/07

I never joined the Helix User's Group. I have their original application from when I bought Helix 1.14 (seems like just yesterday). What is their phone number? I have noticed a deterioration of the quality of help on their line. Frankly I think it's a pity, but the other side is it's no worse than many other help lines I've seen. A shame the 800 number went away, but on the other hand, they do return calls. I agree wholeheartedly with you about dBase III (are you listening Bill Amon?).

ALLAN BALLIETT on 04/08

Thanks Dave! I don't have the HELIX Assoc. # handy, but I will dig it out and post it for you. (It may take a while!) The shocking thing about it is that it costs around \$60 a year but, on the other hand, they theoretically have a BBS system that contains a lot of pre-templated solutions to common HELIX applications, plus in depth support and news. I'll start hunting now...

ALLAN BALLIETT on 04/12

Dave, The Phone Number for the Helix Users Group is: (503) 344-4252. Buddy Page heads it up.

#### Desk Accessories

JERRY WALZ on 03/29

CE software's DiskTop is an excellent implementation and improvement on DiskInfo. I have it on all of my systems disks and use it every day. Good \$25 value.

DEACON MACCUBBIN on 04/07

I just received an update to DiskTop 2.0 yesterday. It came with a new version of Widgets and a very solid and professional manual. Those folks at CE Software are fabulous! The new DiskTop 2.0 has some new additional features and CE asks that you send another \$7 if you decide to keep the new version. Version 2.0 will not be released as shareware. It will be sold at \$39.95 and sent free to all v1.2 registered owners. (v1.2 will still be distributed as shareware).

JERRY OPPENHEIMER on 04/03

I'd like to alert everyone to an incompatibility problem I've encountered on my Plus using Tempo 1.1b (the latest version) and Superspool, the latest version. I have Tempo autoboot. I have found that when I boot Superspool, which is not a DA, but is booted from the desktop — they don't work and I get a bomb. This has happened to me with word processing files in Microsoft Works 1.0. Apparently Tempo and Superspool in ROM don't mix. The way around it, I've found, is to quit Tempo, then print and Superspool will work. When the printing is over, call up Tempo again. Has anyone see this problem. If so I'd like to hear your experiences. Maybe I'm doing something wrong. neither the Tempo nor the SuperSpool manual discusses incompatibilities.

DOUGLAS E CANTON JR on 04/06

I have seen similar problems with MacLightning when using Superspool 3.1d? or Maxprint (Macmemory) with, among other programs, Word 1.05 and 3.0. The printing goes haywire and eventually there is a bomb. It "seems" to work (spooling or spellcheck) as long as they are not being done at the same time/  
contd.

exiting Maclighting when printing. Word 3.0 has problems with Superspool—period. (footnotes print double & other annoying bugs). Note that my Word “preferences” is set for program and file to reside in memory (2meg) and may thus be competing for memory. With 2meg, I don't know if that may/should be the case. P.S. Is there a later version of Superspool?

LOUIS M. PECORA on 04/11

I've also found Tempo incompatible with Switcher (lots of garbage appears in the menu area when switching—clicking on it causes bombs) and with the DA PopUp (which makes menus PopUp anywhere on the screen—it intercepts Tempo <cmd> strokes if they use the shift key). Tempo is nice, but it must do some real deep messing with the keyboard-system interface. Oh yes, one more: Tempo and OverVUE are also incompatible—when using Tempo the OverVUE menus remain dimmed and apparently inaccessible.

### Desktop Publishing

LLOYD SWIFT on 03/16

I have three specific RSG3 questions: 1. How do you write black on top of a pattern. See page 28 of RSG3 docs for what I want to do. I can't find documentation of how anywhere and can't figure it out myself. It used to be possible in RSG1. 2. How do you set up a template for a left-hand or right-hand page with text (and possibly other) blocks in place and then copy it to the proper pages, e.g. I'd like to set up text blocks with a gutter margin for left and right hand pages and then copy the template for right hand from page 1 to pages ,5,7,9, etc. and the left-hand one from page 2 to pages 4,6,8,10 etc. Haven't figured this one out yet either. 3. Why when you import a picture into a graphics block and set it to “run around” and then put a frame around it and mess around a bit with the picture and the frame, the text suddenly departs from beside the picture and won't come back? The picture behaves like a picture in MacWrite—takes the whole width of the page even though it has a small-sized block. The “objects” don't seem ever to do this but pictures do sometimes. Frustrating. Anybody had similar trouble and any fix?

RICHARD MARTIN on 03/17

I really like RSG3, too. It can't beat MacWrite for simple word munching, but the output sure looks pretty on a LaserWriter. In fact, I know somebody that prefers RSG to Word as a straight word processor. So what's the big deal about Pagemaker, anyway? On to your questions... 1. You can do this by overlaying a text block on top of a pattern with run-around turned off. I hope this is what you mean, because the subject isn't touched upon on page 28 of my docs (Premiere edition). 2. I assume you know about the two “Master” pages, L & R. What you type on them can't be edited on regular pages, but there's a way around that. On page 1, layout text blocks and whatever however you'd like them to be on the odd pages. Then go to the size-to-fit view, select everything using the selection rectangle on the whole page, and paste that merrily onto all your odd pages. Repeat the process with all the even pages. When finished, delete pages 1 & 2. Voila! You can adjust the gutter via “Design Grids.” 3. You have to make sure that your graphics & frame overlap one of the sides of the text block underneath. RSG can't run-around both sides of a block, so just shoves the text underneath. I hope they do some-

thing about this in RSG3.1....

LLOYD SWIFT on 03/29

Thanks for your answers to my RSG3 queries. I still have not found a way to make it overlay a black text over a pattern. When I do what you suggested—“overlaying a text block on top of a pattern with run-around turned off”—I still get the text block as a white rectangle overlaying (covering up, defacing, obscuring) the pattern. When I said that what I wanted was on page 28 of the documentation, I meant that the right hand column on that page consist of black text on top of a gray pattern which is what I want to be able to do. I was NOT suggesting that the subject was “touched on” on that page—the documentation says nothing about what I want to do. They do have (on page 48) a box on Outline type on background fill which sounds like the same thing but isn't. Anyway I haven't found a way to make it work—even sending the pattern behind doesn't seem to do it. The other two answers are right on! Thanks.

### Educational Software

FRED PUHAN on 02/02

Just read about a package of 11 games for pre-K to 2nd graders for the Mac called Match-On-A-Mac by Teach Yourself by Computer Software in Macazine... Their address is 2128 W. Jefferson Rd., Pittsford, NY 14534. Has anybody heard about it? I would REALLY like to purchase some QUALITY software that my 5-year old can use!!! She LOVES to play on my Mac, but what I've got for her (learning math, reading, etc.) is REALLY, REALLY LIMITED!!!

### Graphics & Design Software

CHARLES REILLY on 04/05

Please explain how Mac deals with laying out wide documents, say 12-16" wide. Say we want to do some artwork as a template for making a silk screened paper decal. Does software (FullPaint, MacDraw, etc.) limit width? Or is there a way to do wide documents and have them print out sideways?? A second problem is finding a printer. If it's true that software allows one to utilize full width of printer, then I may be able to get by with a 15" wide printer. Are people finding the Imagewriter 15 a good machine for desktop pub uses? Are there alternatives? Finally, is Laserwriter output wider? Please refer me to sources of reading so I can get a handle on these things before I jump in.

