$ 2.50

Washington Apple Pi

The Journal of Washington Apple Pi, Ltd.

Volume 8 June 1986 Number 6

Highlights

- Adult Games (pg 21)
- Family Home Money Manager: Part 2
- Using 30 Fonts in MacDraw
- Generating MacPaint Documents from MacForth
- Mac Compatible Home Controller

In This Issue

For information on joining WAP, see "General Information", page 5.

Anniversary Sale!

MacCORNER

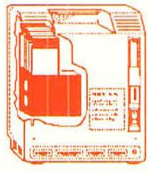
Anniversary Sale!

The Macintosh™ Only Software and Peripherals Store

Great Anniversary Sale

Memorial Day weekend -June 15th

MICAH



Micah 20 AT $1449

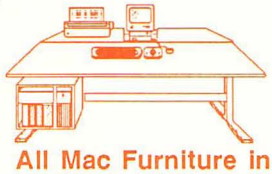
Without question the highest performance Hard Disk for the Mac. Benched at three times the speed of a Hyperdrive, its excellent design makes for quick, trouble free internal installation. It includes printer spooling,backup, partitioning & security. THE hard disk to beat for speed,compactness & sophisticated SW.

For the Mac plus & Mac 512

SUPERMAC TECHNOLOGY

DATAFRAME 20 $1049

The dataFrame 20 is the fastest external Mac Plus Hard Disk available. Portable & extremely sturdy & reliable, it is our best SCSI external. The hard disk Apple chose over every other SCSI to introduce the MacPlus. In stock now only at MacCorner.



All Mac Furniture in stock 20-40% off

Simulations Galore!

Flight Simulator
Orbiter
MacGolf
(great father's day present!)

All games 30-60%off

more than 20 new games In stock

Odesta HELIX...in stock again!

HELIX is THE Database for Macintosh. Whatever your needs are, from simple listsings, to complex relational applications helix will let you do it quickly and easily! ...Then of course, there is the MacCorner price.

HELIX... $149

Programer's Zone

The new TML Pascal utilities are on their way. Call for availability & Pricing

Z-Basic	$75
TML Pascal	$75
Aztec C L.1	$159

2 Meg RAM Expansion Board for the MacPlus

Increase the memory in your Macplus to a whooping 2 megabytes with MacMemory's MaxPlus , the first & only modular RAM expansion for your Macplus. Get the Power

Includes MaxRam, MaxPrint spooler SW & MaxChill piezo Fan from MacMemory!!

The MaxPlus... $425

LowDown

The New lowdown 20, for those desiring a good, no frills entry level SCSI hard Disk for the Mac. Includes over 3 megabytes of PD software.

Lowdown 20 Meg ...$899
Tape .Backup 20 M...$829

Super Sale Specials

800 K Disk Drives	$279
512k upgrade	$179
128-2Meg Upgrade	$499
Mac 512 SCSI Port	$149

MDIdeas

The MDIdeas SCSI sit under the Mac & uses a rugged 5 1/4" mechanism. includes Backup Software & SCSI Cable

MDIdeas 20 ...$999

MAC Bottom

25% Off on all Models!!

The compact of Mac hard Disks is still the best value arround! Includes all SW: printer spooling, backup & volumizing SW & supports HFS & MFS

Microperf paper 2400 box ...$29

ImageWritter Ribbons Box of six $3.95ea

Box of 10 SSDD 3 1/2" Sony 17.95

The One Stop MIDI Shop

A true recording studio within a Mac, with 200 tracks & up to 50,000 note capacity on a Mac 512, (3 times more on a Mac Plus.) The cream of the crop!

Performer	$239
Opcode Mac plus interface	$125

Casio comes to MacCorner

Now at macCorner the whole line of casio MIDI keyboards, including editing SW from Opcode!

Casio CZ 3000	$795
CZ 101	$299
Opcode Casio Patch Librarian	$49

8653 zetts Av. Gaithersburg
1 block West of I-355

MORE THAN 200 MAC PRODUCTS IN STOCK!!!
GREAT SPECIALS THROUGHOUT THE STORE!!
All prices subject to change without notice. **Limited Availability
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The Macintosh™ Only Store

Clinton Computer -- Your #1 Apple Dealer

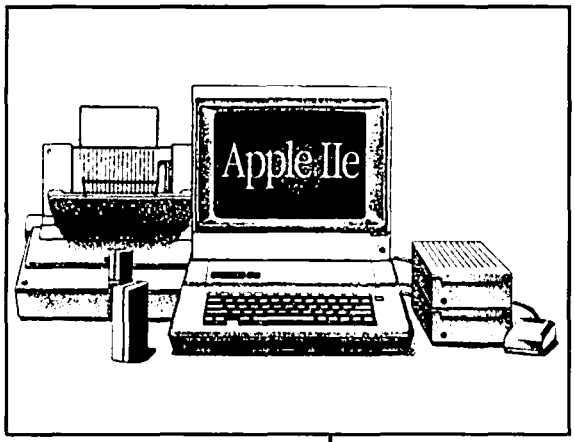
277 S. Washington St., Alexandria, VA (703)838-9700 ● 9636 Ft. Meade Road, Laurel, MD (301)953-1110 ● 6443 Old Alex. Ferry Rd., Clinton, MD (301)856-2500

A Special Washington Apple Pi Newsletter Supplement June 1986

Apple Offers Rebates, Rebates, Rebates!

Macintosh 512K Recent Purchase Rebate

If you purchased a Macintosh 128K or Macintosh 512K or 512K Memory Expansion between January 16, 1986 and April 14, 1986, you can qualify for a $75 rebate from Apple when you purchase an 800K Disk Drive Kit between Jan. 16 and July 15, 1986.



Apple // Peripheral Rebates

Now through July 31, 1986 Apple Computer, Inc. is offering the hottest promotion in Apple // history. Customers can receive rebates directly from Apple on a wide variety of peripherals.

$50 Rebate
(On Each Product)

DuoDisk
ImageWriter II Printer
Apple Unidisk 3.5"
Apple Personal Modem
Apple //e Memory Expansion Card

$25 Rebate
(On Each Product)

Apple 5.25" Unidisk
External Disk //c
//c or //e Mouse
Sheet Feeder
for ImageWriter II

$10 Rebate
(On Each Product)

//e Numeric Keypad
Apple Joystick
//e Enhancement Kit
//c Carrying Case
Catalyst 3.0
and more!

Pi Pricing for Macintosh Upgrades

Give your Macintosh 128K or 512K the POWER of a Macintosh Plus!

	List	Pi Price*
Macintosh Plus Internal Disk Upgrade (list includes $25 installation)	$324	$243
Macintosh Plus Upgrade from 128K or third party 512K; also requires Disk Upgrade (list includes $50 installation)	$849	$637
Macintosh Plus Upgrade from Apple 512K; also requires Disk Upgrade (list includes $50 installation)	$649	$487
LaserWriter Plus Upgrade (list includes $50 installation)	$849	$637

Our Service Center-- Clinton Computer p.s.

Clinton Computer, p.s. is the largest and most professional microcomputer service center in the Metro area. The p.s. symbolizes that you get something extra -- Professional Service, Personal Service, Prompt Service, Post-Sale Service, Parts and Supplies -- the type of support that our customers have come to expect, the type of service that has won us rave reviews from local consumer rating services!

Located at 6457 Old Alex. Ferry Road in Clinton, with satellite shops at our Alexandria and Laurel stores, p.s.'s primary purpose is to provide factory-authorized service for the main lines of products we sell. We stock the parts to service your equipment quickly, generally "while-you-wait."

The p.s. Sales Floor is our company-wide outlet for used, demo, discontinued and overstocked equipment and peripherals at fantastic savings.

Training Available in Laurel

Clinton Computer's Laurel store is offering a comprehensive training program on both Apple™ and IBM™ microcomputers. Classes are available for the new owner as well as the seasoned user who wants to learn a specific software package.

We offer public computer courses and private tutoring for adults and children, as well as executive seminars, field training, and a custom courseware service for agencies and organizations.

For further information, please call Paula Majerowicz at (301)953-1110.

*CLINTON COMPUTER is pleased to offer Washington Apple Pi members a 25% DISCOUNT OFF THE LIST PRICE on all Apple brand peripherals and software and on AppleCare. Discount is available to persons who have been Pi members for at least three months. Discount applies to cash and certified check purchases of Apple peripherals and software (no CPU's) and may not be applied retroactively. Add 1% for credit card and personal check purchases. If the product is not in stock, we can take your prepaid order. Pi members need to present their ID cards up-front. Discount cannot be used in combination with other promotions. Members should primarily utilize the Pi network of experts for after-sale support. No phone or mail orders, please.

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EDSIG	- Peter Combes	(301) 251-6369
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SigMac Prog. Grp.	- Timothy Buehrer	(703) 548-8971
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Pascal (PIG)	- John Dyer	(703) 538-5636
PI-SIG	- Bob Golden	(301) 593-6165
STOCKSIG	- Robert Wood	(703) 893-9591
Telecomm. SIG	- George Kinal	(202) 546-7270

Washington Apple Pi, Ltd.
8227 Woodmont Avenue, Suite 201
Bethesda, MD 20814
Business Office (301) 654-8060

EDITORIAL

We began testing the DataFrame 20 which was generously loaned by SuperMac Technologies to WAP for a few weeks. First, the bad news. Our Mac+ went bad after a couple of hours of use with the DataFrame. Fortunately, we were able to continue testing and working on the Journal production cycle by hooking up the DataFrame to the office Mac+. We sent ours to the shop for repairs, and this time plunked down the $'s for AppleCare. We rehooked the DataFrame to our Mac+ and began the weekend crunch to get the Journal out. Guess what? Yes, it went bad again, but we were able to limp along without the internal drive (which seems to be the source of the trouble) using the DataFrame and the external 800K drive together with a functioning Mac+.

The good news. The DataFrame worked wonders. We were able to get all the articles stored as "To be Laserwritered" documents, and that plus all the odds and ends we have accumulated amounted to 6 megs out of 20. Interaction between the hard drive, the LaserWriter+ and the Mac+ went almost without a hitch. And is it fast! Some strange system errors and bombs, but we recovered from all. One power failure prior to a thunderstorm didn't phase the hard disk or the rest (our surge protector equipped with brownout warning beeped and we shut down). On the whole, we think hard drives are here to stay. Now, if we can scrape up the funds to buy one...

PRESIDENT'S CORNER
by Tom Warrick

The polls are now open for voting in the annual election for officers and directors of Washington Apple Pi. While I won't admonish you with the advice to "vote early, vote often," I would like to ask that you take a few minutes to read over the candidate statements and mark your ballot. Your ballot must be received at the Washington Apple Pi office by 3:00 p.m. on *Saturday, June 21.*

This year we're doing a few things differently and, we hope, better in the election process. First, our nominating committee of ***Jay Heller*** and ***Mike Ungerman*** have done a superb job of encouraging candidates to run for Directors- at-Large. (I understand that Jay and Mike have agreed to turn over all the negatives. Thanks, fellows.) Of particular note is the number of women who are running this year, in contrast to last year when none came forward. Second, one of the problems in a group as big as WAP is that it is difficult to associate the names one reads about with the faces one sees at meetings. All the candidates were invited to submit photographs or sketches of themselves. (Thanks to professional photographer and Pi member ***Martin Kuhn*** for taking photos of those candidates who were at the April general meeting. Martin, you may recall, also provided us with the photos of the Alan Kay meeting that appeared in the April Journal.) With 15 candidates' hats in the ring for Director- at-Large, this is one of the most crowded fields ever, which shows a high degree of interest in your user group. Last year more than one thousand WAP members voted, and we would like to do even better this year.

Please vote on the back of the ballot. As we have in years past, we are asking your cooperation in a survey of both you and your views. This year, we would like everyone to let us know what computer(s) you have and use and, for the first time, where you use them. Although we find out from most of our members what computers they own when they fill out a membership or renewal application, that information tends to lag behind when people change computers. Also, in view of the fact that the "Open Mac" to be announced early in 1987 will be MS-DOS and Unix compatible, we are particularly interested in the number of our members who use MS-DOS or other types of computers.

Another purpose of the "back of the ballot" questionnaire is to elicit what ***application software*** packages people use. This will, we hope, give guidance to our all-volunteer authors as to what people would like to read about. We know, for example, that many of our Apple //c members use AppleWorks, but what do Apple][+ members use to do their spreadsheets and word processing? We aren't going to forget them/you/us.

And also at this time we are interested in people's reactions to the new ***meeting format.*** I, for one, think it has worked rather well in bringing together our diverse membership—not only for pure fellowship but also so that everyone can participate in the business of the club without having to come to a meeting in which he or she is not interested, and so that everyone can take advantage of special speakers whose topics cut across product lines. This is especially valuable when we get a top-flight speaker at the last minute, as we did with Alan Kay in February.

The garage sale! WAP's semi-annual "garage sale" will be held at the June meeting on Saturday, June 24. This is always one of our best-attended and most popular meetings. As in the past, there will be a $1 admission charge. People with products to sell (originals only, of course) will be admitted at 9:00. We'll try to conduct a business meeting without them from 9:00 to 9:30. (One item on the agenda will be the election results!) The garage sale proper will begin at 9:30. At 10:30, we'll try to organize Q&A sessions for anyone who would like to join one. One will be in the auditorium, the other will either be in the foyer, one of the side rooms off the cafeteria, or under the arcade if the weather permits. ***Joe Fuchs*** has graciously agreed to again host the post-sale "distress auction"—always the highlight of the sale—which will begin at 11:30. Remember, USUHS' regulations permit no sales by businesses.

The WAP ***Bulletin Board Systems*** (BBS's) have been undergoing a great deal of change recently. One of the most recent is the change of name to the ***Telecommunications System*** in view of the changing role of the system in WAP activities. One important new role is that Journal article authors who so desire will soon be able to upload their articles directly to the WAP office rather than submit a disk. ***Corvus,*** the well-known hard disk manufacturer, has been gracious enough to let us use one of their hard disks, and the Telecommunications System Committee (TSC), formerly known as the BBS Committee, has been hard at work preparing the system for multi-user capability so that more than one person at a time will be able to call a single number and access the same message base. Even though the hard disk has been donated to the Pi, the expense of operating the system will be considerable because of maintenance costs, the expense of the telephone lines, and so on. WAP will soon implement a decision that was approved some time ago by the membership and by the users of the BBS—excuse me, TS—to have an annual fee to support the operation of the system. The TSC has, after consideration of the cost required to maintain the system, voted a fee of $6.00 a year, i.e., 50¢ a month, to be assessed at the same time as dues renewal beginning with those WAP members whose memberships expire at the end of August of this year. (To see when your membership expires, look at the second line of the label on

contd. on pg 41

CLASSIFIEDS

WANTED: Documentation for Z80 Apple Card (171C's) for CP/M programs. Any hints further. Charles Roettcher (301) 320-5171.

WANTED: VisiFile software for Apple][+ and Apple //c. Call David Parry at office (202) 333-3355 or home (202) 363-5987.

FOR SALE: Macintosh 128K and Imagewriter. Excellent condition, only 18 months old. Includes manuals, MacWrite and MacPaint. Only $1325. Call Tom at (202) 546-5994.

FOR SALE: Corvus 10 MB hard disk with software interface for 512K Mac. John Weld (202) 463-0662.

FOR SALE: Bernoulli Box by IOMEGA; double 10 Meg. removable cartridge hard disk drives; Apple][+ interface card; one 3-ft. and one 10-ft. interface cables; setup and formatting software included; presently configured to run Starcard. Call Peter at (301) 229-2288.

FOR SALE: Apple][+, 64K, 2 disk drives, monitor, paddles. $500. Call 722-1634 evenings.

FOR SALE: Apple //e (unenhanced) full working system on 2 floppy drives. I have an impossible-to-refuse offer on a Mac. Grappler 64K 80-column card, 2 Apple][drives and C Itoh Prowriter M8510A printer with Apple Mouse //, Apple Super Serial Card, Z-80 Microsoft Softcard and SwyftCard complete the hardware package. Software includes Apple Writer II, Simply Perfect, The Write Choice word processors; complete Wagner series (brown and red boxes - not MouseWrite); VisiFile v1.5, DOS 3.3, ProDos, ALF 3 music synthesis and various elderly programs such as a museum copy of VisiCalc. I would prefer to sell complete system as a bundle for a quick sale. Will entertain reasonable offers. Home (301) 951-0838. No area code required in the Wash. Metro area.