DAVID GURSKY on 04/05

The answer to your question varies from from package to package. Software has an entry under the File menu called “Page Setup”, which sets up what type of paper is in your printer, including 11" x 14" continuous forms. The options vary from package to package. Helix will allow you to setup customized form sizes. MacPaint only knows about 8.5" x 11" forms. Printing wide documents sideways can be done in the Print dialog box (appears when Print is selected from the File menu.) Two icons appear in the lower left corner of the box, one for normal printing, the other for sideways, (portrait vs. landscape). LaserWriters are stuck with forms no wider than 8.5". Now you can print sideways on legal forms for 14" output, but your printout could still only be 8.5" wide. Laserwriters do not do continuous forms.

contd.

**BILL BALDRIDGE on 04/06**

There are some applications, like MacPlot, which are set up specifically to output to plotters. There are also plotter drivers for MacDraw (PlotStart from SoftStart), and speaking of which, MacDraw allows documents of almost unlimited size, if you have a good straightedge, an X-acto knife and some Spray Mount—I regularly do 16x20 posters with this latter method. With the Mac, you are only limited by the screen and your imagination when it comes to graphics.

#### **Hard Disks**

**JAMES DONNELLY on 03/30**

Why is a hard disk (Apple 20SC) likely to do this? About twice a week it decides to obliterate all icons and announce that “The disk is so full that I cannot do this” or “The disk is so full that I cannot do that.” Generally, ALL icons on the hard disk become generic until I reboot, at which point they reappear. Funny thing is, this disk has FIFTEEN and ONE-HALF MILLION free bytes on it when the software decides that it’s too full for words. Anybody have any experience of this problem?

**BILL BALDRIDGE on 03/30**

Suggest you boot something like Fedit or HDTools or another application which will allow you to look at the disk directory. I suspect your desktop file has become cluttered with “ghosts of files past.” Bernie Urban might be able to better comment on this, as he had a desktop of around 5Mb once.

**JAMES DONNELLY on 04/01**

Thanks for the tip. By coincidence I had been looking at the desktop’s APPL resource and found two of almost everything. I rebuilt the desktop, just on general principles - at least I tried to. The first time, Mac said the desktop could not be rebuilt. So I dumped everything onto floppies, wiped out the hard disk and restored everything. Desktop seems uncluttered now, and I haven’t had any “disk full” messages yet.

**CAREY ZIMMERMAN on 04/01**

I’m going to upgrade my 512 to an enhanced and am planning to add a hard disk. Presently planning on the Jasmine 20 meg. I would appreciate any comments pro or con concerning this drive. Would also welcome any and all comments concerning the SCSI ports that are available for the 512E’s. Are there any things that I should watch out for on the upgrade? Any recommendations on who should do the upgrade?

**JONATHAN TETZLAFF on 04/05**

Although I haven’t used the Jasmine 20 meg drive, I have used the Jasmine 80-meg drive for many many hours. It has behaved very well during some heavy use. I’m very pleased. I only have two complaints (apart from the 3 or 4 weeks it took to get it). It’s pretty noisy (the fan), and the Mac will not consistently boot from it. That is, I have the Mac plugged into the back of the drive. When I turn the drive on, the Mac comes on. It should automatically load the system file at this point, but does so only about half of the time. All I have to do is hit the reset switch, but I don’t feel I should have to do that so often. Small complaints, though. I am very pleased with it overall.

**DAVID GURSKY on 04/05**

That is a problem with the Mac, not the drive! Solution: Turn the drive on first and let it start. After its up to speed and ready, turn the Mac on. You should not see the problem.

**DEACON MACCUBBIN on 04/07**

Someone else may have already told you this, but you should call Jasmine about an upgrade in their operating software. I understand the “failure to boot” problem has been fixed in the current version.

#### **Other Hardware**

**DAVID GURSKY on 02/20**

While I’m not sure about other manufacturers, Sony (in order to cut costs) polishes both Double Sided and Single Sided disks on both sides. The difference is that Sony CERTIFIES (i.e. tests) Double Sided disks on both sides, but on only one side for Single Sided disks. To wit, I have about 60 (at least!) Sony SSDD disks that I’ve formatted on both sides, no problem!

**LEE DUER on 02/20**

I can echo Davids comments re the Sony disks. I too format these on the other side and verify it with Copy II Mac tools (I really am not sure that makes it better but feel better when its confirmed) I have formatted over a hundred of these that way and have yet to have a failure.

**LLOYD SWIFT on 02/20**

Agree! I’ve had 5 OLD SS disks fail to initialize as DS — all others are working fine. As long as you keep your data backed up regularly, I see no problem with using SS disks as DS.

**JERRY OPPENHEIMER on 03/15**

Is anyone using a third party 800 drive. I’d like to hear upsides and downsides, warnings and recommendations.

**BILL BALDRIDGE on 03/19**

Let me jump in here with both left feet...I have been using my Chinon 800K external about 6 months now and find it SUPER! As long as I remember that 800K disks go in the 800K drive (the internal 400K drive won’t read them, and in fact I once mistakenly clicked on [initialize] instead of [eject] and had to rebuild an 800K disk of, luckily, public domain software). The only danger inherent in the 800 external is if it dies on you all your 800K disks will be useless until you get it fixed or get an 800K internal drive. But then on the other hand, you don’t have to send your whole Mac off to the shop, just the drive. Overall, I’ve been very happy with the \$200 I spent for the external 800K drive. It seems to digest SS disks (albiet SONY/FUJI) as happily as DS disks, and will read 400K disks as readily as 800K disks. Though I think the addition of ANY external drive to the Mac is a MAJOR upgrade, the decision as to how much to spend and where/how to buy should be predicated on the needs and budget of the purchaser. Caveat emptor.

**BILL QUALLS on 03/22**

I don’t own a third party 800K external drive, but I have a good friend at work who does, and I have used his drive. We also compared his drive with my Apple external drive, so I’ll tell you what I know. First, he paid less for his external drive than I paid  
contd.

for mine, but his drive is more cheaply made and not as rugged. Apple uses Sony drives, and there is no question about their quality. The third party drive does have a button that you can push to eject the disk. I like that feature. Speed is the most important factor in a disk drive, and the third party drive is noticeably slower than the Apple drive. This could be somewhat subjective—by noticeably slower I mean a few seconds, but it's something to think about. On the positive side, he has had the drive for almost a year now, he uses it almost daily, and he hasn't had any problems with it. His main application is C programming to give you an idea of what he does with his machine. To summarize, I think you'll save some money buying a third party drive, but you'll sacrifice some performance. Reliability probably won't be a problem. BTW, I think he bought his drive from Warp Nine Engineering for \$199.

**JERRY OPPENHEIMER on 03/23**

I appreciate your detailed and quick response. I've decided to go ahead with a Dataspace. I've been told that the third party drives using the Chinon drives are the best as opposed to those using the Fujitsu drives. Warp Nine makes the Phaser 800. I'm not sure whether that had Chinon or Fujitsu.