FOR SALE: 10 MB ProFile hard disk, $800; 512K MacXL memory expansion board, $400. Call (313) 434-5757.

FOR SALE: Apple //c with new motherboard (works with 3.5 drive), Zenith 12" top-rated green monitor, monitor stand, Okidata 92 printer (Imagewriter emulator), Kraft Joystick, carrying case for //c, lots of software. $1000 firm or trade for MS-DOS transporatable. Call Dr. Silverman at home 681-8918 after 5:30 or at work 649-6400.

TO TRADE: Hitachi Color Monitor Model #1481. Never used. Will trade for extended 80-column card, serial interface for Imagewriter to //e and monochrome monitor. Will consider outright sale. Call Dr. Silverman at home 681-8918 or at work 649-6400.

FOR SALE: 64K Apple][+, 2 drives, Epson, Videx 80, monitor, 64K (128K) Saturn Accelerator][, Super Serial, Parallel, Hayes Smartmodem, CP/M, VisiCalc+Pre-boot, VisiPlot/Trend, AW][+Pre-boot, Data Capture 5.0, BPI General Ledger, misc. software. All $1000/offer. Richard Harps (202) 682-2194 work.

FOR SALE: 256K Apple ///, 2nd drive, Monitor III, Serial card, AW III, VisiCalc Advanced Version. All: $750/offer. Richard Harps (202) 682-2194 work.

FOR SALE: Apple //e 128K, 2 drives, 80-col, Apple monitor and Super Serial card, $1200. UltraTerm, $175. Panasonic 1090 printer with buffered interface card, $325. System Saver, $40. Serial Card, $75. Alf Music Card, $75. 192K expanded 80-col. card, $200. 6 MHz ALS CP/M card with software, $200. Call Bob Cham, Burlington, VT (802) 878-6647 evenings or (802) 655-9451 days.

COMMERCIAL CLASSIFIEDS

FOR SALE: Macintosh 400K external disk drive, $140 (negotiable). (301) 733-4585 after 7:00 PM, Hagerstown.

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 and topics for upcoming months:

June	28	- Garage Sale
July	26	- TBA
Aug	23	- GAMESIG (tentative)

The Executive Board of Washington Apple Pi meets on the second Wednesday of each month at 7:30 PM at the office. All members are welcome to attend. (Sometimes an alternate date is selected. Call the office for any late changes.)

General Information

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
Tues. & Thurs.	-	7 PM to 9:00 PM **
Saturday	-	12 Noon to 3:00 PM

** Office will not be open on Tuesday evenings during July and August.

SIGNEWS

Apple /// SIG meets on the 4th Wednesday of the month at 7:30 PM in the Chamber of Commerce Bldg., 1615 H Street NW, DC. The June meeting will be on the 25th.

AppleWorks SIG offers two meeting options: 8:00 AM before the regular meeting and 12 Noon after the Apple II Q&A session. Attend either or both.

DisabledSIG meets on the first Thursday of each month at the Chevy Chase Community Center, 7:00 PM. The next meeting will be on June 5.

dPub SIG (Desktop Publishing) will meet on Wednesday, June 4, at 7:30 Pm in the PEPCO auditorium at 1900 Penn. Ave., NW.

EdSIG - the education special interest group - meets on the 4th Thursday of the month at the office, 7:30 PM. However, the June 26 meeting will be a special visit. Details: 251-6369.

FEDSIG meets on the last Wednesday of the month at 7:30 PM at the office. The next meeting will be on June 25.

ForthSIG meets on the third Saturday of the month at the office, 12 Noon.

GameSIG meets on the first Thursday of each month at the office, 7:30 PM. The next meeting will be on June 5. See their news elsewhere in this issue.

MusicSIG meets on the 2nd Saturday of each month at 1:30 PM. Call Ray Hobbs at 490-7484 for place.

PIG, the Pascal Interest Group, meets on the third Thursday of each month at the office, 8:00 PM. The next meeting will be on June 19.

PI-SIG - call Bob Golden at 593-6165 for details.

SigMac Programmers meet on the 1st Thursday of each month at Our Lady of Lourdes School, 7500 Pearl Street, Bethesda, MD.

StockSIG meetings are on the second Thursday of each month at the office, 8:00 PM.

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

• June 1986 •

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5 SigMac 7:30PM-Lady of Lourdes; DisabledSIG 7PM-CCCC ->	<-Thursday 5th contd. GameSIG 7:30PM-Off.	7
8	9 Deadline for Journal Articles	10	11 Executive Board 7:30 PM Office	12STOCKSIG 8PM Office; FAC Slice 7:30 MRIID Ft.Detrick	13	14 MusicSIG 1:30PM- Call Ray Hobbs
15	16	17	18	19 Pascal SIG 8:00 PM Office	20	21 FORTH SIG 12 Noon Office
22	23 Mac Begin. Tutorial #1 7-10 PM Office	24 BBS Comm. 7:30 PM Office	25Apple/// 7:30 Ch. of Comm.DC; FEDSIG-Off. 7:30PM	26 EDSIG Special Visit-Call 251-6369	27	28 WAP Meeting - Apple // & Mac Garage Sale
29	30 Mac Begin. Tutorial #2 7-10 PM Office					

• July 1986 •

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	-> Thursday 3rd contd. DisabledSIG 7PM-CCCC	3 SigMac 7:30PM-Lady of Lourdes; GameSig-Off 7:30 PM	4 Have a good Holiday Office Closed	5
6	7 Deadline for Journal Articles	8	9 Executive Board 7:30 PM Office	10STOCKSIG 8PM Office; FAC Slice 7:30 MRIID Ft.Detrick	11	12 MusicSIG 1:30 PM- Call Ray Hobbs
13	14	15	16	17 Pascal SIG 8:00 PM Office	18	19 Forth SIG 12 Noon Office
20	21 Mac Begin. Tutorial #1 7-10 PM Office	22 BBS Comm. 7:30 PM Office	23 Apple /// Ch. of Com. Bldg., DC 7:30 PM	24 EDSIG 7:30 PM Office	25	26 WAP Meeting - Apple // & Mac 9 AM USUHS
27	28 Mac Begin. Tutorial #2 7-10 PM Office	29	30 FEDSIG Office 7:30 PM	31		

MEETING REPORT: April 26
by Adrien Youell

Excuse me a moment while I think. Just sit comfortably and relax. Don't tell anyone, but I am wondering who was the best speaker on Saturday, or the prettiest, or had the most impact on Club history. After a suitable pause, I cannot decide which single person made the most impact, so I shall not decide.

This is the first time I have received *thank-you* letters from presenters, three of them! As I imply, it was a very mixed meeting. The advertised Dvorak concentration was led by Virginia Russell (of the Dvorak International Federation, 11 Pearl Street, Brandon, VT 05733; 802-247-6020; for a Dvorak info pack send $5, or $7.50 to include the Michael L. Cleper booklet). It was a meeting not necessarily applicable to all Apple owners but of varying specialist interest to varying sections. The Dvorak keyboard layout sets up one's fingers at a natural stance as opposed to the waywardness of Sholc's *qwerty* layout. Virginia Russell gave a suberb demonstration of how to be 'at home' with different groups. The Dvorak people as of this writing have already sent me at least the $5 worth on postage in material for all Apple computers. Bruce Field has devised an instruction sheet for Apple //e keyboard conversion to Dvorak.

Our own Ken Davis has written a superb **Typing Well** tutorial program for Apple // which includes Dvorak. This program is available at $49.95 from **Learning Well** Co, New York (800-645-6564).

I love Lynn Bresett. Sir-Tech bosses let her come down from (PO Box 245, 323 Washington St) Ogdensburg, New York 13669. Tel: (315) 393-6633, specially for our meeting. I had warned Ron Wartow that we had heard quite enough of Wizardry on the Mac, and I was not going to let the Apple people play more games. This was to be a serious meeting; after all he gets at least two meetings a year and now wants August 23rd. Lynn mumbled something about *buy-one-get-3-free* at $34.95 for Rescue Raiders Apple II, plus $5 P&H (getting Star Maze, Galactic Attack and Crypt of Medea free). I don't know how you people have time to play computer games. More attention to the wife's keyboard just gets one thrown back to the pen! Caught you! I love Lynn Bresett. Here's why. I asked Ron to ask her to talk about the ethos of a *software house*. Boy, did she give a good stand-up talk on programmers, their aspirations, failures and successes. The audience went from Humm to Ahh!

Nothing is ever as easy as it first appears. You get an idea, program it and wonder why the world isn't beating a path to your door. Lynn expressed this elegantly. I say, "If at first you don't succeed lie down and let the anxiety pass off". Not so Mark Crawford. This genius and his wife Carin (of Computerised Anesthesia Systems Inc, 2310 Valley Wood Dr, PO Box 13349, Akron, Ohio 44313; 800-354-1110) wanted to make anesthetic records simpler and more legible. Boy, did they succeed? As a doctor, I am surrounded by scripted drivel. This is where the Mac makes sense. Mark and Carin have made clarity out of turmoil. Computerized Anesthesia Recording and Information Network (acronym "CARIN") allows an anestheologist to electronically track several patients under the 'dope', hence the *network* connotation. This is not a cheap toy. Mark's company will provide a working hospital system starting at $10,000.

I was forgetting. Excuse me. Theron Fuller made a remark and we all sat up. Theron proposed an (incomplete) motion to change Art. 5, Sect. 6 of the by-laws relating to Rights of Membership and Violation of Guidelines concerning expulsion of a member. To allow for thoughtful consideration and redefinition of *language* this motion was tabled until next meeting. You must think of your bye-laws (and the hello-laws will take care of themselves!).

Apple][, Uhh!, Apple 16, Forever! That is Andy Niemic's badge. Why sit with a frog when a kangaroo will leap higher and faster. Now don't do a somersault out of your chair. The *16* refers to a 16-bit 65C816 chip on a 1meg **Multiram RGB** card. Checkmate Technology Inc (of 509 S Rockford Dr, Tempe, AZ 85281; 800-327-7347 and 602-966-5802) is set on a collision course with Applied Engineering. Andy's message was that you should check the advertising carefully and ask for detailed specs. before buying. AppleWorks SIG unite. Now, to conclude. Wasn't there a lot for everyone? More product news for Mac is forthcoming.

MINUTES

Summary of May Executive Board Meeting

The Executive Board of Washington Apple Pi met on May 14, 1986 at 7:30 PM at the office, with Tom Warrick presiding. Doug Mohney, from the University of Maryland, reported that his group sponsored a Computer Fest in the Washington area last year, which turned out well. This year, a bigger event is planned. The Board decided to participate in the Computerfest, without deciding on whether or not to change the date of the Pi meeting. Budgets for June 1, 1986 - May 31, 1987 were distributed. The estimated budget was very dependent on assumptions on membership renewals and group purchase. Lee Raesly reported that Sunol had ceased trading. The ownership of the Sunol unit in the club's possession is moot. A Corvus drive has been shipped. The Board decided to set the annual BBS fee at $6. A member's password privileges has been suspended by the BBS committee for 90 days, and the Board voted not to overrule this. The chairman explained the AppleLink system for communicating with Apple. 70 groups have been invited to join the system. The Board decided that Apple Pi should participate. Lee Raesly reported on the Wizard program for Sider. Concerns were expressed as to how far Apple Pi would be endorsing the product, and what were other implications of such an agreement with First Class Peripherals. A committee was appointed to study the matter. The Board decided that the office tutorial room should be renovated.

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 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.

General	John Day	(301) 621-7543
	Dave Harvey	(703) 527-2704
	Robert Martin	(301) 498-6074
Accounting Packages		
Accountant(Dec.Sup.)	Mark Pankin	(703) 524-0937
BPI Programs	Jaxon Brown	(301) 350-3283
	Otis Greever	(301) 262-5607
Home Accountant	Leon Raesly	(301) 439-1799
Howardsoft (Tax)	Leon Raesly	(301) 439-1799
	Otis Greever	(301) 262-5607
APPLE SSC	Bernie Benson	(301) 951-5294
Apple TechNotes	Joe Chelena	(703) 978-1816
AppleWorks	Jay Jones (Balt.)	(301) 969-1990
	Ken Black	(703) 369-3366
	Ken DeVito	(703) 960-0787
Communications Packages and Modems-Telecom.		
Anchor Mark 12	George Kinal (7-10)	(202) 546-7270
	Jeremy Parker	(301) 229-2578
Apple Modems	John Day	(301) 621-7543
ASCII Express	Dave Harvey	(703) 527-2704
BIZCOMP Modem	Jeremy Parker	(301) 229-2578
General	Tom Nebiker	(216) 867-7463
Hayes Smartmodem	Bernie Benson	(301) 951-5294
Robotics Modem	Joan B. Dunham *	(301) 585-0989
SeriAll Comm. Card	Joan B. Dunham *	(301) 585-0989
Smartcom I	Harmon Pritchard	(301) 972-4667
VisiTerm	Steve Wildstrom	(301) 564-0039
XTALK CP/M Comm.	Bernie Benson	(301) 951-5294
Computers, Specific		
Apple //c	John Day	(301) 621-7543
LISA/Mac XL	John Day	(301) 621-7543
Macintosh:		
General	Steve Hunt	(301) 262-9080
	Donald Schmitt	(717) 334-3265
	Rob Clark	(804) 872-9070
Chart	Terry Monks	(703) 471-4610
Comm. & Modems	Steve Hunt	(301) 262-9080
Concertware	Skip Horvath	(703) 536-4091
Excel	David Morganstein	(301) 972-4263
	Mark Pankin	(703) 524-0937
File Vision	Steve Hunt	(301) 262-9080
Helix	Jim Berry *	(703) 662-0640
	Harvey Levine	(301) 299-9380
Inside Mac	Jon Hardis	(301) 330-1422
	Don Landing	(703) 690-1010
Lang.-C,Pascal,XLisp	Carolyn Komada	(703) 691-1986
MacDraw	Tom Berilla	(301) 434-3256
MacLion (DBMS)	Mark Miani	(202) 362-8123
MacProject	Jay Lucas	(703) 751-3332
MacTerminal	Jon Hardis	(301) 330-1422
MS-BASIC	John Love	(703) 569-2294
Multiplan	John Boblitz	(301) 356-9384
	Don Landing	(703) 690-1010
	Steve Hunt	(301) 262-9080
	Walt Francis	(202) 966-5742
MusicWorks	Skip Horvath	(703) 536-4091
OverVue	J.T.(Tom) DeMay Jr.	(301) 779-4632
Spreadsheets	David Morganstein	(301) 972-4263
Spreadsheets&Graphcs	Bob Pulgino	(202) 797-0879
Sidekick	Ray Hobbs(7:30-10)	(301) 490-7484
Word	Marty Milrod	(301) 464-2154
Data Bases		
dBase II	Paul Bublitz	(301) 261-4124
	John Staples	(703) 893-5985
dBase II & III	Ray Hobbs(7:30-10)	(301) 490-7484
	Jim Kellock (day)	(301) 986-9522
	Leon Raesly	(301) 460-0754
DB Master	Dave Einhorn	(301) 593-8420
Data Perfect	Leon Raesly	(301) 439-1799
Data Factory	Bob Schmidt	(301) 736-4698
General Manager	Normand Bernache	(301) 935-5617
PFS	Bill Etue	(703) 620-2103
	Ginny Spevak	(202) 362-3887
QuickFile II	J.J. Finkelstein	(301) 652-9375
Q-Pro-4	John Staples	(703) 893-5985
VisiPlot	Leon Raesly	(301) 439-1799
Games - Apple //	Charles Hall	(301) 330-4052
Games - Mac	Ron Wartow	(301) 654-4439
Hard Disks		
Corvus & Omninet	Tom Vier (ABBS)	(301) 986-8085
Sider	Jaxon Brown	(301) 350-3283
	Otis Greever	(301) 262-5607
Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine)		
A	Louis Biggie	(301) 967-3977
A	Peter Combes	(301) 251-6369
A,I	Jeff Dillon	(301) 422-6458
A	Richard Langston	(301) 869-7466
A	Leon Raesly	(301) 439-1799
A,I,M	Richard Untied	(609) 596-8816
A,I,M	John Love	(703) 569-2294
M	Raymond Hobbs	(301) 490-7484
P	Donn Hoffman *	(412) 578-8905
P	Michael Hartman	(301) 445-1583
Forth	Bruce Field	(301) 340-7038
MS Basic	Ray Hobbs(7:30-10)	(301) 490-7484
Math/OR Applns.	Mark Pankin	(703) 524-0937
Monitor, RGB	John Day	(301) 621-7543
Operating Systems		
Apple DOS	Richard Langston	(301) 869-7466
	John Love	(703) 569-2294
	Adam Robie	(301) 460-6537
	Richard Untied	(609) 596-8816
CP/M	Ray Hobbs (7:30-10)	(301) 490-7484
	Leon Raesly	(301) 439-1799
ProDOS	Richard Langston	(301) 869-7466
	John Love	(703) 569-2294
Printers		
General	Walt Francis	(202) 966-5742
	Leon Raesly	(301) 439-1799
	Joan B. Dunham *	(301) 585-0989
Apple Color Plotter	John Day	(301) 621-7543
Apple Daisy Wheel	John Day	(301) 621-7543
Daisywriter 2000	Bill Etue	(703) 620-2103
	Henry Greene	(202) 363-1797
IDS 460	Jeff Stetekluh	(703) 979-8249
Imagewriter	John Day	(301) 621-7543
MX-80	Jeff Dillon	(301) 434-0405
NEC 8023	Bill Mark	(301) 779-8938
Okidata	Michael Proffitt	(301) 874-2270
	Dan Robrish	(301) 530-4202
Scribe	Phil Leber	(703) 378-4391
Silentype	Bruce Field	(301) 340-7038
Spreadsheets	Leon Raesly	(301) 439-1799
	Walt Francis	(202) 966-5742
Lotus 1-2-3	Walt Francis	(202) 966-5742
	Ray Hobbs(7:30-10)	(301) 490-7484
Multiplan	Terry Prudden	(301) 933-3065
VisiCalc	Walt Francis	(202) 966-5742
Sprdsht. 2.0(MagicCalc)	Leon Raesly	(301) 439-1799
SuperCalc Ver. 2.0	Leon Raesly	(301) 430-1799
Stat. Packages	David Morganstein	(301) 972-4263
Stock Market	Robert Wood	(703) 893-9591
Time-Sharing	Dave Harvey	(703) 527-2704
Word Processors	Walt Francis	(202) 966-5742
Apple Writer II	Dianne Lorenz	(301) 530-7881
	Leon Raesly	(301) 439-1799
Format II	Henry Donahoe	(202) 298-9107
Gutenberg & Jr.	Neil Muncy Can.	(416) 298-3964
	Harris Silverstone	(301) 435-3582
Letter Perfect & Simply Perfect	Leon Raesly	(301) 439-1799
Magic Window and II	Joyce C. Little	(301) 321-2989
Peach Text	Carl Eisen	(703) 354-4837
PIE Writer/Apple PIE	Jim Graham	(703) 643-1848
ScreenWriter II	Peter Combes	(301) 251-6369
	E. E. Carter	(202) 363-2342
Supertext II	Peter Rosden	(301) 229-2288
Word Handler	Jon Vaupel	(301) 977-3054
Word Juggler //e	Carl Eisen	(703) 354-4837
Word Perfect	James Edwards	(301) 585-3002
Word Star	Leon Raesly	(301) 439-1799
	Dana Reil	(301) 350-3283

* Calls up until midnight are ok.

APPLE TEAS
by Amy T. Billingsley

What's an Apple Tea? An opportunity for Apple users to get together in a small group setting to learn about a specific phase of Apple computing, or just to share information and ask questions.

How can you have one in your area? Plan to host one at your home or another suitable location. Think of a topic of general interest, settle on a date, and call me at 622-2203. How could something so helpful be so simple! Start working on yours today.

Announcing **five** Apple Teas in **June** and **July**. Refreshments will be served. RSVP to host.

Apple MacTea - NW Washington
Tuesday, June 24th, 7:30-9:30 PM
on AppleTalk and Other Local Area Networks
Business Applications of the Mac
Hosts: John & Ann Loikow with Walter Rhett
3404 Rodman Street, Washington DC 20008

RSVP to Ann Loikow, 363-6658 (eve) or 377-6773 (day). Directions: Take Beltway to Connecticut Ave South toward DC. Pass Van Ness to Rodman, turn right. Proceed 2 long blocks up the hill. Cross 34th St. and park. 3404 is a beige house next to the alley, left (South) side of street.

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Apple MacTea - Germantown, MD
Wednesday, June 25th, 7:30-9:30 PM
on Excel and Other Business Applications
at the home of David Morganstein
13424 Walnutwood Ln, Germantown, MD 20874

RSVP to David, 772-4263. Directions: Take Route 270 North to 118 West, Germantown (2nd exit). Turn right at 2nd traffic light onto Middlebrook Road. Turn right at dead end, Germantown Road. Take 1st left (sign reads Trimfield, but is Wynnfield to left). Take 3rd left, Walnutwood Lane to 13424.

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Apple Tea - Northern Virginia
Wednesday, June 25th, 7-9 PM
AppleWorks - The Works (continued from May)
at the home of Rex Pelto
3314 S. 28th Street, #101, Alexandria, VA 22303

RSVP to Rex at 379-5780. Directions: Take 395 to King Street West. Proceed to 4th traffic light, turn left onto 28th St. Keep to the right until Bldg. #3314, Apt. 101.

.....

Apple Tea - Laurel, MD
Wednesday July 2nd, 7:30-9:30 PM
Managing Your Money with the Apple - Spreadsheets
at the home of Paul Simon
15311 Bauer Lane, Laurel, MD 20707

RSVP to Paul, 490-8395 (evenings from 6-10 PM). Directions: 95 North toward Baltimore. Take 2nd Laurel exit, #198 toward Burtonsville. Go 1 mile to Bauer Lane. Turn right to 3rd house on right, 15311.

.....

Apple Tea - Laurel, MD
Sunday, July 13, 4-6 PM
Musical Apple: Making Music with a Computer
at the home of Raymond Hobbs
8405 Snowden Loop, Laurel, MD 20708

RSVP to Ray, 490-7484. Directions: Take Balt-Wash Pkwy toward Baltimore. Take Route 197 exit toward Laurel. Go about 1/2 mile to 3rd traffic light, Montpelier Dr. Turn left. Go 1 mile to Snowden Loop. Turn right to 8405, 100 feet on right.

APPLEWORKS SIG NEWS
by Peg Matzen

Due to popular demand, AppleWorks SIG now offers the opportunity to meet at 8:00 AM before the regular WAP monthly meeting or at 12 Noon after the Apple II Q & A session. George Sall will chair the early session. Come to both if you wish!

More than 30 users participated in the lively give-and-take of the April 26 meeting. Solutions to problems or ideas for expanding use of AppleWorks were the talk of the day. Topics ranged from a strong endorsement of current "cheapie" modems to Apple "sticky space".

Chairman Ken DeVito had many takers for the "AppleWorks Desktop Utility", which he offered in return for a blank disk. The utility, obtained from Lou Pastura and created by Sam Bauer, offers the capability of a calculator, calendar and memo pad. Ken's project to evaluate diskettes from the AppleWorks User's Group (TAWUG) in New Orleans and contribute them to the WAP Disketeria was highly successful. Not only did volunteers take home the diskettes for evaluation, but another 16 sides were received for evaluation and contribution to the WAP Disketeria. Again, Ken will be soliciting help ...

The May 24 AppleWorks SIG meetings will feature Bulletin Board demonstrations (live or captured) in addition to the usual Q & As. Ken DeVito and Richard Rowell will present BB Systems 1 and 2, as well as Dow Jones, MCI Mail, and GEnie.

THE UnCopyProtect DRIVER: A Review

by David Ottalini, /// SIG Co-Chairman

I didn't know what to expect when I decided to order On Three's new "UnCopyProtect Driver." It was advertised in the magazine's March issue as a device driver designed for use with Apple Writer, VisiCalc and Advanced VisiCalc as a way to make backup copies of those specific copy-protected programs.

On Three, while specifically stating it strongly opposes copying for anything other than archival/backup purposes, said the decision had been made to develop such a software device because those three Apple Three programs are no longer produced or supported. Thus, if one were were to crash, a user could be in a lot of trouble.

Obviously, if you have a nibble copier, you also have the ability to make backups. But as those programs move to the ProDOS operating system (as they essentially all have) and require a minimum 64K of memory, those /// users making do with the original emulation mode will be left out in the cold. They are also slow and depend on a lot of factors, like disk speed, that can prevent the program from being copied.

Instead, here is an easy and straightforward native-mode way to allow a user to make backups that work the first time. All it takes is a little knowledge of how to use the System Configuration Program. Instead of nibbling a copy bit by bit, On Three has come up with a completely new, and I think innovative way, to fool copies of Apple Writer, VisiCalc or Advanced VisiCalc into thinking they are the originals.

When you order the UnCopyProtect Driver, you receive one disk from On Three along with a three page user's guide. On the disk is not only the driver, but also a copy of System Utilities. So all you have to do is boot the disk and you can install the driver with few hassles.

On Three recommends that you make a copy of the program using the Copy a Volume command. Since the program is copy-protected, it will not work. But what you do then is simply use the System Configuration Program to load in the drivers from the SOS.Driver file and add the UnCopyProtect Driver, called UNCOPY.DRIVER on the disk. After generating the new driver file back to your copy of Apple Writer, VisiCalc or Advanced VC, boot it up and it should work without any problems. You might also consider reversing things and install the UnCopyProtect Driver on the original program's SOS.Driver file. That way your original will always be ready to make a backup if your backup crashes.

On the flip side of the disk, by the way, is a copy of the public domain utility program called Fixer that allows you to fix your Catalyzed disks so that the UnCopyProtectDriver will work with them as well.The product can also be used with On Three's Selector /// hard disk menu program. There is no specific indication that the program will work with Catalyst, but if it will work with Selector, it should also work with Catalyst.

This is a real gem from On Three's programmer Rob Turner and a must for those of you who want a quick and easy way to make backups of your valuable Apple Writer (1.0 and 2.0), VisiCalc or Advanced VisiCalc programs. And at only $19.95, this program is a real bargain too (especially since a copy of System Utilites and Fixer are included).

The UnCopyProtect Driver is a unique way to go after the problem of copy protection. One wishes On Three would have expanded the driver to include a few other programs, like Business Graphics, that are no longer supported either.

Oh, and by the way, the UnCopyProtect Driver is itself unprotected!

NEW /// INFORMATION IN THE WAP LIBRARY

by David Ottalini

Our long-awaited VHS video tape "How to Use Your Apple /// in Ten Easy Video Lessons" is now in the WAP library. The office has a VHS machine, so if you are interested, please take a look.

The manuals and other information ordered from ATUNC...the Apple Three Users of Northern California have also arrived. They include:

: Fortran Manual
: Business Basic 1.23
: SOS Reference Manual Vols 1 & 2
: Device Writers Guide
: Apple][Emulation Mode
: 3 EZP/Apple Works File Format Tech Note

These will all be available in the special Apple /// section of the WAP Library being put together by SIG member Jim Salerno.

We are also looking for any donations of /// manuals, especially any Product Training Paks you might no longer need. Software donations may also be taken in the future...if and when we are successful in our attempts to get an Apple /// donated to the WAP office.

If you have any suggestions, etc. please contact Jim at (301) 424-5997.

APPLE /// SIG NEWS
by Charlene Ryan

Since the last time I communicated with you by letter, we have had two meetings in our new location. What a success story! The second was even better than the first. There were 18 faces in attendance, three fourths of them were new. Welcome and please come back again. We hope you find our meetings meaningful and worth while. Ed Zier, who is our point of contact for the new meeting location, did not make this last meeting and, consequently, there was not a computer available to demonstrate the different programs that we were prepared to do at the meeting. We have contacted him and got his assurance that he will be there next time with equipment ready for whatever we have planned.

One item on the meeting for next time, May 27, will include a demonstration of MacStuff. This is a program for the Apple /// that has pull-down menus like the Macintosh.

We have quite a bit of information for the Apple /// in the WAP library. Jim Salerno has visited the office and started to gather it all up into one location. The office managers will allocate and clean out one shelf for us. This will be helpful since we have so little in comparison to the other computer media in the library.

Recent additions to the library include:

Apple /// Fortran Reference Manual
Business Basic, Version 1.23
SOS Device Writer's Guide
SOS Reference Manual, Vol 1, How SOS Works
SOS Reference Manual, Vol 2, The SOS Calls
SOS Technical Note #1, SOS Drivers
Apple][Emulation Mode Manual
File Formats for Appleworks and /// EZ Pieces

For those of us who bought our /// way back when from a dealer, do you remember their having training packs to loan you that went with the software you bought? Those training packs were often given or sold to the individual, and they also showed up at several of those auctions we rushed to. These training packs would be excellent items for the WAP library. As new users show up at meetings who bought their /// secondhand, they don't have the dealer support advantage we had.

Our Co-chairman, Dave Ottalini, will be running for director-at-large in the upcoming Apple Pi election. He is the first /// SIG member to do this. Dave has our support and best wishes.

We will be discussing the possiblity of a New Member Tuturial at the next meeting. We are trying to plan it for some Saturday in June—possibly the 14th. If there is some interest in this, please let us know. There is an article in the May WAP Journal by Tom Bartkiewicz that reviews the UniDisk 3.5 for the Apple ///. Tom also talked about this product at the April meeting. He is extremely pleased with the performance.

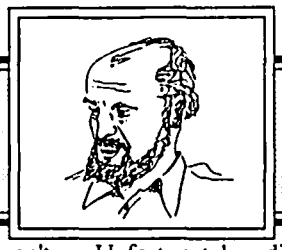
There are many new items now on the market for the ///. The Titan 3+2e board allows your computer to simulate a //e and runs everything a //e can. Any files created with AppleWorks in PRODOS can be used with Three Easy Pieces in SOS and vice-versa. I have personally taken an Apple][+ file created by VisiCalc, converted it to an Apple /// file with Apple Writer Utilities, then pulled it into Three Easy Pieces as a DIF file, and didn't lose a figure. The manipulation possibilities are endless. Don't feel that moving back and forth from the Apple // family to the /// is impossible. If you think you have a problem, let us try to help you work it out.

A company in Tuson Arizona, WSM Group, would be willing to work on a C Compiler for the /// if there is enough interest. Please call them if you are. This will be a fast powerful programming language that will work directly with 6502 assembly language, and it looks like the computer software market is trending toward the C Language arena. Phone number: (602) 298-7910. CALL THEM!!

One of the many interesting individuals who came to the last meeting was a gentleman named Bob Schaffer, Jr. He comes from Cumberland, Maryland and traveled over 150 miles for the meeting. Bob was formerly an Apple /// repairman. He did this for 4 years. He's delighted to see the continued interest in such a great product. He will be glad to help anyone personally with hardware problems they might have. His phone number is: (301) 729-1544. See you at the next meeting.

DISABLEDSIG NEWS

by Jay M. Thal

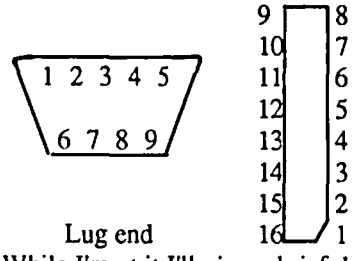


The focus of this article is to give a brief review of two programs: "Exploratory Play" and "Representational Play", by PEAL Programs for Early Acquisition of Language) Software. These two programs are designed for children as young as 18 months through five years. They require either an Apple][,][+, or //e with an Echo Speech Synthesizer; or a //c and a Cricket Synthesizer (both synthesizers made by Street Electronics, AND a Muppet Learning Keys (MLK) by Koala Industries.

Because I have a][+, the MLK which has a male 9-pin D connector doesn't mate with my game port as it does with the //e or //c. If you're lucky enough to have an adaptor well and good. I didn't, so I had to make one of my own with off the wall parts from my local Radio Shack. For those so inclined, here are the pin matches:

9-Pin D	16 Pin DIP
1	3
2	1
3	8
4	7
5	6
6	4
7	2
8	10
9	11

It sure helps if you know how to solder. The D-Subminiture is Radio Shack #276-1538, and the pin numbers are molded by the solder lugs. Use a magnifying glass! The 16-Pin DIP numbers counterclockwise from the notched corner (see below).