**CHASE RIDGELY on 04/07**

I've got a small problem (I Hope). A Mac Plus with a Levco 1+1 card installed is refusing to recognize disks - half of the time it rejects as bad disks checked on other Mac's as good it rejects the disk. We tried various disks so it seems to be a mechanical problem? Any thoughts?

**JAY HELLER on 04/08**

Check the cable to the drive, it might be loose. Does this happen if you use an external drive?

#### Printers

**MARK BERRY on 04/01**

HELP.... The foil attached to the paper guide has partially torn away by the print head. How do I fix this or is it not repairable? It makes a racket during printing and smears the ink and God knows what else. I need answers fast on this.

**DEACON MACCUBBIN on 04/07**

I have been told that you can just remove that piece of foil without causing any problems. Otherwise, you'll have to take advantage of your Applecare and take the printer to your dealer.

**CHARLES REILLY on 04/04**

Please advise of wide-carriage printers available for Mac. Secondly, is a wide carriage Imagewriter II on the way? I mean should I hold on expecting a new machine to pop up soon?

**BILL BALDRIDGE on 04/04**

Suggest you either contact Epson America (call the 800 operator for their toll free number [800-555-1212]), or Printers Plus (several locations in the DC area—check Yellow Pages).

**DAVID GURSKY on 04/04**

In addition to the options Bill mentions, Apple has a wide carriage version of the ImageWriter I (called ImageWriter 15).

I doubt there will ever be a wide carriage version of the Imagewriter II.

**BILL BALDRIDGE on 04/05**

BTW, Charles, if you just want the wide carriage for occasional print jobs requiring the extra width, the New Carrollton Public Library has a Fat Mac and a 15" Imagewriter in their Computer Room. You need to call to reserve it beforehand though—of course this presumes you are in this area.

#### Spreadsheets

**BILL QUALLS on 02/14**

You might get some argument about what the "best" book on Excel is, but I recommend *Hands-On Excel* by Danny Goodman. It's published by Scott, Foresman & Company and costs \$21.95. I would think B. Dalton Booksellers would have it.

**DAVID GURSKY on 02/14**

Hands On Excel is supposed to be a good book, as Bill pointed out. My information is the "Excel in Business" from Microsoft Press, by Doug Cobb leads the pack.

**KEVIN PARKER on 03/14**

I am looking into buying both a database/file program and a spreadsheet. I don't want to spend a whole lot of money, so there seem to be two basic possibilities. The first is to buy Microsoft Works, which will have both, and they will presumably work together well. The other is to buy two separate programs like Reflex and MacCalc, which is a cheaper but perhaps not as effective an alternative. Any suggestions?

**ALLAN BALLIETT on 03/20**

47th St Photo, a mail order firm in NY is selling the most recent version of JAZZ for \$99. This is no joke, and they do have copies in stock (as of 10 days ago). I bought one. I swear, it's worth \$99 just to see the elaborate packaging. (and the diskette detents that were place for the wrong corner the 3.5 diskettes in the spiffy 9 diskette wallet that comes with JAZZ) If you need their 800 number, you best call me at 241-0473 in Arlington. PS-It is a lot of stuff for \$99.

**KEVIN PARKER on 03/27**

I ordered my copy of Jazz today and also looked at some books about it. I think it will do everything I need it to do and then some, and I'm not going to get any sort of spreadsheet/database package for less. I'll let you know what I think of it after it comes in and I play with it for a while.

**ALLAN BALLIETT on 04/08**

After playing with it for awhile, I'm not sure I would pop \$99 for it again. (I mean, jecz, that's what I paid for MORE!) I do use the Spreadsheet a lot, but then SIDEKICK is upgrading to a pull down SS!!! My complaints about JAZZ are: 1. VERY slow laser printing (I've not found a way of avoiding grid and col/row headings on the print); 2. I've actually run out of MEMORY (Mac+!) while computing a VERY simple spreadsheet! Anxious to hear your discoveries!

**KEVIN PARKER on 04/10**

I've been using the database mainly, and I think it's great! I've contd.



put member information in for my club. Now I've got it set up so that when we get a new batch of members, I type all the info in, select the records, open up the new member's letter, do a print merge, and I've got all my letters ready to go. I really haven't used the spreadsheet much, yet, but I keep wanting to. (It's a lot better than MacLion, anyway). Anyhow, where else are you going to get a spreadsheet and a database together for less? (Of course, maybe I'll come on here in a week grousing about the spreadsheet.)

#### Tech Notes

RICK GLASBY on 02/14

I've been experiencing a series of diskette and/or system failures recently. After inserting an application diskette into my 512, the screen goes black, and an unhappy Mac face with the code "0F0064" appears. Any guesses as to what might cause this? Bad system file? Bad diskette media? Bad diskette drive? Sick Mac? It's happened on about 4 different diskettes recently. I don't want to sound like a whiner, but my IBM PC at work doesn't wimp out nearly so often (in fact, never.) I do love my Mac (in a purely platonic manner) but it does frustrate me with its sensitivity. Over the last 2 1/2 years more system crashes than I care to remember. Seriously, if anyone has an idea as to what might be causing these failures, please leave a message.

BILL BALDRIDGE on 03/15

I realize this comes a MONTH late, but I'll post this anyway in case you haven't yet gotten a reply elsewhere, Rick. The 0F0064 is indicating a ALL OK on the hardware side - if I remember correctly. What apparently is happening is the disk you are using has been corrupted, and the Mac is getting indigestion trying to read it. I'll suggest a couple of things, and you can try them or not: 1) Stick to SONY, FUJI, or MAXELL diskettes - if you gotta run sans Hard Disk, these are proven performers (avoid VERBATIM like the plague). 2) The 512 (aka Fat Mac) should be paired with Finder 4.1 and System 2.0—stay away from 5.3/3.2 until you either get the new ROMs or buy a Plus. These SHOULD keep the blues away...any further questions, feel free to post it here—we'll try to reply more promptly in the future...

NICK ROBERTSHAW on 04/07

I have System 3.2, finder 5.3 stable on my 512E since November. Recently, three of my diskettes have become unreadable on this, or any other Mac. These were all Maxell DSDD. They have not been subjected to any environmental stress (heat, stray magnetic fields, soap operas, etc). Has anyone else had trouble with this brand of disk? Is there any way to recover files from a disk that the Mac only seems to want to re-initialize?

DAVID GURSKY on 04/07

Maxells and Sonys are probably the most reliable magnetic media today. If you've lost data on one of them, forget it. Its history. Well maybe not. Have you tried FEdit on it? If FEdit (or actually FEdit Plus [or Disk First Aid - ed.]) can't read it, that disk IS history.

DOUGLAS E CANTON JR on 04/14

Start up Mactools, insert the disk and it should acknowledge the disk with options to repair, mount, initialize or eject. If repair

does not fix the problem, then mounting the disk and subsequently choosing the undelete option under the 'Disk' menu should recover the files. Note: these unrecovered files also require that you specify the file type and creator (a mactools command) in order for the original application to recognize the file. If this all seems greek, the Copy ][ Mac/Mactools manual explains it better than these few lines can. Good Luck from a survivor of Verbatim Datalife disks.