While I'm at it I'll give a brief description of the MLK. It is a 14" x 15" tablet with a 9" x 13", software controlled, membrane keyboard. The keyboard is colorful and provides a palette of colors, numbers, the letters in alphabetical sequence, and more. It comes with a simple program for pre-schoolers that deals with number and letter matching. It discounts for about $42, and is well worth the price. What makes it a flexible tool is that overlays can be slipped over the membrane, in channels provided on the tablet, to reidentify the keys.

Well back to the original purpose for this article—PEAL's software. As I have mentioned in several earlier articles, the programs were designed by Dr. Laura Meyers to aid children without to language acquire it. Meyers has worked with what are often called severely damaged children—children with Cerebral Palsy, Downs Syndrome, etc.

While most children start using their first words around 12 months, these children haven't. Unfortunately, diagnosis often becomes a self-fulfilling prophecy and the children's limits are set by the diagnostician. Meyers thinks otherwise and sees children as generally able to acquire control at specific ages, and even skip over stages seemingly missed. Thus, these programs are designed for children starting at 18 months, with the computer giving them the needed control over their environment.

As with the talking word processor reviewed in the April 1986 issue, Meyers favors not waiting for a child to develop the motor (finger) skills through exercises which are irrelevant to it. She favors providing a relevant opportunity through control and communication and to develop the child's inner strengths so that he can see reasons to develop skills.

"Exploratory Play" is designed for children 18 to 36 months. It contains two groupings of activities: in and out play, "Purse"; and cause and effect play, "Wind-Up". Each activity has three levels, an overlay with 12 pictures, and three framing overlays which allow progressive limitation to the activity , and a plastic covered chart advising dos and don'ts and suggested activities.

"Purse" comes from the observation that mothers' purses are often playthings for children, and contain all sorts of interesting things to take in and out. If the child wants the wallet, beads, keys, glasses, etc. it can select the picture, hear the word, see the display, and relate one to the other.

"Wind-up" deals with toys that children love—cars, telephones, and even soap bubbles. No longer just naming names like in Purse, it deals with actions—wind, blow, pop, open, and "I want that". Each stage adds new concepts, demands word combining, and demonstrates receptive knowledge. Both allow the child to ask for "more" or state "all done".

"Representational Play" is similarly packaged but is designed for children 24 months to 5 years. It contains two programs: "Baby", doll play; and, "Car", car play. In it the child can develop from word combinations to complete phrases and sentences. "Done" becomes "I'm all done", and "more" is "I want more." Scenarios can be developed from cars stopping, going fast, crashing, etc. to more complex social interactions like diapering the baby, combing its hair, or covering the baby.

Like Lincoln at Gettysburg, there is little I can say here that can adequately describe what these programs can do, or what they have done. With the cost of the Echo, and the MLK, and the $120 per program, these aren't designed for idle child education at home. But they appear to be valuable tools for children with special needs and therapists with the will to use them.

PEAL Software, 2210 Wilshire Blvd, Suite 806, Santa Monica, CA 90403-5784. (213) 451-0997.

MICROTEST II: A Review
by Walter Rhett

MicroTest II is an educational test generator developed by Chariot Software, and designed to work on Apple's Macintosh computer. Its goal is to give classroom teachers an easy, efficient electronic means of developing an extensive bank of test questions. MicroTest II uses menus, commands, and templates related to data base operations in order to format questions and print them. The program uses standard word processing features for entering and editing questions or test items. MicroTest II's strengths and weaknesses are related to the strengths and weaknesses of its data base and word processing features.

The heart of the Microtest program is its data base features. They allow the program to create large test banks that can be grouped and organized into chapters, and then reorganized into books. The micro part of the data base deals with formatting test questions. These can be true or false items or multiple choice. There are options for determining the items' prefixes (alphabet or number), and the field range. An excellent safety feature prevents an item from being saved without an answer. On-screen controls allow for forward and backward scrolling. The controls are mouse-based, rather than keyboard operated. Its mouse controls were easy. The commands of the program are hierarchical, and took me some getting used to. A regular database user would probably have quicker success, and would see the logic of the choices more clearly.

When it came time to set the print format, I missed an on-screen display! Neither the data base nor the word pro- cessor allows the user to display the actual page on screen. On-screen display helps me with item continuity. By being able to see the previous items, I often build in progressive reading interest, sets of facts, and progressive item difficulty, into tests. (Increasing the difficulty of test items is a motivational challenge to students, as is making a test interesting reading; both bring surprising results in student performance.)

MicroTest has a limit to the size of an item, so reading passages need to be less than 150 words. I liked the item parameters.

I frequently do editing, test development, and software review, and I found the Microtest program moderately difficult to use. Parts of it were downright frustrating. My methods of review do not rigidly follow the instructions in the manual. Having been spoiled by the Macintosh's visual interface, like the average user, I boot up a new piece of software and learn it hands-on, referring to the manual only when I need to. A blind test lets me stumble around a bit. I get a feel for how someone else programmed the machine, and usually encounter the bugs and stumbling blocks right away.

Reviewing software has made me appreciate the infinite systems of logic and personalities within programming. I appreciate, too, the different needs of individual styles, and the differences in computer operated environments. I need a piece of software to have speed, simple commands, and complete on-screen display. Many people I know are happy without these features. They patiently memorize large sets of commands, and see the final form only in print. (I couldn't even begin to evaluate such a piece of software!)

Many test generators follow MicroTest's plan of developing tests as a database. But word processing features are equally as important for certain aspects of test construction. File is a public domain text editor, which allows the Macintosh screen to display mutiple windows. I find it helpful in constructing duplicate tests covering different subject variety but having the same skills content. This type of testing helps in teaching across the curriculum.

MicroTest primarily produces paper copy tests, and does not allow for on-screen answering, sound, or graphics.

I found MicroTest to be pretty heftily priced at $175 (but again, I'm a devotee of thrift stores!), reasonably free of bugs, a performer that stores well and safes securely. It needs a few more really innovative features to become a leader in the field.

EDSIG NEWS
by Peter Combes

EDSIG Calendar

Thursday, June 26 at 7.30 p.m. - Special visit. Call 251-6369 for venue details.

Thursday, July 25, at 7.30 p.m. - "Newsroom at School". Carol Thomas explains and demonstrates the in-school uses of this innovative program.

Meeting Report

Thursday, April 24 at 7.30 p.m. - "Magazines on Disk".

Three publishers sent review versions of their monthly magazines. Scholastic, a well known name in educational software, sent us copies of Microzine, an attractive "Computer Learning Library on a Disk".

Uptime, "The Magazine on a Disk", sent only disks, containing several old favorites, such as Oregon Trail and Lissajous. The table of contents was impressive.

Fast Track, by Learning Advantage, looks much more like a regular magazine than the other two, with attractive articles, comic strips, and puzzles. However, the software included in the magazine was not insignificant—we were startled to find "Chipwits" included in one issue.

All three offerings contained far more than we could review at one session. We distributed the material among the attendees, and look forward to a more detailed treatment next month. Meanwhile, MicroTest II is reviewed on this page by Walter Rhett.

CHOOSING A SCHOOL WITH A COMPUTER PROGRAM

by Walter Rhett

The school, the business, and the home are the three institutions where Americans are most likely to encounter computers. Examples come quickly to mind; today's business uses many types of general and specialized computers. The electronic scanners you see in grocery stores, the terminals airline agents use for reservations, the electronic fuel injection which provides gasoline for your car, the direct dial system on your phone, your personal bank card—all put you in touch with businesses and industries using computers to increase profits and to offer better service.

Homes contain a large variety of machines, from Atari games to Apple's innovative and popular machines, to IBM's personal mule, the PC. Games and simulations, videos, concerts, and electronic accessories enrich the family staples—spreadsheets, data bases, and word processors. The variety of home programs is having a tremendous impact on the family, and the family is a strong resource of computer knowledge.

But the computer's greatest impact lies in education. Computers are quietly, irreversibly changing what and how our children will learn. And the child who does not gain early experience will not know that he or she is behind—until it is too late.

Finding a good computer program for your child is just as important as securing a respected dance or music teacher. I suggest—based on my research and experiences with other classroom teachers involved in computing—that you look for the following:

1. The educational focus of the program should be on discovery—allowing children opportunities to use the computer creatively and independently. Stay away from programs where there is rigid control, unimaginative drill and practice, or a concern that the children might "break" the machines. (Computers are incredibly durable machines. From the viewpoint of damage likely to be inflicted by supervised children, they are virtually indestructible.)

2. The program should have large blocks (at least 45 minutes!) of individual or small group (no more than three persons!) hands-on time to develop well-rounded skills in writing, math, art, science. A computer becomes more than a tool when the child has enough time on the machine. Time allows the computer to act as an integral learning environment in which the child is capable of expressing his or her ideas in real terms. Learning takes place when, through his or her application of technical and conceptual skills, the child makes this happen. A new learner needs to do solo or small group work to really interact with the machine, to explore new options, and to bring out individual creativity.

3. The program's library should have a large number of computer demonstrations, along with the best educational games, drills, and simulations. Demostrations, games, drills, and simulations—but only the good ones—keep learner interest high.

4. Printers should be available so that children can receive hard copies of their work.

5. Review the skills taught by the program's software. Software uses three basic methods of learning. A good computer program will spend equal amounts of time in each approach, giving the student a chance to master the skills related to each area, and giving the child a chance to develop a well rounded individual learning style.

A. The first software method is drill and practice: A student learns a rule, and applies that rule to solve problems related to using the rule correctly. Drill and practice increases a student's work speed, improves memorization, and teaches the student how to justify his or her choices—it teaches the student to reason properly.

B. The second method is discovery learning. This type of software uses multiple cognitive skills in learning. Its most frequently selected skills are memorizing, perceiving relationships, planning, following multiple steps, forming concepts, and visual understanding. (Lessons are needed that focus on understanding moods and tone, along with view!) The educational applications of databases, spreadsheets, and word processors frequently challenge the student through discovery learning.

C. The third method is simulation. Simulation is the highest form of educational activity. It involves learning environments which imitate the complexity and chaos of real life. Perserverance, problem-solving skills, strategy development, model building, competitive agression are the affective skills that are presently developed by the majority of computer simulations.

6. Finally, a good school program will permit a student to participate in at least half a day's activities, during interviews. Participation—the experience of working with the machine, the teacher, and the other students on assignments according to a schedule—is the best assessment of how a school can assist in developing your child's potential.

Successful interactions with the computer depend upon developing a suitable individual style. Through participation, your child gets to feel and sense the program's learning chemistry. Use your child's judgement of what program they liked. The best computer learning programs (including the one you should design for your child when he or she is at home!) helps a child make new discoveries, and supports his or her creative freedom.

Q & A

by Bruce F. Field

For the past couple of months some readers and I have speculated as to why Apple Writer II occasionally drops characters. Ron Dyck wrote to report that Don Lancaster has identified an identical problem with Apple Writer //c in his Apple Writer Cookbook, pages 32-33. It's possible that this is also the problem with Apple Writer II. To paraphrase Don, the keyscanner in the //c is slightly flakey, and missing characters generally happen in the slower insertion mode of Apple Writer //c. To avoid this, use the replace mode rather than the insert mode, be gentle in your typing, and release the keys crisply.

Richard Small has some additional information on configuring a Gemini 10X printer and Grappler+ interface with AppleWorks. "It is necessary to select a 'Custom Printer' as the Gemini codes are not the same as any Epson. The Gemini manual lists the following codes for pitches:

10 cpi	ESC B 1	(Hex 42 01)
12 cpi	ESC B 2	(Hex 42 02)
17 cpi	ESC B 3	(Hex 42 03)

In the entry of the custom printer configuration data it is natural to type '<ESC> B 1' for 10 cpi. This, however, results in Hex 42 31 instead of 42 01. The proper codes to enter from the keyboard for the above are:

10 cpi	ESC control-A
12 cpi	ESC control-B
17 cpi	ESC control-C

To ensure that the double wide mode is cancelled, I use ESC B Ctrl-A ESC W Ctrl-@ as my 10 cpi code and suffix the same for 12 and 17 cpi." Thanks Richard.

Since last month I have obtained additional information on globally replacing carriage returns in Apple Writer II. My original answer was based on second hand information. With Apple Writer II you can globally replace carriage returns by using a different delimiter character. To replace carriage returns with nulls, type Ctrl-F to replace, then type "<><<A", without the quotes of course. In English this is, less-than, greater-than, less-than, less-than, and the letter A. The less-than character is the new delimiter, the greater-than character represents the carriage return, and since nothing is put between the last two less-than characters the carriage return is replaced with nothing (null).

One reader had problems using Word Perfect V1.0 (the ProDOS //c version) with the Fingerprint interface card by ThirdWare. The Fingerprint card is supposed to be Grappler+ compatible but it didn't work with Word Perfect configured for Grappler+. The printer would print about one buffer full of text before producing garbage. The problem was solved by the ThirdWare people who tracked it down to Fingerprint using different "mask" bytes for monitoring the status of the printer. The problem can be solved by running PRINTER.SYSTEM on the Word Perfect Utility disk. Configure your printer using Grappler+ as the model but change mask byte #1 to 09, and mask byte #2 to 01 (from their original values of 07 and 03 respectively). After exiting PRINTER.SYSTEM copy the WP.CARD file from the Utility disk to the /WP disk. Word Perfect handles buffering of text to the printer, allowing the user to perform other operations while printing which apparently caused the problem here.

Q. I want to use cut sheet paper for my AppleWorks data base report. I know how to get the printer to pause at the end of each page when printing a word processor document but have been unable to get this to work for the data base. Can you help?

A. You can do this by changing your printer specification from the Other Activities/Printer Information menus. Choose Change printer specifications, and check yes for item 3—stop at the end of each page. This will be in effect for all your printing. If you wish it to be in effect only temporarily, you will have to change it back when you are done. For word processing (as you have apparently discovered) there is an alternate method. When you are finished typing the document, put the cursor at the beginning of the document, press open-Apple-O, type PE, press RETURN, and press ESC. This will cause the printer to stop at the end of each page and will be in effect only for the one document.

Q. We have a new Silver Reed daisy wheel printer which I put into port 1 on my Apple //c. Then I reconfigured port 2 for the Apple Scribe. Both printers work well for regular text printing—but I cannot print any graphics from the "Print Shop" package to either one. I'm at a loss to make Print Shop work.

A. You should be able to make Print Shop work successfully with your Scribe. After booting Print Shop choose Setup from the Main menu. The program will present you with a choice of printers, use the arrow keys to choose the Scribe (which is on the same line as the Apple DMP and Imagewriter) and press RETURN. The program then gives you a choice of interface cards, choose the Apple Super Serial card; and to the choice of slots, choose slot 2. That should do it.

In general it is not easy to print graphics with a daisy wheel printer. Some printers have the capability of moving the print head in small increments and the period character can be used to print dots, but this method is extremely slow and not usually supported by graphics packages. At 30 characters per second it would take about 30 minutes to print the entire hi-res graphics screen using a daisy wheel printer.

Q. I am writing an Applesoft program that GETs four characters, prints a message to the screen, then GETs four more characters. I don't want the user to have to press return, so I am using the GET command. But, when people use the program they accidently type more than

contd.

four characters the first time and the last of these is used for the first GET of the second set. Is there some way I can disable the keyboard after the first set of GETs?

A. You can't disable the keyboard, but just before the second set of GETs you can clear any keystrokes that have been typed since the last GET. Insert POKE -16368,0 just before the second set of GETs. When you type a key on the keyboard it sets a flag (the eighth bit of the character byte) to tell you that a key has been pressed. The Applesoft GET command monitors the character byte by continuously reading memory location -16384 ($C000) waiting until the eighth bit goes high. It then resets the eighth bit low by doing the equivalent of POKE -16368,0 and returns the lower 7 bits which contain the character.

Q. Is there a data base program for the Apple //c other than Dbase II which has a command language to simplify entering data and setting up reports?