#### Telecommunications

RICHARD BROSNAHAN on 02/20

I am having some trouble and some great success using RR 9.4 and the CMS system mainframe at U of M. The trouble comes from two sources. One is Kermit uploads. Instead of tabs, I get ;;;; (semi-colons). Darned annoying and really fouls up a program. I have to go through and edit the darn things and that takes hours. Yes, I must use tabs. If I strip the control chars out before uploads then the resulting program will compile and run, but the source code looks like the dickens and is hard to read due to the indentations being gone. So, what to do? Anyone got any ideas? Also, how do I get more PF keys than Red provides? Red gives you 1 through 4 but I also could use keys 5 through 12. I do not know the ASCII code or escape code necessary for this. I think I could figure it out from there if I did. Red provides for this with macros. I think you use /[ and then the number. Truc? Thanks, in advance. P.S. Where is Red 10.0?

DAVID GURSKY on 02/21

Forget Red Ryder. If you want to do 3278 emulation on the Mac, the only real option you have is MacTerminal. It will do PF1 through 24, and many other program function keys.

NANCY SEFERIAN on 03/15

I downloaded a game from the downloading system, and when I tried to open it I got the message, "Application Not Found." What do I need to do to see the game and play it?

BILL BALDRIDGE on 03/15

It's highly possible you need PackIt, Nancy. It should be available in the Utility section of the board - this is the "application" your Mac is looking for when you double click on the file you downloaded. There are two things you can check to verify this: 1) If the file you downloaded has an extension of "pit" or ".p3t" or somesuch, it indicates it is a "packed" file and will require the aforementioned PackIt. 2) Use Fedit or other utility which can display Type and Creator information. If the Creator is PIT then you again will need PackIt to Un-packit.

DOUGLAS E CANTON JR on 03/23

I need to know what terminal settings to use (i.e. parity, stop bits, echo, etc.) to use with an Apple Modem 1200 to access the Pi boards, Compuserve, and Dow Jones. Settings for the following programs would be appreciated: Macterminal, RedRyder, and Straight Talk (Dow Jones). Also, I would appreciate any assistance with straight Talk/Dow Jones in general. Just as a bit of background, I have used Macterminal and RR with an Apple Personal Modem and everything worked fine. I vaguely remember reading somewhere that the Apple Modem 1200 was not fully Hayes compatible/may need additional commands to get it  
contd.

to do some functions. Any assistance with this modem is appreciated.

DAVID GURSKY on 03/23

I use an Apple 1200 with MacTerminal. The key settings are 8 bits, no parity, and no handshake. The Hayes compatibility is only an issue if you are using Smartcom II, which I gather does some rather esoteric things.

DAVID BERNHARDT on 04/06

I'm new here and need help with the procedure for downloading files from the library using Red Ryder 9.2. I want to get some DA's and so forth, but can't seem to get the procedure right. Are there help files about this somewhere? Thanks for any assistance.

CHARLES REILLY on 04/13

Please advise which modem you prefer for use with Mac+/SE. Yes, I'm not proud, I'll even look at that DAKS modem. Whaddya say: what's hassle-free easy-to-use and cheap?

BILL BALDRIDGE on 04/14

I've been using my DAK/ADC 1200 for almost a year with no complaints, no problems, and they just reduced the price to \$149 (now \$129! - ed.).

#### Utilities

LEE DUER on 03/23

On page 142 of the new MacUser there is an ad from ALSoft, Inc. re their software program called DiskExpress. according to their pitch a disk or drive slows down with use because it gets "fragmented" (my gosh, that sounds awful). Their program of course UN-fragments the disk or drive. QUESTION (at last)- is all that hype OR is that type of program good for us ?? If so, does anyone know of other available programs that do the same or does DISKEXPRESS have an exclusive on this?

LOUIS M. PECORA on 04/07

For your info, I have used DiskExpress. It is straightforward and appears to work well. So far, no problems with the "reconstructed" files on my, now unfragmented, hard disk. Though, I did back it up first before using Disk Express. I would recommend it.

#### Word Processors

BILL QUALLS on 03/16

A while back, InfoWorld reviewed WriteNow. I reported on this review then. At the time, InfoWorld gave WriteNow a Satisfactory rating (5.2 on a 10 point scale). It seems that this review contained several inaccuracies which affected the product's scorecard. In the March 2 issue, InfoWorld corrected these inaccuracies and updated its rating of WriteNow to 7.0 (Very Good). The rating breakdown is, as follows: Performance - VERY GOOD; Documentation - SATISFACTORY; Ease of Learning - VERY GOOD; Ease of Use - SATISFACTORY; Error Handling - VERY GOOD; Support - VERY GOOD; Value - VERY GOOD. This review update is one of read several complimentary reviews of WriteNow I've read lately. If you're looking for a word processor and have no need for a full-blown production word processing system, then WriteNow is definitely worth a look.

MARK OSTROFF on 03/16

An interesting aside is the fact that, according to the folks at the Micro Dynamics booth at FOSE, WriteNow is the ONLY current WP package that will run on the new Mac II at this time.

BILL QUALLS on 03/17

That is an interesting aside. From what I've read about WriteNow, it conforms to the programming standards published in Inside Macintosh in all respects, including such things as keyboard command equivalents. I also know that Apple has laid blame on software incompatibility problems with the Mac II on developers failing to rigorously follow these standards. This probably explains why WriteNow works.

BILL BALDRIDGE on 04/01

I've been "messaging" (for lack of a more definitive word) with WriteNow since January, and am not convinced it is what I'm looking for in a text processor—too many limitations, and some outright bugs. It does have some nice features for the price, but I've gotten to the point (and I assume many other Mac users have also) where if I have to drag out the manual to look up how to adjust margins on a footer, then it isn't intuitive enough. Maybe I'm just lazy...

BILL QUALLS on 04/01

I hear what you're saying about WriteNow lacking some nice to have features. I got a chance to play with a demo of the program a while back. WriteNow is billed as an enhanced MacWrite, which puts it at the low end of the word processor scale. I figure WriteNow will fit the bill for most personal word processing needs (letters, garage sale flyers, etc.). Every now and then something will come up, and WriteNow won't have the capabilities or features to handle it. Business word processing is another ball game, and I don't see how WriteNow can compete seriously in that arena. It's just too limited. A while back I read that Apple Computer has site licensed a couple a hundred copies of WriteNow for use in its corporate headquarters in Cupertino. I have a hard time believing that WriteNow is THE standard word processor at Apple. Am I all wet on this? Does anyone else have any comments about WriteNow?

BILL BALDRIDGE on 04/02

I've had documents up to 90 pages loaded into WriteNow and it didn't seem to slow it down significantly, except when doing massive changes like a font change or margin change, and even these never took more than a minute (with MacWrite you could probably write an opera longhand before this magic occurred). Another drawback is when doing a leaflet format (sideways, 4 column), WriteNow cannot do a left/right page number, or separate headers or footers. Despite what T/Maker says, lines which are not aligned on the screen do not line up when printed (with older System/Finder - ed.). Anyway, despite these admittedly niggling details, WriteNow is a powerful tool in a compact (80K) package; I can put it on a 400K disk with a pretty good system folder, and still have room for MacPaint and a couple of other small utilities. I can see why Apple Inc. considers it worthy of office use—it's compact, fast, fairly intuitive (unless you want to get fancy), can do multiple columns, sideways on the screen, spell checking built-in, and some other gee wiz stuff. But for contd.

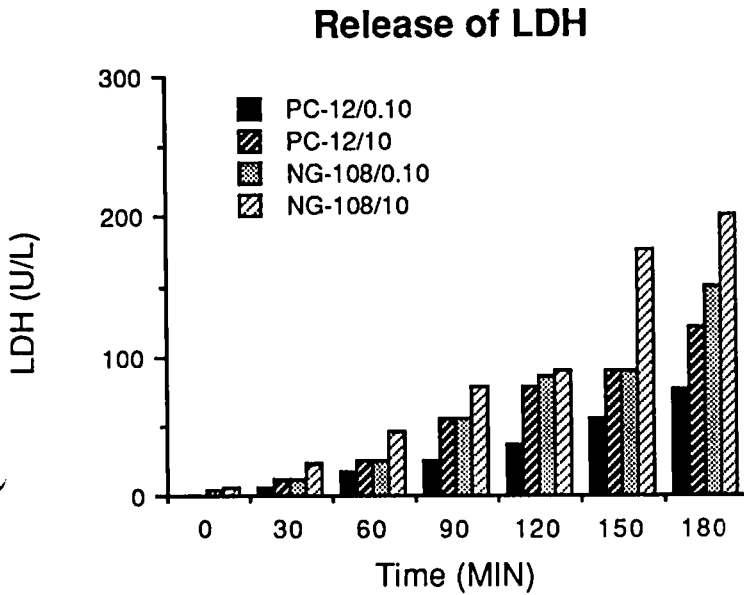
expectations of a word processor. We do not need many of the features that others seem to require, such as automatic index or table of contents generation. WriteNow is clean and works well with DAs. (Word 3.0, on the other hand, refuses to accept "Shorthand" glossaries, and its own glossary function is about as badly implemented as one could imagine.) To sum up, WriteNow meets many business needs quite well, thank you. Perhaps it is time to recognize that there is no one "business word processor," and that niches will develop for different needs.

MARK BERRY on 04/02

HELP..... How do I set up MacWrite to print on labels. I've tried

Bits and Bytes contd. from pg 66

Figure 8 is an example of a column graph created in Cricket Graph.



a few things but can't seem to get the spacing right. Any help will be greatly appreciated.

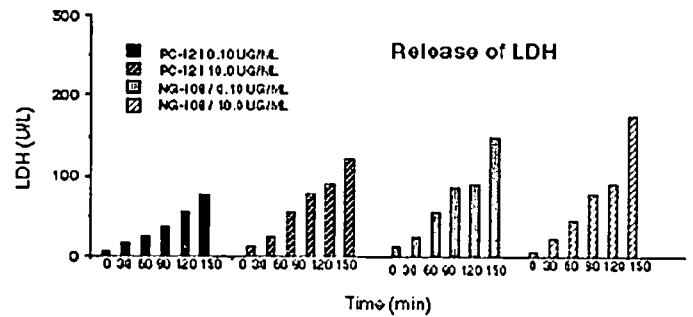
BILL BALDRIDGE on 04/04

You need MacWrite version 4.5, and select the 6 line per inch option on the ruler. You also need to select "No breaks between pages" on the Page Setup option from the FILE menu.

MARK BERRY on 04/05

Bill—you're a peach [Aw, gee. - ed.]. Thanks. It's things like this that make the \$6 I spent joining this board the best investment I ever made. And it doesn't depreciate like my Mac!

Figure 9 is an example of the above chart that was originally created in Cricket Graph and then exported to MacDraw for customizing. Note that the same data sets have been combined by time point and the individual bar graphs have been separated from each other.



Lynn R. Trusal is a Major in the U.S. Army and a research physiologist with the U.S. Army Medical Research Institute of Infectious Diseases, Ft. Detrick, Frederick, MD. He hasn't written any computer books, he doesn't own a consulting firm, he's never taken a computer course, he doesn't do programming, but he reads a hell of a lot and loves the Macintosh (not in the Biblical sense!). Take that Fred Seelig!

## DISKETTERIA DISPATCH

by Jim Little

First I made a mistake in the credit for the data base program last month. The author is Jim Low.

We have seven new disks this month—telecommunications, pre-school age games, four Appleworks™ user group disks, and a "C" compiler.

**ProDOS Disk 812 - Toddlers and Kids Game Room.** A complete icon menu composed and assembled by Linda Van Zee of WAP. Instruction, amusement and challenging games. Icons are large enough to be easily readable by youngsters. Pressing the matching number key loads the program. ESCape returns to the menu. Neat. Best on a color monitor. Some require a joystick.

**ProDOS Disk 813 /TAWUG-1** - The start of a series of Appleworks™ aids, templates, data bases, etc. This contains printer aids, control characters, printing character size, business help, tips and lots more.

**ProDOS Disk 814 /TAWUG-2** - Money related helpers. Amortization table generator, stock tracker, financial records,

and a lot of etc. Use the ideas if not the contents.

**ProDOS Disk 815/TAWUG-3** - Food and garden, Star Trek (trivia, not the game), genealogy, time, fun stuff, collections and more misc.

**ProDOS Disk 816 /TAWUG-4** - Lists. Movies, books, magazines, programs, TAWUG lists, records. Any thing that you may need to keep track of, classify or search. Let the computer do the walking.

All these disks were due to the efforts of Paul Kelbaugh, of WAP, who extracted these goodies from 28 TAWUG disks.

**ProDOS Disk 817 Telecom** - A set of communication programs and utilities allowing binary file up and down loads, data compression, a nifty text file print/screen dump utility, and more. Another disk from Canada's LOGIC group.

**CP/M Disk 420** is a small "C" compiler and documentation set. John Bell put this together so that with this two sided disk you should be able to venture into the universe of "C".

More coming next month, stay tuned.

# MAC DISKETERIA NOTES

by Martin Milrod and David Weikert

## Forgive us, Ron !

Let us clarify that Deep Angst, the superb World Builder program, (released last month on Mac Disk #95,) was the genius product of our much-celebrated Emeritus GameSIG Chairman, Ronald Wartow. Deep Ennui (Mac Disk 96,) another World Builder game, was written as a response to Ron's Deep Angst product.

## Here we go again....

With the introduction of 256K ROM (Read Only Memory) instruction sets in the Mac SE and MacII, authors are rewriting and revising Mac programs rapidly. Reportedly, some 20-25% of previously working software fails on the SE and II because their authors did not completely follow the ROM instruction sets used in the earlier 128K ROM machines (the Mac Plus and Mac 512K "Enhanced.") This problem previously occurred when Apple increased its original 64K ROM instruction sets (in the Mac 128K and Mac 512K,) to 128K ROMs; and this caused much consternation when earlier Mac Disk programs failed to run on the then-upgraded ROMs.

Be aware, then, that SE and Mac II owners may need revised versions of some software if the Mac Disk materials they now have in hand fails to work on their machines. Similarly, some of the newest releases may have problems running on the earlier machines. Within six months, all of this "compatibility" problem should have been ironed out, so stay cool Matilda!