A. There is a program called Superbase distributed by Precision Software Ltd. that is available for about $100 mail order or $130 locally. It has a command language that performs the same functions as the command language in Dbase II but it is not identical to that language. The Superbase language is derived from Applesoft with added commands for data base and file manipulation. At present it is available in DOS 3.3 and the entire data base must fit onto one 143 Kbyte 5 1/4" diskette. A ProDOS version is supposed to be available but doesn't seem to be around yet. The program documentation contains a good tutorial, and an audio cassette is included with a three part tutorial. The documentation is weak on the programming language (it helps to be a programmer already), and it is on a copy protected diskette.

Q&A answers questions about the Apple // family of hardware and software. I cannot answer all letters, but I try to answer questions that are of general interest to most readers. Please send your questions to Q&A, Washington Apple Pi, Ltd., 8227 Woodmont Avenue, Suite 201, Bethesda, MD 20814.

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LEARNING DVORAK: Meeting Report

by Michael Spevak

Virginia Russell, President of Dvorak International Federation, which she founded in 1980, spoke to Apple][and Macintosh users in the April 26, 1986, monthly meeting sponsored by the Apple //c SIG. The meeting was well-attended and lively.

Mrs. Russell reviewed the history and status of the Dvorak (pronounced DaVORak) keyboard with an "Ev and Charley" routine. The 114-year-old Sholes QWERTY keyboard was never intended to be used for touch typing, which typewriter advances by the turn of the century made possible for the first time. Its use for touch typing is awkward, whereas even very young children have been observed learning to touch type spontaneously with Dvorak. As a rule of thumb, a non-typist can expect to type at 40 words per minute with Dvorak after 18 hours training, but with QWERTY only after about 3 times as long. Someone who already types proficiently with QWERTY can estimate the hours of training in Dvorak needed to equal his present rate by converting his speed in words per minute into hours. For example, someone typing 40 wpm would again achieve that rate after 40 hours on Dvorak. Most 60+ words per minute typists should expect to gain little speed by retraining, although the decrease in fatigue for heavy duty typists like court reporters has made for some happy converts. With Dvorak, 70% of keystrokes are on the home row, and finger travel in 8 hours of typing is 1 mile, compared with about 16 for QWERTY. An average Dvorak typing rate would be 85 wpm.

The Dvorak keyboard was laid out with English letter frequencies in mind, and somewhat different keyboards are in use for German, Spanish, and Turkish. Largely languishing since its invention in 1936, Dvorak's use and popularity has been burgeoning since the American National Standards Institute accepted it as an alternate standard keyboard layout in 1983. Its present renaissance has come about because of media attention to its advantages, the cheap, switchable conversions possible with computers, and the fact that secretaries are no longer the only typists, that more and more of the persons who write also type what they write themselves, and that these persons are in a better position not to have to put up with the inadequacies of QWERTY than "mere" secretaries have been. These same persons, many in Fortune 500 companies, now want their secretaries to enjoy the enhanced productivity available with Dvorak. Their pressure should shortly induce local schools across the nation to supply Dvorak-trained typists.

In the meantime, learning Dvorak is a do-it-yourself venture made possible by a wide array of products now available, many of which were described and shown by Mrs. Russell: up-to-date information is available from her to members of Dvorak International Federation, Box 128, Brandon, Vermont 05733, (802)247-6020, $30 per year. Dr. Dvorak's timeless, excellent typing manual is available from DIF for $12.95 including postage. DIF will provide the excellent Hooleon key overlays for $26.95. It will also send a special packet of relevant DVORAK information to WAP members for $5.

The IBM, Commodore, Radio Shack Models 100 and 200, NEC, Morrow, and the Wang are among the computers that can, with hardware or software, use Dvorak. As far as Mrs. Russell knows, only the Atari cannot. The Apple][+ uses Magic Keyboard, hardware made by Southern California Research Group for approximately $50. [A caveat: keystrokes simultaneous with the control key are in QWERTY mode!] A fine separate keyboard is sold by Wico for the IBM for $299, adaptable for the //e for $29.95. It is available from Sigma Integrative Systems, P.O. Box 10661, McLean, VA 22102. Inexpensive, simple software can convert the Macintosh and the Apple ///. Excellent key overlays, which show QWERTY as well as Dvorak in contrasting colors, are available from Hooleon, P.O. Box 201, Cornville, AZ 86325, (602)634-7515 at $26.95. The //e can be modified with Switch to Dvorak, P.O. Box 2919, Satellite Beach, FL 32937, (305)773-4381, for $25.00, or the fine switch and overlays from Faultline Micro, P.O. Box 3147, Fullerton, CA 92634, (714)526-5055, for $39.95 + $2.00 shipping. The same modification can be made for pennies using the method described in this Journal by Bruce Field. A diagram is available.

DVORAK for the Apple /// is available on its Systems Utility Disk. For users of IBM's and compatibles, which Apple users often use at the office, the best program is Acutype, which comes with adequate key overlays, for $24.95 from 819 West 6th Street, Winona, Minnesota 55987, (507)454-1400.

In addition to the SCM manual, there are a number of programs for learning Dvorak, mostly games: MasterType, WizType, and The Write Choice. WAP member Ken Davis has just published Typing Well, published by Learning Well at $49.95 at (800)645-6564. He demonstrated it during the meeting. The program is considered excellent by Mrs. Russell, and it just won an award from Family Computing. It runs on the //e and //c, and partially on the][+. Parts of the Dvorak manual can be written into it in 5 line, 40 column bits. It might be possible to arrange for a group discount for WAP members.

It might be useful if typing programs which are available for Apples were to be reviewed in a later issue of this Journal.

Mrs. Russell recommends starting with Dr. Dvorak's manual, and she noted that some may find typing software programs of some use after they have the basics in mind. She also recommends that the keys be correctly labeled; that even when touch typing the keys are glanced at, and seeing the letters reinforces the Dvorak system (or mixes one up!) [The letter sequences used in early lessons of standard QWERTY typing manuals have no relationship to those used in Dvorak typing and are far more confusing than helpful. The lessons for practicing timed writing, after all letters have been learned, may be of some help in building up speed.]

dPUB SIG
by Tom Piwowar

At our next meeting, Joe Manganello of Harwood Typographic Service will demonstrate software which they are developing to have a Mac produce typesetting commands that operate a Compugraphic 8600. There will be an opportunity for hands-on use of their program and telecommunication of output back to Harwood's plant. This meeting will be held on Wednesday, June 4, 7:30PM, at the Pepco Building Auditorium, 1900 Pennsylvania Avenue, NW, D.C.

dPUB SIG MINUTES
by Rosemary Connelly

On Friday evening, April 11, the Desktop Publishing SIG met in the Pepco Auditorium. We were treated to an extremely interesting and to-the-point presentation by Harold Chevalier and Stephen Warren on Typography and Newsletter Layout.

Harold Chevalier has spent many years as a typographer and is currently Manager of Manufacturing Systems at U.S. News and World Report. He emphasized how publishing today is based upon historical standards, and desktop publishing should be aware of these standards. For example, many readers, out of habit, prefer right-justified text, despite the fact that unjustified text is easier to read. Mr. Chevalier recommended John W. Seybold's ***The World of Digital Typesetting.*** If more that 10 people order the book we can get a discount.

Stephen Warren is a Publication Assistant at the American Sociological Association. He had a lot of helpful hints for the first-time newsletter editor: Decide who the publication is aimed at, then study other similar publications. Give yourself lots of creative room. Don't expect the first few issues to be perfect. Make subtle modifications the first few months, then stick to a format. Stephen critiqued several newsletters, including his own, and recommended a one-day course on newsletter design by Promotional Prospectives.

J. Condren reminded the group that Desktop Publishing is not just cheap publishing. It requires the merging of three skills: computer hacker, graphic artist and typographer. There was some discussion of the mayhem that could be wrought by poor design and misuse of fonts. One member cited a large company in Tysons Corner who has hired a design consultant to layout a policy manual for Mac users in order to ensure a uniform document style.

It was agreed that the next meeting would be held at the Pepco Auditorium, but not on a Friday night.

WAP ACROSTIC
by Professor Apple

			1 C	2 M	3 S	■	4 G	5 X	6 M	7 F	8 V	9 F	10 G	■	11 K	12 T	13 S	14 C												
	15 V	■	16 K	17 X	18 L	■	19 S	20 J	21 C	22 P	23 N	■	24 T	25 K	26 F	27 F	28 P	■	29 M	30 U										
	■	31 A	32 Q	33 B	34 G	35 W	36 E	■	37 K	38 M	39 P	40 H	41 J	■	42 L	43 N	■	44 B	45 V	46 X										
47 G	48 F	49 D	50 D	51 P	■	52 G	53 B	■	54 V	55 T	56 A	57 O	58 N	59 U	60 C	■	61 N	62 T	63 A	64 A	65 F									
66 U	67 D	68 R	69 N	70 N	71 L	■	72 J	73 Q	74 L	75 I	76 R	77 Q	78 H	■	79 L	80 A	81 O	82 R	83 U	■	84 Q									
85 V	86 O	■	87 P	88 D	89 J	■	90 W	91 S	92 S	93 H	■	94 X	95 U	96 T	97 I	98 D	99 R	■	100M	101N	102E									
■	103W	104W	105I	■	106K	107P	108L	109T	110R	111R	112J	113B	114O	■	115D	116I	■	117P	118H	119D	120H									
	■	121F	122I	123I	124N	■	125H	126D	127J	128W	■	129H	130O	131E	132J	133M	■	134D	135E	136E										
	137B	■	138E	139H	140H	■	141O	142L	143D	144T	■	145I	146S	147N	148Q	149D	150W	■	151L	152X										
		153C	154U	■	155L	156D	157S	158G	■	159A	160B	161Q	162U	163T	164V	165T	166H	167G	■											

Definitions

A. "Little _ _" (2 wds) — 159 63 64 56 31 80

B. Barren — 113 53 33 160 137 44

C. Plunder (var) — 60 14 1 153 21

D. Obtained from C10H8 — 49 67 98 88 134 126 143 156 149 119 115 50

E. Lack of feeling — 131 102 136 36 135 138

F. Cease to sleep again — 27 65 121 26 7 48 9

G. Cornel — 47 52 10 4 34 158 167

H. List of visible stars — 140 93 118 78 139 129 166 125 40 120

I. Airport landing areas — 145 97 116 75 122 123 105

J. Under — 72 89 132 41 127 112 20

K. Decrease in strength — 11 106 16 37 25

L. Boy's name — 108 79 74 151 155 71 42 142 18

M. Values — 100 29 6 2 38 133

N. Business partner — 101 124 43 70 61 69 147 58 23

O. Expanded with extra material — 81 57 86 114 130 141

P. Holds in high value — 107 28 87 51 39 117 22

Q. Deprive of hearing — 148 77 84 32 73 161

R. Neuter reciprocal pronoun — 111 68 99 76 82 110

S. Disease-bearing flies — 19 3 146 13 91 92 157

T. Portion of Catholic Mass — 96 163 12 109 144 165 62 55 24

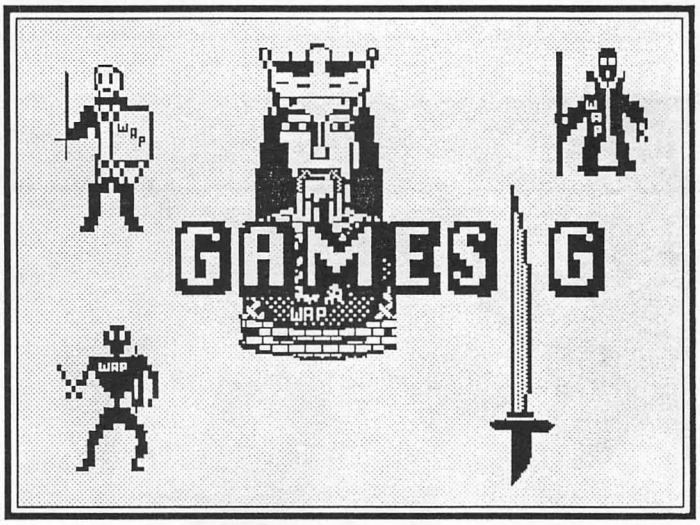
U. Sports official — 95 162 30 83 66 59 154

V. American author (1783-1859) — 164 15 45 8 85 54

W. Dudley Moore film — 104 150 128 103 90 35

X. Building gallery (var) — 17 5 94 46 152

GAMESIG NEWS
by Barry Bedrick



In April, GAMESIG's Second Sporadic Party was again well-attended, at the home of Paul and Janice Moore. The invitation contained an encrypted RSVP message, the key to which required one to translate from the Chinese. Despite that, we intrepid gamers showed up in force and followed the adventure game clues to gain admittance to the house. Among the evening's highlights were: a participatory murder mystery; the presence of a special guest, Ms. Lynn Bresett, representing Sirtech Software; a quest, at times resembling a stampede, following a succession of clues hidden by our host, for a prize won by Charles Don Hall; and a surfeit of wonderful food. Our thanks go again to Paul and Janice.

Ignoring the jibes of those few with no appreciation of art, I commemorated the party with photographs. (Sales of the more incriminating negatives remain brisk—it's nice to know my efforts are appreciated.)

Among the lowlights at the party was the unedifying spectacle of a room full of Pi members unable to get a disk with **Bloodquest** to boot. However, we succeeded at the May meeting. Bloodquest is a hilarious send-up of adventure and fantasy-role-playing games, and playing through it is an experience which should not be missed.

Also at the meeting, we saw a demonstration of **Flight Simulator** (Microsoft) for the Macintosh, a visually and aurally impressive adaptation of a perenially popular program. Software received and assigned for review included **Star Fleet I** (Cygnus).

Finally, we saw demonstrations of the games involved in the 2-for-1 offer by Sir-Tech to Pi members, described elsewhere in this issue. These are **Rescue Raiders, Galactic Attack, Star Maze** and **Crypt of Medea.**

Don't forget the June 5 meeting at 7:30 PM at the office.

GameSIG Chairman Ron Wartow greets Lynn Bresett of Sir-Tech Software, Inc.

THE AMERICAN CHALLENGE: A Review
by Lester Shipley

The American Challenge by Mindscape is a real time sailboat racing simulation game for the Apple // family. Learning to sail around the variety of race courses is the first challenge of the program. You can race your boat alone, competing against your best time or the current champion's, or race against another person via a two computer link for simultaneous head-to-head competition.

The program is well documented, including how to set up the two-computer connection. There's even a 45-rpm record included in the package with a sailing tutorial on one side and a original sailing song, "Win Back The Cup", by Tom Snyder on the other. You can also win a trip to Australia by entering the Computer Cup sailing contest.

All races are held on Silicon Bay . Around the bay are highlighted landmarks to help you navigate. The graphics are similar to Flight Simulator II and the action of the program runs smoothly. You can view your boat from several different positions. An overhead view can be used at any time showing the entire race course and the track of the boats. There's also a motor boat that you can use if you get tired of sailing. The seven race courses are increasingly difficulty, leading to the final race, "The Cup Race", with the Australians.

This is a good simulation game and I enjoyed the challenge of trying to beat the demo sailboats. I did not get a chance to try the two-computer version, but I believe this could be the best feature of the program—trying your sailing skill against someone else via modem.

BLACK CAULDRON: A Review
by Don Smith

Black Cauldron is the newest "King's Quest style" graphic adventure from Sierra On-Line to be released for the the Apple //e. In the game you are Taran, an apprentice to a wizard. You are in charge of taking care of the wizard's magical pig. One day the pig escapes, and throughout the game you have to find the pig before the evil Horned King finds it and controls the world.

The game play of Black Cauldron is the same as the first of the King's Quests. It's not bad, but not great either. The pictures are stored in double hi-res Graphics Magician format. Most of the pictures are quite detailed so that they take longer to load than standard pictures, but it is not a really long time. There is still a problem when two or more objects move on the screen at one time. This is a nice touch, but your character slows down considerably.

Pictures are the mainstay of any graphic adventure, and the pictures from Black Cauldron are the best I've seen anywhere. As I said above the pictures are double hi-res and they make full use of the wide variety of colors available. It's obvious that the people at Sierra brought in some "ringers" when they designed the graphics. Before the game was released, Black Cauldron was a book and an animated movie by Disney. The pictures definitely have that Disney "look" to them. I think that this is a good sign because often the graphics in games are only adequate, because programmers or game designers, not cartoonists, drew them.