## Should we go to 800K disks?

In order to increase the value of Mac Disks, we are considering going to 800K (2-sided) Mac Disk format when our Library collection is restructured over the summer months. We know that some percentage of WAP members have 400K (1 sided) disk machines, and that they would have to find a "friend" to unbundle the 800K disks into digestible 400K disks for their use or go to the office to copy them from 800K formatted disks.

This would be a pain for 400K disk machine owners, but an improved bargain for the majority of Mac owners who now have 800K disk machines. (Apple only makes 800K disk machines now.) While the decision to "go 800" may not be a sharp business decision in terms of sales volume and income, it may mean greater services and value to our members. Please let know if you think that our conversion to the 800K format makes sense to you and if you think we should proceed in that direction.

## Volunteers still needed

Good and reliable writers of program notes, especially in the area of telecommunications, are needed more than ever now that the Mac Disk Library is being restructured to present numbered series of disks organized along functional lines such as Utilities (and Inits,) DA's (and FKeys,) Fonts. If you are willing to contribute your time and effort in these areas to help out fellow members of the Pi, please contact Dave Weikert, the chief Honcho and coordinator of the Mac Disk Library (301) 963-0063.

## Errata for Mac Disk 88

Lofty Becker sent us the following information on some of the DAs and FKeys that he has written.

**ATalk Key:** Written for a specific person who needed it for a particular use. Lofty says, "Not one of your major stars."

**Print Clip Key:** "This should print the clipboard. However it probably will not if run from an application since most applications keep a private "scrap" and only put things in the "public" clipboard when a DA asks them to, or when they quit. Hence it is probably mostly useful only with DA word processors--and these can usually print anyway.

**Fontsie Special 2.0:** The program note should have indicated that this is shareware.

**Time Logger:** The FKey version of this is no longer being supported. Time Logger is now exclusively a DA with its own INIT resource to run automatically at startup and shutdown. It is still shareware but the fee is now \$10.00. (Time Logger 2.02 is included on Disk 98.)

## New Mac Disks for July

This month we issue five new disks including two fonts disks, one game disk, one disk of utilities and one with sounds. This month's submissions are brought to you by Bob Soule and Dave Weikert and the efforts of all the duplicators listed under the masthead. Credit for last month's submissions was inadvertently omitted but they were brought to you by William Jones, Mike Robinett, Bob Soule and Dave Weikert. Folder information, where appropriate, precedes the listing of program contents. Folder information is underlined, programs and files are printed in bold and shareware price information is printed in bold italic.

Please remember to send the authors their requested shareware fees if you decide to add the programs to your software library. Shareware now accounts for over half of the material that we receive for Mac disks and we all need to encourage the authors to continue to use this distribution channel. If we don't support the shareware concept with cash, the sources will find different distribution channels.

In July, six more disks will be removed from the Disketeria: Mac Disks 60, 61A, 61B, 62, 63 and 64. If you want to add them to your collection, order them this month as they will no longer be stocked even on an archival basis.

## Mac Disk 100: Fonts VIII

In each font folder, there is an Icon that looks like a LaserWriter with a page sticking up with letter "T" on it. Copy this Icon to your System Folder. Then install the bit mapped font in your System file (or to an application file) using Font/DA Mover version 3.2 or later. Some of the fonts are self downloading. However none of the fonts appear to work with the new System 4.1/Finder 5.5/LaserWriter 4.0/Laser Prep 4.0 files so you must use the System 3.3/Finder 5.4 or earlier combinations with the appropriate LaserWriter and Laser Prep files. Download Allows you to send a specific Postscript or text font file to the LaserWriter. You can choose whether the font file will stay permanently in the LaserWriter memory until the LaserWriter is reset or turned off or just during the printing of the document.

contd.

### Cunei Stuff Folder

**Cunei** You might use this on the cover of an archeology paper but certainly not on a resume.

**Read Me First(cf)** is the documentation for Cunei.

**Cunefont.bmap** is the screen font installed with Font/DA Mover. *Shareware - \$20.00.*

### GreyHel Stuff Folder

**GreyHel** Converts the LaserWriter built-in Helvetica font into a Gray Helvetica.

**Read Me** is the documentation for GreyHel.

**GreyHelvetica.bmap** is the screen font installed with Font/DA Mover and **GrayHelvetica.AFM** is the font metric file.

### ModerPriBol Stuff Folder

**ModerPriBol** This font looks like very fine hand printing. It works best with an application that allows you to change leading in one point or smaller increments.

**Read Me First(mp)** is the documentation for ModernPrint.

**ModernPrintBold.bmap** is the screen font installed with Font/DA Mover. *Shareware - \$20.00.*

### TimesFra Stuff Folder

**TimesFra** This font replicates Times and produces very attractive fractions of any length (up to a full line). The method of typing the fractions takes some getting used to but is very effective after some practice.

**TimesFractionsDocs** is the documentation for TimesFractions.

**TimesFraction.bmap** is the screen font installed with Font/DA Mover. *Shareware - \$25.00.*

### SanSer Stuff Folder

**SanSer** A font that the author suggests could replace Helvetica or Avant Garde. It looked a little too squashed for my tastes but you may find it attractive.

**Read Me First-SS** is the documentation for SanSerif. **SanSerif.bmap** is the screen font installed with Font/DA Mover. *Shareware - \$20.00.*

## Mac Disk 101: Fonts IX

### Specialty Fonts - Foreign & Domestic

**Cirth 48** A large font in 48 point size.

**Elvish 12** A foreign font in 12 point. **Lineal12,18** A script font in 12 and 18 points.

**Taliesin 9,12,18,24** A graphical font with four different sets of symbols in four sizes.

**Vienna 18** A tall, straight font in 18 points.

### Beneventana Folder

**Scriptura Beneventana** The Beneventana font, available in 12 and 24 points, is based on the manuscript hand used by the monks of Monte Cassino in the 10th-12th centuries and is most useful for typing Latin.

**Beneventana.doc** A two-page MacWrite document which describes the Beneventana font. Practice your Latin translation on parts of this one!

### Bruce R. Gilson Fonts Folder

**BRG Fonts List** A one-page MacWrite document describing the fonts in the Bruce R. Gilson Fonts folder.

**Font File A** You'll find some nice specialty fonts named after cities and neighborhoods in our own Washington area. **Alexandria**, in 18 point size only, is a slightly improved Palo Alto font. **Bethesda**, in 12 point, is a font with sweeping curves on the upstrokes. **Dupont Circle**, in 12, 14, and 24 points, is a stylish Broadway-looking font. **Georgetown**, in 12 and 24 points, is a font with extra little flourishes on the ends of the strokes. **Silver Spring**, in 12 and 18 points, is a circular font. **Takoma Park**, in 12 point, is a decorative font. **Washington**, in 9, 10, 12, and 18 points, is a square-corner font.

**Font File B** More specialty fonts, all with descriptive names. **Angular** comes in 12, 14, 18, and 24 points. **Bamboo** comes in 36 point. **Bold Script** comes in 14 point. **Crescent Moon** comes in 18 point. **Morse**, which shows Morse code beneath the letters, comes in 14 point. **Optimizer**, similar to the standard Optima printer's font, comes in 12, 14, and 18 points.