Black Cauldron is fun and easy to understand. The graphics will amaze the kids but the game itself is challenging enough for the adults to enjoy. If you loved King's Quest I and II, then get Black Cauldron and you won't be disappointed. If you have looked down your nose at graphic adventures because of their simplicity, this game will change your mind. Or if you're just looking for a game, take a look at Black Cauldron. It will surprise you.

Black Cauldron, Sierra On-Line, $39.95, for the 128K Apple //e (must be able to use double hi-res) with joystick.

WIZARDRY FOR THE DETERMINED

by Duncan Langford

The Macwizardry documentation contains a loose sheet in the form of a letter from Werdna and Trebor; it sternly warns against 'cheat' programs which allow for the building-up of characters with enormous strength and abilities. These were (are?) widely available for Apple II versions although I haven't seen any yet for the Mac. Clearly, although very convenient, use of such artificial aids is indeed cheating. But—are there perhaps any legitimate ways in which your cherished adventurers may grow stronger and more powerful as rapidly as possible?

In this article I describe some techniques which allow this to happen without at any time using anything outside the original Wizardry program: no Mac tools studying of odd disk tracks in order to change them—that's too easy.

The first and most important task is to initialize a disk just to allow backups of your characters. Make this a 'normal' scenario disk but strip off everything that isn't essential—no Title screen, ImageWriter files, Scrapbook or Notepad. Don't worry, it won't crash. The purpose is to allow lots of room for backups and to allow the easy transfer of characters. You'll see why later.

Boot your 'usual' game disk. Decide upon the characters with which you wish to work, or start by creating new ones. It's best to select a balanced party; you'll need to organize frequent expeditions into the Maze, and survival is kinda helpful. Don't include a Thief or a Bishop, though, as these characters aren't too useful in combat, and you can always create them later. If you want a Thief, make sure to have an extra Neutral fighter, Priest or Mage. Yes, Virginia, we can turn a Priest into a Thief!

As a start, back up the characters to your new disk, using a simple name, '01' is fine - use '02' for the next and so on. Then take all the party to the Hotel. (Always choose the stables option for free board; if your characters need restoring, make a special expedition to the foot of the first steps in the Maze, just to cure them by magic.)

Write out a table of names and experience points; the need is to find out how far away the next 'gain a level' point may be. If you have one character who is particularly strong or powerful, you can duplicate him by:

(a) changing his name

(b) transferring him (using the transfer utility) to your 'backup' disk

(c) restoring your saved character from 01 - which of course will also restore the character you transferred!

(d) Quit; boot up the backup disk and transfer the renamed character back to the main disk.

A useful bonus trick is to dump all the useful equipment(belonging to others) that can be carried by the character into the Swag Bag, and load him up before transferring him. He'll return with the equipment (and gold if you pool that too), effectively duplicating it. The Swag Bag is unaffected by backups, so by constantly dumping an article there and restoring characters from backup, you may duplicate any number of articles. Very useful for those hard-to-find artifacts!

When you are confident that the party is as strong as you can currently make it, and you know exactly how many experience points are needed to reach the next level, venture into the Maze. Survival tricks are another article, but remember to record carefully how many points you gain. If you must open chests, cast at least two Calfo spells and (unless Teleport is the option!) choose your strongest character to Open it; then cure him with a lot of healing spells. As a general rule, useful artifacts are more likely to be found in the lower levels. Remember, you don't need to try too hard to collect gold!

Lots of monsters (and therefore experience points) may be found in the Monster Allocation Center on level 4; this is easily reached by elevator from level 1, of course (hints on play are another article too!). Make sure that you don't run too low on hit points. It's always better to play it safe and return a bit early, particulary if you have characters who have reached an upgrade point.

On return to the castle, BACK UP your party. Then back it up again with a new number. Wizardry—on 128K Mac's at least—has an infuriating habit of crashing and wiping out the last backup, and its always better to be safe than sorry.

Select the first character to have reached the 'upper' level and take him to the Hotel. Unless the upgrade results in improved characteristics and increased hit points, restore from backup and try again...and again...and again. Wizardry seems to select increased hit points at random. I've seen the same character awarded between 1 and 28 hit points for the same upgrade. You may have to try for some time before a suitable combination is awarded. When it has, BACKUP AGAIN. Then try the next character. This process may be continued so that at every upgrade your character grows rapidly in hit points, attributes and spells.

Now for the bit I found particularly interesting. When a character possesses the minimum attribute for another class, you are offered the opportunity to 'change class'. If your character is, for example, a Priest, and you change him to be a Mage, he will keep his minimum spells. This minimum is the actual number of priest spells at each level, provided that your priest has earned this number. For example, a priest with a 9/9/9/1 would keep 5/4/4/1—there are 5 level one spells, 4 level two, 4 level three; but although there are four level 4's, we only get the 1 we had to start with. This trick allows characters to build up very high hit points too. You keep your existing hit points when class is changed, but start collecting them again from level one, which is, of course, usually around 1500 points away from an upgrade!

Priests and Fighters collect better hit points that Mages, so by changing class from time to time, you may end with Mages with high hit points, or indeed, Fighters with the spell power of combined Priests and Mages! It's at this point that its impossible to convert a (neutral) character to become a Thief, of course.

Remember, always backup your characters and then backup your backups—preferably on another disk. Don't get discouraged by a failure to gain enough hit points at upgrade time. It will pay you to keep trying... and keep playing.

We could have a WAP competition for the longest period spent playing Wizardry, maybe? Any advance on almost two weeks...?

BUY ONE, GET ONE FREE

Sir-Tech Software has announced a WAP Special Order Program for its non-WIZARDRY-related Apple // series programs. Before July 4, 1986, if a member buys RESCUE RAIDERS at the retail price of $34.95, the member gets either STAR MAZE, GALACTIC ATTACK, or CRYPT OF MEDEA free. Adding $5.00 for shipping by UPS Ground and handling, the total price for two programs would be $39.95. You can pay by Visa or MasterCard, check, or if a member wants COD, there is an additional $1.90 fee. AN ORDER BLANK CAN BE FOUND BELOW. Order blanks are also available at the club office.

To assist members unfamiliar with the programs, all 4 programs have a full backup program on the disk, and all but STAR MAZE, which saves high scores, have a "save game" feature. Some comments from various sources follow:

1. RESCUE RAIDERS (64K and joystick required, Mockingboard speech, intermediate level). "Ultimate arcade game of battle strategy.....fuses arcade-reflex skills with tactical and strategic skills. Combining stunning scrolling graphics and infinite options, you fight 8 increasingly difficult battles armed with a helicopter manned by soldiers and a variety of on-the-ground weapons and defenses, all displayed on radar.....Visual pleasure. Good buy because it's not easy. Interesting premise in that you use modern weapons in a World War II scenario via time machines." February 1985 Washington Apple Pi Journal.

2. STAR MAZE (48K required, keyboard or joystick-run, beginner level,). "Multi-directional scrolling game in which the object is to find and recover nine power jewels on each of sixteen levels. Sir-Tech has produced an admirable piece of programming....Control of the ship's speed is the most difficult part of the game.....Since fuel runs out rapidly, it is both important to remember where in the huge maze your base is and to learn how to quickly decelerate your ship to a crawl.....requires considerable practice.....As a shoot-'em-up game STAR MAZE sports good scrolling and colorful graphics. With practice, it's fun to play." 1985 Book of Apple Software.

3. GALACTIC ATTACK (48K required, keyboard only, intermediate level). "A real-time space combat game which combines arcade elements with strategic planning.....you control speed and direction as you seek to recapture the planets of the solar system.....The game does a good job of combining strategic game elements with pleasing graphics." January/February 1983 Computer Gaming World.

4. CRYPT OF MEDEA (48K required, keyboard only, Mockingboard speech, beginner level). "Chilling [hi-res graphic] adventure.....documentation [includes] a list of key or action words [and] a list of hints....encoded in cryptic messages.....Both the novice and the expert gamer will enjoy the challenge.....problems are varied and the solutions intricate.....musical background.....will challenge all who find themselves trapped in this dark and evil place." August 1984 Computer Gaming World. "Blend of the humorous and the macabre designed for the novice computer adventurer, 15 years or older.....electronic horror comic." Sir-Tech Catalog.

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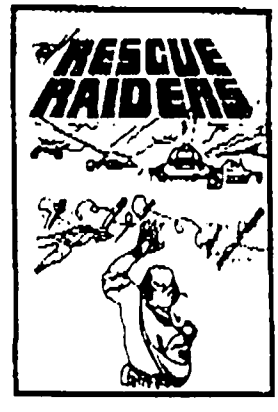

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This offer expires July 4th, 1986, or while supplies last, whichever is sooner. Only the above listed programs qualify for this promotion. Sir-tech reserves the right to substitute other products qualified under this promotion if customer's selection is unavailable. All decisions by Sir-tech are final. All programs are for the Apple II Series microcomputers only.

LAP COMPUTERS AS APPLE ACCESSORIES

Part 7: Singing the Line Feed Blues

by George Kinal

One of the most common and infuriating problems in microcomputer telecommunications concerns either too many or too few line feeds. "Too many" usually means that the received text is double spaced, while too few means the text lines over-write one another on the screen. I have seen secretaries laboriously removing the extra blank lines, one by one, from electronically transmitted text!

In many microcomputer communications and file transfer applications, only carriage returns (ASCII character 13, or S0C for hex fans) are needed at the end of each line; the receiving system, the word processing software, or the computer's operating system treats each such character as both a command to move the cursor to the left edge AND to scroll down one line (a line feed). Under the Apple][monitor routines, for example, the CHRS(13) has this effect. Virtually all editors and word processors, regardless of operating system, also interpret the "carriage return" in this way.

The lap computers conform to this philosophy insofar as program entry in BASIC, text entry using TEXT, and transmission using TELCOM go. That is, pressing "ENTER" in TEXT places a carriage return character into the text file, and scrolls the text on the screen, while pressing it in TELCOM causes the CHRS(13) to be sent out.

There are some microcomputer systems, most notably those operating under CP/M and MS-DOS, which explicitly demand a separate line feed character to be received in order to scroll the cursor in telecommunications applications.In order to accomodate these systems, most bulletin boards and remote services, including our own WAP systems and CompuServe, automatically append to every carriage return a line feed character (CHRS(10) or CTRL-J). A brief test session using Mac-Terminal seemed to indicate that it, too, requires line feeds on received text.

The lap computers' TELCOM program, for some very peculiar reason, also requires such a line feed character when receiving text using TELCOM. The fact that laptops do not send line feeds, yet expect to receive them, leads to the strange phenomenon that when two laptops are communicating with each other, the line feeds (CTRL-Js) must be manually entered in order to scroll the displayed text! So, the laptop with TELCOM looks like an Apple when sending, but acts like a CP/M machine when receiving.

Communications software packages handle these problems in several common ways. AE-Pro, for example, treats a received carriage return by itself, and a carriage return followed immediately by a line feed, in the same way (in other words, the unnecessary line feed is ignored). Realizing that for "on-line" communications with a non-Apple computer line feeds may be necessary, AE-Pro's authors also added the "CHAT" command, which, when set, adds a line feed to each carriage return sent out. So, to properly communicate between an Apple][and a laptop, just use the AE-Pro "CHAT" command. Other "grown up" communication programs likewise give the user the option of adding line feeds.

How might these different problems show up in laptop <-> Apple communications, or indeed between any two different computers?

1) Laptop receiving to screen (TELCOM TERM mode). Text lines over-write each other (the necessary line feeds are not being sent). There is no command within TELCOM to change this. The computer on the other end must be instructed to add line feeds (many BBSs can be instructed to send line feeds; have the AE-Pro user turn CHAT on, etc.).

2) Laptop receiving a file using the LOAD function, or via TELCOM upload command. Here no line feeds should be necessary, because TEXT does not need line feeds.

3) Laptop sending in TELCOM mode, from keyboard, or as a line by line transmission (UPLOAD) within TELCOM—text is received by the other computer in an overprinting mode. That means that it requires line feeds. This overprinting situation should not occur on a native mode Apple II, but will happen under CP/M, and apparently with MacTerminal. I don't know yet of any patch to the LAPTOP memory that will give it the equivalent of AE-Pro's "CHAT", that is, the ability to add line feeds to every "ENTER" from the keyboard when TELCOM is being used directly as a terminal. However, there are patch programs which will add line feeds to text sent in the UPLOAD mode. These patches actually do something very simple. You can do it yourself directly from BASIC. Want line feeds added to every carriage return during uploading? Just type in the following command under BASIC: POKE 63066,1 <ENTER>. [On the Olivetti M-10, use 63069 instead of 63066.] (Several programs are also available to add line feeds to printer output of the laptops, but none are as simple as the single POKE needed for TELCOM. Later, to get rid of the line feed addition, POKE 63066,0.) Utilities also exist for CP/M, MS-DOS, and the Mac to take care of missing or extra line feeds after the file has been received ("Didler" is apparently such a utility for the Mac.)

4) Laptop transmits text file using SAVE command. Most word processors are happier with this mode than with TELCOM's normal line-by-line mode. All line editors, and a few word processors, do prefer line-oriented text (PC-Write is, I believe, one such beast, as are some Wang office word processors). And, I've recently found out something amazing about the SAVE mode, which I heartily recommend instead of TELCOM uploading: when you SAVE a file through the COM port, each carriage return in the file apparently is followed by a line feed! Thus, if you use your laptop as a line editor, the resulting text is immediately compatible with a CP/M line editor (like the one in Turbo-Pascal). The point here is that it is the final software to be used to process the text which governs the need for line feeds; don't worry just because you see text overwriting on the screen. For example, transmitting a laptop TEXT file to my Apple][+ with the

contd.

CP/M communications program MODEM 7/40, I see overwritten text. Yet the received file is perfectly compatible with WORDSTAR! I understand that MacWrite likewise uses the CR-only convention.

To summarize the most relevant solutions to the linefeed problem from a laptop perspective: 1) If you need to have linefeeds added during your laptop upload, do the POKE mentioned above. Be sure that the destination computer's software really needs line feeds; most word processors do not. 2) An alternative solution is to use a utility program on the destination computer, such as Didler. 3) For on-line communications, the other computer must be set up to provide line feeds, for example by using CHAT with AE-Pro. Line feeds are not needed to upload BASIC programs or TEXT files to the laptop. 4) In the rare case of laptop-to-laptop on-line communications, the sender will have to type CTRL-J after each ENTER. (There may be a patch program for this problem as well, but so far I haven't found any reference to one.)

(Ed. Note: Interestingly enough, we're singing the line feed blues, too. This article was given to us in CP/M WordStar format. We then converted it to DOS 3.3, and then to the Mac. Each line as it was originally formatted had a carriage return, which had to be removed for formatting to our line width. In addition, the justification of the lines was carried forward to the disk, not just to the printer as in most word processors. The extra justification spaces between words had to be removed. Hopefully, WordStar can be coaxed to get around this.)

LETTER TO THE EDITOR

Dear Editor,

Thank you for offering me the opportunity to reply to Mr. Raskin's letter in the May Journal. His letter is of excellent assistance to new SwyftCard users with lots of good advice, and I think it complements my article in the April Journal and the comments in last month's Meeting Report. As an academic, I invite, welcome and enjoy criticism. No paper would be worth the toils and tribulation of its preparation without some feedback.

I am a little irritated to be accused that I invented a *tissue of lies*. It is not possible within my mental capacity to invent objective details. Facts you read are engraved facts. If Mr Raskin wants to change them you must ask him. It is also slightly irritating that you, Dear Reader, are implied to be so stupid that you cannot for yourself analyze a product review. I think you have made up your own mind, and you are so encouraged. Suffice to say that I have received agreeing remarks from members, and my own SwyftCard is winging its way back to Information Appliance Inc. for checking, because my machine just stopped working (with the card in the slot).

Adrien Youell

THE FAMILY HOME MONEY MANAGER: Part 2

Working One's Way Through an Applesoft Program

by Brian G. Mason

(This is the second in a series of nine articles which began in the May 1985 Journal.)

Last month we examined the first of five programs which go to make up THE FAMILY HOME MONEY MANAGER. That program sets up all the preliminaries which get things going, including the chaining module which is used to link all the programs together.