**Font File C** A variety of Hebrew fonts. **Jerusalem**, a relatively standard font, comes in 10, 12, 14, 18, and 24 points. **Haifa**, a stylized font, comes in 9, 10, 12, 14, and 18 points. **Tel Aviv**, a rounded font, comes in 12, 14, 18, 24, 28, and 36 points. **Eilat**, a script font, is available in 12, 14, 18, and 20 points.

**Font File D** Contains the **Delancey Street** font, in 12 and 18 points. The author describes this one as a "pseudo-Hebrew" font—ordinary letters in Hebrew style.

### **Bruce R. Gilson Fonts:**

**Font File A:** Alexandria. Bethesda.

Dupont Circle. GEORGETOWN.

SILVER SPRING. Takoma Park. Washington.

**Font File B:** Angular. Bamboo. Bold Script.

CRESCENT MOON. MORSE. Optimizer.

**Font File C:** Eilat: אילת Haifa: חיפה

Jerusalem: ירושלים Tel Aviv: תל אביב

**Font File D:** Delancey Street.

### Korean Font Folder

**Hangul 3.01** This font suitcase contains two Korean fonts. **Hangul** comes in 12 and 14 points. **Hangul-key** comes in 12 points. My experimentation indicates that you only get Korean characters when you press the Option key

**Read Me in Hangul 3.12** Sorry folks, but you'll need to know Korean to make anything out of this five-page MacWrite file.

**Mac Disk 102: Sounds I - Digitized Sounds and Players** Disk 99, **Init I - BeepSounds**, was our introduction to digitized sounds and that theme is continued on this disk. Any of the digitized sounds on this disk can be used with the **BeepSound Init** by changing the name of the file to **BeepSound** and placing it and the **Beep.Init** file in the system folder. Conversely, any of the digitized sound files on Disk 99 may be used with the sound players on this disk.

**Mr. Ed** You guessed it; that stalwart equine performer is back.

**SoundPlay:** A player for digitized sounds that doesn't take  
contd.

up much space.

**SoundPlay.da** A desk accessory version of a digitized sound player.

#### SuperPlay 4.0 Stuff Folder

**SuperPlay 4.0** A program that plays digitized sounds. Unlike the smaller SoundPlay, this one also allows selection of different sampling frequencies and opening and creation of resource files. It has a play all feature that will allow playing all of the sounds in a specified folder. Try one of the lower frequency sampling rates for some really weird sounds. *Shareware - \$ What you think it's worth.*

**SuperPlay Doc(MW)** The documentation for SuperPlay 4.0 explaining some of the capabilities of the program and a little bit about the types of digitized sound files. The two FKeys mentioned are not included on this disk but will be considered for a future FKeys disk.

#### Sounds Folder

**F-Troop** Yes, those boys in blue are at it again.

**Look, Up in the Sky...** It's a bird, it's a plane... And Clark Kent is nowhere to be found.

**Trying to Think OK** you old movie watchers and trivia buffs, who said this? This is the way we feel after assembling one of these disks late at night (and sometimes for the next few days).

**Woob Woob** This is a laugh?

**Yabba Dabba Doo** Fred Flintstone making happy sounds.

#### **Mac Disk 103: Utilities XVII**

##### **Word Processing Utilities**

**Acta Reader** Allows you to read and print any file created by the Acta desk accessory. Acta is a commercial outline processor.

**Case Converter** Changes upper case text files to lower case.

**MacWriteToText** Changes a MacWrite document into a text document. It also preserves format information which is enclosed in curly braces.

**MacWriteRecover** Another program that converts MacWrite documents into text. This one just provides the text without any format information.

**Read MacWrite** Use to read a MacWrite document or to recover files that MacWrite will not open. You can print to the screen or to a file and the screen.

#### Add/Strip 1.3 Folder

**Add/Strip 1.3** Add or strips Line Feeds (LFs) and/or Carriage Returns (CRs) from text files. It also has a feature to strip CRs from all lines not followed by two CRs thus creating paragraphs.

For you programmers, **Add/Strip1.3.pas** and **Add/Strip1.3.rsrc** are the Pascal source code and the resources for the program.

#### Index 4.5 Stuff Folder

**Index 4.5** Indexes Word 4.5 files one page at a time. It creates a list of words that you have marked with their page number. You also need a program that sorts the list alphabetically.

**Index.help** is the associated help file.

#### Mangle Stuff Folder

**Mangle** Change style and ruler changes in a MacWrite document. Since it directly changes your MacWrite file on the disk, make sure you have a backup in case something goes wrong. Style changes include font type, size and style.

**Mangle Doc (MW)** is the associated documentation.

#### Tab Stuff Folder

**Entab** This handy utility changes a specified number (or more) of spaces to a tab character.

**Detab** does the reverse by changing a tab to a specified number of spaces. Great for preserving column layouts in text files if you use a mono-spaced font such as Monaco or Courier.

#### WordCount 3.0 Folder

**Word Count 3.0** Counts the number of words in a Word 3.0 file. Note the author's strictures in the **WordCount Doc** on the use of Option - j codes and the requirement for a full save, not a "fast" save.

#### Word Stuff Folder

**Microsoft Word Commands** This Word 3.0 document is a well organized and presented summary of all of the Word keyboard and keypad commands, formatting, editing, the use of formula commands, the special codes for Find/Change and the Hidden Text Entries. Since the document is written in Word 3.0, it also serves as an example of how to use some of the features described.

**MS Word Keys** This is a similar document but the reference is arranged in alphabetical order by function.

**Word 3.0 Hints** Just what the title says, a short but useful collection of "how-to" instructions on default font change, adding fonts to the menu, merging graphics with text, making a work menu and defining formulas.

#### WriteNowTranslator Folder

**WNTransText.DA** Translates WriteNow files to text and vice versa. The **Text Doc** is a standard text file and the **TransText Doc** is the same version in WriteNow format. *Shareware \$5.00.*

#### **Mac Disk 104: Fun & Games XXII**

**Cánfield 2.0** A version of solitaire. Nice lead in sound from Scott Joplin's "The Entertainer". An update to earlier versions originally issued on Mac disks 80 and 35. *Shareware - \$10.00.*

**This Ain't Othello** Allows the selection of game options including who plays first, how smart the computer plays and whether the alerts are provided as text or sound via Macintalk™ Free, source code is \$5.00.

#### CrossMaster f Folder

**CrossMaster** If your crossword puzzle gets ratty from all of the cross-outs and erasures, this is the program you have been looking for. CrossMaster easily allows you to create crossword grids and then type in your proposed solutions. If you make a mistake, just go back and retype it. The final version may include implementation of a dictionary.

**CrossMaster.doc** describes the use of the program and **SAMPLE 1** is a completed crossword puzzle. *Shareware - \$15.00* registration entitles you to the final release.