That program is pretty much self-contained. Once the preliminaries are over, we no longer need to return to them. We move fairly freely, however, between the other four programs. The first program we named simply, "BUDGET". The other four programs will be saved under the names, "BUDGET 1/85", "ENTER DATA", "CHECKS 1/85", and "EOM PROCED." So, get out the disk you saved "BUDGET" on, and let's continue on our journey.

I think it will make the most sense if we explore the programs as they flow, rather than simply start with line number 1 and go through to the end to line 63999 or whatever.

When we left the program "BUDGET", we had not saved any data, and the program was going to chain to "BUDGET 1/85". (See line 20000 of "BUDGET").

```
20  IF Q% = 7 THEN  GOSUB 1300: GOTO 1500
21  IF Q% = 8 THEN 1400
22  IF Q% = 9 THEN  GOSUB 1200: GOTO 1500
23  IF Q% = 21 THEN 1100
25  GOTO 1100
```

Because we have not even mentioned the variable Q% yet, it has a value of 0. Consequently, the program falls right through to line 25. (Q% is the variable we will use to indicate the selection we have made from the Main Menu.)

```
1099  REM  *** INITIALIZE A NEW BUDGET
1100  HOME : PRINT "YOU MUST FIRST SET UP
      YOUR BUDGET.": PRINT : PRINT "YOU
      NEED TO KNOW WHAT BUDGET
      CATEGORIES YOU WILL BE USING AND
      HOW MUCH TO BUDGETIN EACH
      CATEGORY.  YOU WILL ALSO BE"
1101 PRINT "ASKED TO DESIGNATE A
      FOUR-LETTER CODE TOREPRESENT
      EACH CATEGORY.": PRINT : PRINT "THIS
      IS IN ADDITION TO THE PRE-DETER-
      MINED CATEGORIES:  CASH, INCOME,
      AND CHECKBOOK ACTIVITY.": PRINT :
      PRINT "PRESS <RETURN> IF READY
      TO PROCEED,"
1102  PRINT "<ESC> TO QUIT.": GET CS: IF
       ASC (CS) = 13 THEN 1105
1103  IF  ASC (CS) = 27 THEN  HOME : END
1104  GOTO 1102
```

In trying to make this program as friendly as possible, I included a lot of the instructions right on the screen. The unusual spacing of some of the words you see in the print statements occurs to make the lines break properly on the Apple's 40-character screen.

If the user is ready to proceed, he can press escape to stop everything right here. Unlike the INPUT command, the GET command allows the input of any character, including <ESC> or <RETURN>, as long as it is only one character. That value is put into CS, then CS is examined to see what the ASCII value of the character in CS is. The ASCII value for <RETURN> is 13, the ASCII value for <ESC> is 27. (See your Applesoft manual, pp. 138-139, for a list of ASCII Character Codes.) If CS is neither <RETURN> or <ESC> then the question is asked again. If CS is <ESC> the screen is cleared and the program ended. If CS is <RETURN> the program is continued.

```
1105  HOME : VTAB 5: INPUT "HOW MANY
      CATEGORIES?";NC
1106  PRINT
1107  IF NC < 1 THEN 1105
1108  IF NC > 50 THEN  PRINT "MUST BE LESS
      THAN 50": GOSUB 28:GOTO
1105
1109 NC = NC + 2: PRINT
```

The screen is cleared and we are asked to input the number of categories. NC is the variable that will hold that value. We are not going to allow a value less than 1 (of course) nor more than 50. Three of the categories are required by the program, so we add two to whatever is selected for the number of categories. Make sense? Well, you see, the first category will be number 0.

```
28  VTAB 23: PRINT "HIT ANY KEY TO
    CONTINUE": GET C$: HOME : RETURN
```

We will use the subroutine in line 28 quite often. As soon as a key is pressed, the screen is cleared, and we are returned to the next instruction.

```
1110 PRINT "CATEGORY #1 IS 'CASH', USED
      WHENEVER A  CHECK IS WRITTEN FOR
      CASH.  ITS FOUR-  CHARACTER CODE IS
      'CASH'.    THERE IS NO  BUDGETED
      AMOUNT FOR THIS CATEGORY."
1111 CTS(0) = "CASH":BUD(0) = 0:CDS(0) =
     "CASH"
1115 PRINT : PRINT "CATEGORY #2 IS
     'CHECKBOOK ACTIVITY',    USED FOR
      DEPOSITS TO THE CHECKING
      ACCOUNT AND OTHER ACTIVITY THAT
      AFFECTS THE CHECKBOOK, BUT IS NOT
      INCOME OR EX- PENDITURE. ITS
      FOUR-CHARACTER CODE IS  'BANK'."
1116 PRINT "THERE IS NO BUDGETED AMOUNT
      FOR THIS CATEGORY.": CTS(1) =
      "CHECKBOOK ACTIVITY":BUD(1) = 0:
      CDS(1) = "BANK"
1123 PRINT : PRINT "CATEGORY #3 IS
      'INCOME'.  ITS 4-CHARAC- TER CODE IS
      'EARN'.": INPUT "PROVIDE A PLANNED
```

contd.

```
      BUDGET FOR THIS CATE- GORY - ";BUD(2)
 1124 CT$(2) = "INCOME":CD$(2) = "EARN"
```

At this point, we ask for a budgeted amount for monthly income.

```
 1125 PRINT : FOR I = 3 TO NC
 1130 PRINT "CATEGORY #";I + 1;: INPUT
      ":";CT$(I)
 1135 PRINT "PROVIDE A 4-CHARACTER CODE
      FOR THIS    CATEGORY";: INPUT ":";
      CD$(I): IF  LEN (CD$(I)) > 4 THEN 1135
 1140 PRINT "BUDGET FOR THIS CATEGORY";:
      INPUT ":";BUD(I)
 1145 PRINT : NEXT I
 1146 SB = 0
```

Having taken care of the three required budget categories, we now proceed to the categories selected by the user. Using a FOR-NEXT loop, from category number 3 to category NC, we ask for the category's name, the budget for that category, and the 4-character code which will be used as a short reference to the category. This loop ends after the number of categories have been entered that were selected in the beginning. Then we set the flag SB equal to 0 to indicate that what we have done has not yet been saved to disk.

```
 1147 L% = 1:T% = 1
 1150 POKE 34,0: GOSUB 26: HOME : PRINT  TAB
      (9)"HOME MONEY MANAGER": PRINT :
      PRINT "(P) PRINT BUDGETED
      CATEGORIES": PRINT "(C) CHANGE
      BUDGETED CATEGORIES": PRINT "(S)
      SAVE BUDGETED CATEGORIES": PRINT
      "(Q) QUIT": PRINT "(N) NEXT MENU"
```

We will use the variable L% to keep track of the vertical line we are using and the variable T% to keep track of the horizontal tab position. The POKE of 0 to location 34 sets the top of the scrolling screen at the very top of the screen. This is necessary because in other parts of this program we will prevent some of the lines from scrolling off the top by setting the top of the scrolling screen below these lines. These will usually be screen titles.

In this line we encounter our first GOSUB. Subroutines are placed for the most part at the beginning of the programs to try to speed things up since the Apple searches for GOSUB lines starting with line 1 (or so I thought before reading Mr. Chapman's article in the April 1985 Washington Apple Pi).

```
   26 VTAB 24: HTAB 1: CALL  - 958: VTAB L%:
      HTAB T%: RETURN
```

We will use the bottom area of the screen a lot for instructions and requests for input. This subroutine ensures that the last line of the screen is cleared before proceeding. It then returns us to the line and horizontal tab which we had set prior to jumping to this subroutine.

```
 1155 GOSUB 27
   27   PRINT : INPUT "WHICH?";CS: RETURN
 1160 IF CS = "P" THEN  GOSUB 1300: GOTO 1150
 1162 IF CS = "C" THEN 1400
 1164 IF CS = "S" THEN  GOSUB 1200: GOTO 1150
 1166 IF CS = "Q" THEN  GOSUB 900: END
 1168 IF CS = "N" THEN  GOSUB 900: GOTO 1500
 1170 GOTO 1150
```

For the most part I used the INPUT command throughout which requires pressing <RETURN>. This allows a person to hit the wrong key, back up, and hit the right key before hitting return and proceeding. Here we are giving the user a choice—to print out what has been input so far, change what has been done, save the budgeted categories as they are now, quit, or go to the Main Menu. Let us take these choices one at a time.

PRINT BUDGETED CATEGORIES

```
 1300 HOME : INVERSE : HTAB (10): PRINT
      "BUDGETED CATEGORIES": NORMAL
 1310 PRINT "PRESS <ESC> TO RETURN TO
      MENU,"
 1315 PRINT "ANY OTHER KEY TO CONTINUE."
 1316 GET CS: IF CS =  CHR$ (27) THEN  RETURN

 1320 GOSUB 500
```

The first thing we do is clear the screen and print a title at the top. The next thing we do is provide an escape route if this is not where we want to be. If the user does not press the <ESC> key, we proceed to the subroutine at line 500.

```
  500 VTAB 5: HTAB (25): PRINT "BUDGETED"
  505 PRINT "CATEGORY" TAB( 25)"AMOUNT"
      TAB( 35)"CODE": RETURN
```

This subroutine prints out the headings. Notice the difference between HTAB and TAB(. TAB(can only be used as part of a PRINT statement.

```
 1325 POKE 34,6
 1330 PRINT
 1335 P% = 1
```

Next we set the top of the scrolling window below our headings and print out a blank line under the top of this window. To keep track of where we are, we will use P% as the variable for the page number. We start out by setting P% equal to 1.

```
 1340 FOR J = 0 TO NC
 1345 PRINT J + 1;". ";
 1350 PRINT CT$(J) TAB( 25)BUD(J) TAB
      (35)CD$(J)
 1355 PRINT : IF J + 1 = P% * 8 THEN  GET CS:P%
      = P% + 1: IF CS = CHR$ (27) THEN  POKE
      34,0: RETURN
 1360 NEXT
 1365 PRINT : PRINT "THAT'S ALL.": GET CS:
      POKE 34,0
 1370 RETURN
```

Now we go into a FOR-NEXT loop to print out each budget category, show the amount budgeted for that category, and the code for that category. We also number the lines as we go (line 1345). We prevent the lines from scrolling off the screen by the formula in line 1355, a very crude formula that simply says that if the number of the category is a multiple of 8, pause for a key-press before proceeding. However, if the key pressed is <ESC>, then the window top is set back up to the top of the screen and we return to line 1160. At the end of the loop, after J has reached the value of NC, the program falls to line 1365 where we print the message that that is all, wait for a key-press, reset the window to the top of the screen, and return to line 1160.

The next statement after the GOSUB in 1160 is the statement that takes us back to the modest menu in line 1150.

contd.

CHANGE BUDGETED CATEGORIES

```
1399 REM  *** CHANGE BUDGETED
     CATEGORIES
1400 L% = 1:T% = 1
1402 HOME : HTAB 15: INVERSE : PRINT
     "WARNING!": NORMAL
1403 PRINT : PRINT "MAJOR CHANGES
     SHOULD BE MADE ONLY AT
     THEBEGINNING OF A YEAR. OTHERWISE,
     THERE  MAY BE UNPREDICTABLE
     RESULTS DURING     MONTHLY AND
     YEARLY RECONCILIATIONS."
1404 PRINT : PRINT "THIS IS ESPECIALLY
     TRUE IF A CATEGORY ISDELETED."
1405 GOSUB 28: INVERSE : HTAB (7): PRINT
     "CHANGE BUDGETED CATEGORIES":
     NORMAL : POKE 34,2
```

After setting L% and T%, the line and tab variables, to 1, we clear the screen and print a warning. There should be no problem if a person adds a category during the year, but they will not be able to print out any yearly reports. The deletion of a category will cause the categories that follow it to be moved down to fill the void left by the deleted category. Thus, if for example, you deleted a category named "pet supplies" in the middle of the month, and it was followed by "clothes", "clothes" would move down to take its place and in the monthly totals "pet supplies" bought in the beginning of the month would be added to the totals for "clothes" the remaining of the month. This may become clearer when we get to the deletion routine.

```
1406 HOME : VTAB 4: PRINT "<A> ADD A
     CATEGORY": PRINT "<D> DELETE A
     CATEGORY": PRINT "<C> CHANGE A
     CATEGORY": PRINT "<R> RETURN TO
     MENU"
1407 L% = 6
1410 INPUT C$
1411 IF C$ = "A" THEN 1420
1412 IF C$ = "C" THEN 1440
1413 IF C$ = "D" THEN 1460
1414 IF C$ = "R" THEN 1150
1415 GOTO 1410
```

Some commands as we go through the program may appear redundant such as the HOME command in line 1406. In some cases they may be, inasmuch as it was quite a tortuous process I went through to develop this program. However, there are times when we return to a certain place in a program from another place altogether, and another HOME may very well be required here. I just have not had the inclination to go back and analyze the program in this fashion.

Here we clear the screen and present a simple menu. If "A", "C", "D", or "R" are not pressed, we go back and try again.

ADDING A BUDGET CATEGORY

```
1420 SB = 0:NC = NC + 1
1425 PRINT "CATEGORY #";NC + 1;: INPUT
     ":";CT$(NC)
1427 PRINT "PROVIDE A 4-CHARACTER CODE
     FOR THIS     CATEGORY";: INPUT ":";
     CD$(NC): IF  LEN (CD$(NC)) > 4 THEN 1427
1429 PRINT "BUDGET FOR THIS CATEGORY";:
     INPUT ":";BUD(NC)
1431 PRINT : GOTO 1150
```

We set the flag SB to 0 to indicate that we are changing something and we will need to save our changes later. NC is incremented by 1. Remember that NC starts from 0, but we called this category no. 1, so when we print the category number, we have to print NC+1. We ask for the category name, a four-character code for this category, and a budget for this category. After this information is input, we return to the menu in line 1150.

```
1440 PRINT "WHICH CATEGORY":L% =  PEEK
     (37) + 1:T% =  PEEK (36) + 2: GOSUB 80
```

If we are going to change a budget category we have already established, we have to determine which category it is that is to be changed. We will type in the four-letter code we have established for the category we want to change, and then the computer will see if it can match what we have typed with one of the previously established categories with appropriate responses if it can not.

Here, in line 1440 we see another way to establish the horizontal and vertical position of the cursor. PEEK(37) returns the present horizontal position of the cursor on the screen. PEEK(36) returns the present vertical position of the cursor. We take these values and put them into our variables L% and T% with appropriate increments since we don't want to return exactly to the present position of the cursor in this instance. Next we go to the subroutine at line 80. This portion of the program will be repeated in similar versions in all four of our programs.

```
80 T$ = "":E$ = "": PRINT "?";
81 GET E$:T$ = T$ + E$: PRINT E$;: IF E$ =
   CHR$ (8) AND  LEN (T$) = 2 THEN T$ = ""
82 IF E$ =  CHR$ (8) AND  LEN (T$) > 2 THEN
   T$ =  LEFT$ (T$, LEN (T$) - 2)
83 IF  LEN (T$) < 2 THEN 81
84 IF  LEN (T$) < 5 AND E$ < > CHR$ (13)
   THEN 81
```

First the program takes input from the keyboard. We make sure there is nothing in our new variables T$ and E$ and print a question mark with a semicolon following the print statement so the cursor remains positioned after the question mark. We are going to use a GET routine rather than an INPUT routine so we can input characters that would not be accepted in an INPUT routine such as commas, the escape key, etc. The character that we GET is placed into E$. Then E$ is added to the end of the string, T$. E$ is printed and a semicolon is placed after the print statement so no line feed is generated. CHR$(8) is the backspace key. If the backspace key is pressed and T$ is two characters long (that is one character plus the backspace), then T$ is null. If T$ is longer than two characters, and if the backspace key is pressed, then T$ is changed by taking just the leftmost characters minus two (again, the last character plus the backspace).