#### Scarab of RA f Folder

**Scarab of RA** Down, down into the Great Pyramid of RA the Sun-God. This is a text-graphical adventure game with a nice help menu, a hints menu and a mapping feature that allows you to make notes. Dean's List is the file with the top scores of previous players. *Shareware - \$15.00.*

#### The High Roller f Folder

**The High Roller** A dice rolling program designed to support fantasy role playing games. There is a "Quickie Panel" for frequently rolled dice and a "Versatile Die Roller" which provides practically any possible combination of number of sides and number of dice. This is all nicely explained in the **High Roller™ Info** documentation. *Shareware - \$15.00.*

## EDSIG PROGRAM INTEREST QUESTIONNAIRE - FOR ALL WAP MEMBERS

(You need not be an EDSIG member to respond! We look forward to your responses.) In an effort to learn what programs and activities would appeal to Apple Pi members, we would greatly appreciate your completing this questionnaire and returning it by AUGUST 15 to:

Dr. Patricia Kirby  
Co-Chairman, EDSIG  
P.O. Box 90227  
Washington, DC 20090

Do it today before vacation!

If you already completed a questionnaire at the May meeting, please check here \_\_\_\_.

CHECK ALL THAT APPLY.

1. Are you:

- a. A parent
- b. A classroom instructor (grade level?) \_\_\_\_\_
- c. An instructor ABOUT computers or computer applications
- d. A training designer or instructional designer
- e. A writer of educational publications
- f. An instructional graphics artist
- g. An educational researcher
- h. A computer programmer
- i. A software developer
- j. A designer of computer games or simulations

2. Which educational computer applications would most entice you to come to an EDSIG meeting?

- a. General educational computer issues
- b. Choosing educational software for children and young adults (specify, if you wish):
  - Kindergarten - 2nd grade     8th - 9th grade
  - 3rd - 5th grade             High School
  - 6th - 7th grade             College
- c. Educational software for various subject areas:
  - Social sciences             Programming             English
  - Other languages           Math                         Natural sciences
  - Typing                       SAT preparation
  - Special education (specify, if you wish): \_\_\_\_\_
- d. Opportunities for adults to take courses about - or via - computers
- e. Opportunities for accessing educational forums and bulletin boards via modem
- f. Instructional graphics
- g. Educational games or simulations
- h. Computer camping
- i. Networking with others interested in educational computer issues

3. Have you ever thought of joining EDSIG?

- a. Yes             b. No

4. (If yes) What prevented you from doing so?

- a. Work demands
- b. Concern to be home with family
- c. Tired at the end of the day
- d. Distance to Bethesda
- e. Courses I've taken in school
- f. Other Apple Pi activities
- g. Other conflicting outside commitments (Camp Fire/Scouts, church/synagogue, etc.)
- h. Program offerings not of strong enough interest
- i. Can keep up with educational computer issues well enough just by reading journals
- j. Member of some other educational computer -oriented group (specify): \_\_\_\_\_
- k. Other (specify): \_\_\_\_\_

5. Which EDSIG meeting days and times would attract you?

- a. Same as now (4th Thursday eve.)
- b. Other preferred weeknight (specify):
  - Mon.             Tues.             Wed.             Fri.
- c. A meeting in conjunction with the regular WAP meeting (3rd Sat.)
- d. An occasional presentation DURING the regular WAP meeting
- e. "Meeting by modem" - so I wouldn't have to leave home
- f. Other weekend options:
  - Sat. a.m. (non-WAP day)     Sun. aft.
  - Sat. aft. (non-WAP day)     Sun eve.
- g. Non-preferred meeting days and times? Specify: \_\_\_\_\_

## WAP TUTORIAL REGISTRATION

**Apple II:** The following three WAP tutorials are being offered to Apple II owners on the first three Tuesday evenings of the month from 7:30 to 9:00 PM, at the office, 8227 Woodmont Ave., Bethesda, MD. (The tutorials start promptly at 7:30; if you bring your computer please arrive 15 minutes early to set up.) You may sign up for any or all of the series. They are designed for the "beginner" and will be repeated monthly. A revised outline of the tutorials was given in the October Journal. The fee for each session is \$10.00. You are urged to bring an Apple, monitor and disk drive. (Monitors are available for the 1st 5 registrants - call office.) Please note that WAP does not have equipment for you to use; if you do not bring your own, you will have to look over someone's shoulder.

- |  |                                   |  |                    |
|--|-----------------------------------|--|--------------------|
| <input type="checkbox"/> No Apple II   | - WELCOME TO THE WORLD OF APPLE   |  | Apple II Tutorials |
| <input type="checkbox"/> Tutorials in  | - HOW TO USE YOUR APPLE SOFTWARE  |  | will resume        |
| <input type="checkbox"/> July and Aug. | - POPULAR APPLICATIONS: APPLEWORK |  | in September       |

**Macintosh:** Tutorials for the beginners are regularly given on the 2nd, 3rd and 4th Monday evenings of the month at the office, from 7:30-9:30 PM. You may sign up for 1, 2 or all 3. The fee for each tutorial is \$10. You are strongly urged to bring your Macintosh. These tutorials fill up quickly - call the office to verify space before mailing in your registration.

- Monday, July 13 or  August 10 - Introduction to Macintosh. Prerequisite: Guided Tour to Macintosh.
- Monday, July 20 or  August 17 - Intermediate Mac Skills. Prerequisite: Familiarity with Desktop, disk copying, etc.
- Monday, July 27 or  August 24 - Becoming a Mac Power User. Prerequisite: First two sessions or equivalent.

**Non-Regular Tutorials:** The following tutorials are being offered in August at the office. The fee for these tutorials is \$15 (\$20 for non-members).

- Making Music With Your Macintosh - Judy Moore - Saturday, August 1, 10am-12 Noon. Fee \$15 (\$20). Bring your own software and Mac. Work with Professional Composer, DeLuxe Music Construction Set, Music Type and Performer.
- WordPerfect on the Apple II - Lee Raesly - Saturday, August 8, 9am-12 Noon. Fee \$15 (\$20). Bring your Apple, WordPerfect and a blank disk. Learn the basics of this popular word processors for the //e, //c and IIGs.

Please check the desired tutorials and return this form with fee(s) made payable to Washington Apple Pi, Ltd. to:

Washington Apple Pi, Ltd.  
Attn. Tutorials  
8227 Woodmont Avenue, Suite 201  
Bethesda, MD 20814

Name \_\_\_\_\_ Membership No. \_\_\_\_\_  
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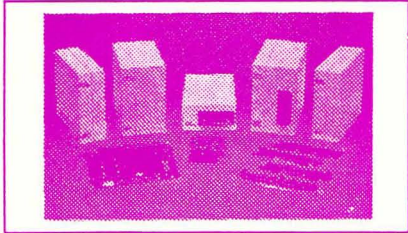
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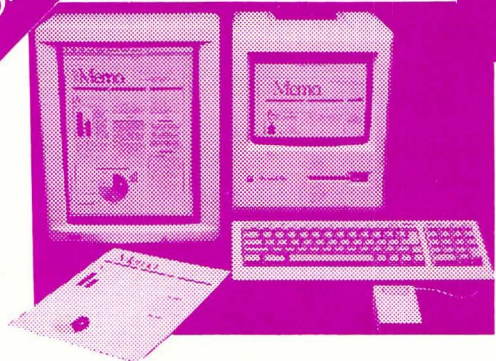
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