Next the program tries to match what we have typed with one of the budget categories we established. If T$ is just one character long, there is not enough information for us to match T$ against the previously established codes, so we just return immediately to the GET statement in line 81. If T$ is less than five characters long and the last key pressed was not

contd.

the <RETURN> (CHR$(13)), then we go back and get another character. However, if TS is five characters long or if the last key pressed was <RETURN>, then the program falls through to the next line which begins our test of whether or not T$ matches one of the budget categories we have established.

```
85 GOSUB 26: FOR J = 0 TO NC: IF  LEFTS (TS,
    LEN (TS) - 1) = CDS(J) THEN  POKE 34,3:
    RETURN
86 NEXT : FOR J = 0 TO NC
87 IF  LEFTS (TS,2) =  LEFTS (CDS(J),2) THEN 91
88 NEXT
89 VTAB 23: HTAB 1: CALL  - 958: PRINT
   "WHAT?";
90 HTAB T%: VTAB L%: CALL  - 868: GOTO 80
91 HTAB 1: VTAB 23: PRINT "IS ";CT$(J);" THE
   CATEGORY YOU MEAN?";: POKE 34,22
92 INPUT "(Y/N)";C$: IF C$ = "Y" THEN  POKE
   34,3: RETURN
93 IF C$ < > "N" THEN 91
94 NEXT J
95 GOTO 89
```

First we look for an exact match by examining the four leftmost characters in T$ and comparing those with CDS(J) from J=0 to J=NC. If a match is found, then we leave the subroutine and go to line 1441 where the command is found which immediately follows the GOSUB which sent us here. If no match is found, we try again with another FOR-NEXT loop (line 86). Now we go through all the category codes from J=0 to J=NC looking at just the first two characters of both T$ and CDS(J). If the first two characters of T$ matches the first two characters of CDS(J) then we go to line 91 where we ask if we have found the category we were looking for. If it does, we return to line 1441. If it does not, we try the next J. If this test fails, we ask for another attempt (line 89).

When we have a match, J retains the value it had when the match was made, and the category, budget, and code for that value of J are each shown in turn. We ask if the user wishes to keep or change what is shown on the screen.

```
1441 HOME
1442 VTAB 24: PRINT "<C> CHANGE, OR <K>
     KEEP": VTAB 3:CS = 1
1444 PRINT : CALL  - 868: PRINT "CATEGORY:";
     CT$(J);" ":Q = 1: GOSUB 415
1446 PRINT : PRINT "BUDGET:";BUD(J);" ":Q = 2:
     GOSUB 415
1448 PRINT : PRINT "CODE:";CD$(J);" ":Q = 3:
     GOSUB 415
1450 IF CS = 0 THEN SB = 0
1455 GOTO 1406
415  INPUT C$: IF C$ < > "C" AND C$ < > "K"
     THEN 415
417  IF C$ = "K" THEN  RETURN
418 ON Q GOTO 420,425,430
420 PRINT : PRINT "CATEGORY";: INPUT
    ":";CT$(J):CS = 0: RETURN
425 PRINT : PRINT "BUDGET";: INPUT
    ":";BUD(J):CS = 0: RETURN
430 PRINT : PRINT "CODE";: INPUT ":";CD$(J):CS
    = 0: RETURN
```

Notice we use the ON Q GOTO command in line 418. We set Q equal to 1, 2, or 3 in lines 1444-1448 depending on whether we are dealing with the category, the budget, or the code. Then when the user types a "C" indicating he wants to change something, the program will go to the appropriate line to receive the input. Notice also we are using another flag to keep track of whether something was changed so we know to remind ourselves to save the new changes.

Finally, we are returned to our menu in line 1406.

DELETE A CATEGORY

```
1460 PRINT "WHICH CATEGORY":L% =  PEEK
     (37) + 1:T% =  PEEK (36) + 2: GOSUB 80
1461 HOME
1462 GOSUB 500
1463 PRINT
1465 PRINT CT$(J) TAB( 25)BUD(J) TAB
     (35)CD$(J)
1470 VTAB 24: PRINT "DELETE THIS
     CATEGORY ";
1475 INPUT "(Y/N)?";C$: IF C$ < > "Y" AND C$
     < > "N" THEN 1475
1480 IF C$ = "N" THEN 1150
```

If we want to delete a category, once again we are asked which one we wish to delete. Once the subroutine at line 80 finds the category for us, the screen is cleared and the subroutine at line 500 prints the usual headings for us and the category selected is displayed on the screen. We are then asked to confirm that indeed we want to delete the category shown. If we decide not to, we are taken back to the main menu of this part of the program in line 1150. Otherwise, the program continues on line 1485.

```
1485 FOR J1 = J + 1 TO NC
1490 CT$(J1 - 1) = CT$(J1):BUD(J1 - 1) BUD(J1):
     CD$(J1 - 1) = CD$(J1): DFS(J1 - 1) = DFS(J1)
1495 NEXT J1
1497 NC = NC - 1:SB = 0
1498 GOTO 1150
```

To delete a record in a file, what you actually do is write over that record with the one which follows it, shuffling all the records down a slot until the end of the file is reached and then you indicate in the data file that the number of records has been reduced by one, effectively blocking access to the last record which is not actually overwritten. Saying it another way, if we wish to delete record number 10 in a file that is 20 records long, we start with record number 11 and write record number 11 over record number 10, effectively erasing record number 10. Then we move record number 12 down to where record number 11 was, and record number 13 down to where record number 12 was, etc. until we get to record number 20 which is moved down to where record number 19 was. Then we say there are only 19 records in the file. That is what we are doing here. We then return to the main menu in line 1150.

SAVE BUDGETED CATEGORIES

```
1199 REM  *** SAVE BUDGETED CATEGORIES
1200 HOME : INVERSE : HTAB (8): PRINT "SAVE
     BUDGETED CATEGORIES": NORMAL :
     POKE 34,2: IF NOT PF THEN 1205
1201 HTAB 16: INVERSE : PRINT "CAUTION!":
     NORMAL : PRINT : PRINT "THE
```

contd.

```
      DIFFERENCES BETWEEN THE BUDGET
      AND  THIS MONTH'S EXPENDITURES
      HAVE BEEN    ALTERED BY PRINTING A
      MONTHLY REPORT.  DO YOU WISH TO
      PROCEED? (Y/N) ";: INPUT CS: IF CS < >
      "Y" AND CS < > "N" THEN 1201
1202  IF CS = "N" THEN 1500
1205  PRINT : PRINT "USE ";FBS;" (<RET>/N)?";:
      GET CS: PRINT CS
1210  IF CS =  CHRS (13) THEN 1245
1220  IF CS <  > "N" THEN 1205
1230  INPUT "NAME?";FBS
1240  IF FBS = "" THEN 1230
```

If we want to save the budget categories at this point, we press "S" which takes us to the subroutine at line 1200. Again we print a title on the screen and then protect it with a POKE 34 to set the top of the scrolling window underneath it. The flag, PF, is used because when we print out a summary of the month's activity or when we go through the procedure of closing out the month, eventhough we don't finish it, the differences are changed. If we then go to this part of the program and save the budget categories, we save the altered differences as well. Thus we insert here the caution to the user.

Next we ask if the user wishes to use the default name for this file which is contained in the string variable FB$, "BUDGET CATEGORIES". If so, the user simply hits <RETURN>, which sends the program to line 1245. If the user wishes to use a different name for this file, for instance if they wish to keep two separate budgets, then this name is put in FBS. The user is prevented from just simply hitting <RETURN> here by line 1240, since a file must have a name.

```
1245  PRINT OPS;FBS
1250  PRINT WRS;FBS
1255  PRINT NC
1260  FOR J = 0 TO NC
1265  PRINT CTS(J): PRINT BUD(J): PRINT CDS(J)
1266  GOSUB 300
1267  PRINT DFS(J)
1270  NEXT
1275  PRINT CLS;FBS
1280 SB = 1: RETURN
```

Wow! We are actually going to get to write a data file to disk now. Apple calls these files TEXT files. I am giving instruction here in DOS 3.3. This program was written before there was such a thing as PRODOS, and I haven't learned enough about PRODOS yet to be able to tell you how the two disk operating systems differ. The first thing you must do is OPEN the file by name. What we did in last month's program, BUDGET, was define OPS to be CHRS(4) (Ctrl-D) followed by the command, OPEN. Here we follow that by the file name defined by FBS. This sets the disk to spinning, looking for a file by the name specified, and if it does not find it, it creates a file with that name. Once that file exists, we can then write to it. That is what we tell the computer we are going to do in line 1250, having previously defined WRS in our BUDGET program to be a Ctrl-D followed by the command, WRITE, and the file name.

Every PRINT command after a WRITE command so introduced will PRINT to the disk. The first thing we are going to have in this data file is the number of budget categories we are maintaining. Then from 0 to NC, we write to the data file the category name, the budget for the category, the category code, and the difference.

```
300  IF  LEN (DFS(J)) < 9 THEN DFS(J) = DF$(J) +
     "": GOTO 300
305  IF  LEN (DFS(J)) > 9 THEN DFS(J) =
     LEFTS (DFS(J),9)
310  RETURN
```

We haven't said too much about this difference yet. It is the amount we carry forward each month as money we had left over if we were under budget the previous month or as money we were in the hole if we were over budget the previous month. This value is kept in a string that must be nine characters long for reasons we will get into much later. But what we are doing in the subroutine at line 300 is ensuring that this string is exactly nine characters long. If it is too short, we add spaces to the end of it. If it is too long, we just take the nine left-most characters of the string.

Finally, we set our flag, SB, back to 1 before returning to the main menu at line 1150 since we have saved our file and all changes made to it. Also, we close our file so that all subsequent PRINT statements will print to the screen.

GOING ON

If we wish to quit at this point, we can by pressing "Q". However, the program will check first to see if we need to save the work we have done so far. This is done by going to the subroutine at line 900.

```
899  REM  *** QUIT
900  IF SB = 1 THEN 990
950  PRINT "BUDGET CATEGORIES NOT
     SAVED."
960  PRINT "CANCEL COMMAND? (Y/N)";:
     GET CS
970  IF CS = "Y" THEN 1150
980  IF CS <  > "N" THEN 960
990  RETURN
```

If we have saved everything or no changes have been made, then SB will be equal to 1, the program will RETURN from this subroutine to line 1166 and simply END as requested. However, if SB is not equal to 1, the message will appear that the budget has not been saved, and the user will be asked to reconsider his request to quit. If they decide to cancel the command, the program will take them back to the main menu. If they decide to quit regardless, the program will take them back to line 1166, and the program will end.

If, instead of quitting, the person wishes to go on to the next menu, they are still asked to save the budget to disk first if they haven't already. Then the program takes them to line 1500.

```
1500  POKE 34,0: HOME : PRINT  TAB(9)
      "HOME MONEY MANAGER": PRINT
1501  VTAB 18: INVERSE : PRINT "PLEASE
      WAIT": NORMAL
1502  GOSUB 10060
1505  CALL H2"ENTER DATA"
10060  POKE 60,LN + 8: POKE 61,HN
10070  POKE 62,LO: POKE 63,HO
```

contd.

```
10080 POKE 66,8: POKE 67,2
10090 RETURN
```

Here the top of the scrolling window is set to the top of the screen, the screen is cleared, and the title is printed at the top. Also, the user is asked to wait while the program is chained to the next program which we will call, "ENTER DATA". (See last month's article for details on chaining.) This is the program we will cover next month. (Stay tuned!)

```
19999 Y = PEEK (222)
20000 IF Y = 5 GOTO 152
152   VTAB 24: FLASH : PRINT "NO DATA IN
      MEMORY": POKE 216,0: FOR C
      = 1 TO 1000: NEXT C: NORMAL
155   GOTO 1150
20001 IF Y = 77 THEN VTAB 24: FLASH : PRINT
      "*** MEMORY FULL ***": FOR C = 1
      TO 200: NEXT C: NORMAL : GOTO 1150
20002 IF Y = 9 THEN  HOME : VTAB 10: FLASH :
      PRINT "*** DISK FULL ***": NORMAL :
      PRINT "REMOVE CURRENT DISK, INSERT
      ANOTHER INITIALIZED DISK, THEN TRY
      AGAIN.": GOSUB 28: RESUME
20999 PRINT "ONERR CODE = ";Y
21000 X = PEEK (218) + PEEK (219) * 256:
      PRINT "ERROR AT LINE ";X: END
```

The only thing left to discuss about this program this month is some error handler routines which are included "just in case". As we did in our "BUDGET" program, we set Y equal to the value found at decimal memory location 222, where the error code is stored. If Y is equal to 5, that means there is no data in memory. We print a message to that effect in line 152 and return to the menu. We also provide for problems that may arise if the disk we try to save data to is full or if we run out of computer memory at some point. Any other error is simply printed out as a number with an indication of the line number at which the error occurred. Hopefully we have taken care of the most serious problems which might arise at this point in our program. I guess you only know if you have provided enough error traps after you start getting complaints from users.

Well, that should be enough for now. We are done with this program module, so put your budget disk in your drive and type "SAVE BUDGET 1/85". This month we have covered the ON -- GOTO command, and writing data to a disk. We also walked through an input routine that uses the GET command to create the string and then checks it against a table of predetermined values. Next month we will explore the program which includes our main menu and the routines for entering the information we will be using throughout the rest of the program.

A NEW WAY TO SKIN A CAT (ProDOS)

by Chester H. Page

The hierarchical structure of pathnames and subdirectories in ProDOS is, no doubt, very convenient for hard disks containing many files, but it can be confusing and annoying to the average DOS 3.3 user. For example, the Basic Programming with ProDOS disk, entitled Examples, contains over 60 files, although only 10 are listed by CAT. The beginner eventually learns that to find out what files are on the disk, he must find each directory file, and catalog that. Of course, there are also subdirectories, and in general, there are subdirectories of subdirectories down to many levels (as many as 64, in principle). Figure 1 is a chart, slightly modified from the example in the ProDOS User's Manual, with four levels of subdirectories. Having such a chart available makes the disk seem less formidable, but what does one do with no such information, as with the Examples disk?

To get around this situation, I wrote SKIN.CAT. With this program loaded, any ProDOS disk can be inserted, and entering RUN will give a complete listing of all files on the disk, as in Figure 2 (for a written record, enter PR#1 before entering RUN.).

The first problem is to avoid the need to enter the name of the disk volume being examined. This is accomplished by using the MLI (Machine Language Interface) procedure for ONLINE, with a simple routine at $300:

300: 20 00 BF	This is the call to MLI
C5	The function number for ONLINE
07 03	Address of parameter list
60	RTS (return to BASIC)
307: 02	Parameter count (2 parameters in list)
60	Slot 6, Drive 1
20 03	$320 for buffer address

When this routine is run (by CALL 768), the disk in drive 1 is turned on and its name returned to the specified buffer at $320. Actually, the first byte is the number of characters in the volume name, then the volume name itself in ASCII. We want to replace the count byte with 47 (ASCII for the slash, /) and increment the count by 1 to allow for this added character. This new count, and the address $320, must then be installed in Applesoft's string variable table, just as if this string had been created by Applesoft. The location for this string pointer is at the end of the present table of numeric storage (which includes string data and numerical variables); this location is given in $6B/6C (decimal 107/108), found by line 130. The table of numeric storage already holds pointers to the variables I and A from line 1, DS from line 120, and X itself from line 130. A pointer to the volume-name string must be stored at X; it needs the string name (FS), string length, and string address. The name and address are predetermined, so are entered in advance by line 140, the string length is computed and entered by line 160. Lines 180-210 advance the pointer to the end of numeric storage by the 7 bytes used by the string pointer, and also set the beginning-of-array-storage pointer to the same value. Then when we later create the array GS(I), all pointer entries will be properly located. It remains to "legitimatize" FS by making it a proper Applesoft string in the usual area just under HIMEM; this is done by line 220 which simply adds a null string to FS. FS will be used successively as the name of the volume (top level directory) and as the name of each subdirectory to be examined.

Although ProDOS directory files are not text files, and cannot be read by Applewriter, they can be read a line at a time by INPUT LS: PRINT LS. A directory file has the following lines:

(1) directory name
(2) name line, being the header
NAME TYPE BLOCKS MODIFIED etc.
(3) a blank line
(4) -(n) one line for each file
(n+1) a blank line
(n+2) BLOCKS FREE and BLOCKS USED data

The two blank lines serve as convenient delimiters; after 3 lines have been read, we can iterate INPUT LS until a null string (blank) is returned. Printing the blank and one more line gives the complete catalog; stopping at this point omits the block-data line. This will save repeating this line with each subdirectory listing.

Lines 250-340 read the disk's directory, check each entry to see if it is identified as a directory (file type), and if so, save its file name as GS(I). Each such GS(I) is used in turn as the FS file name, until all directory type files have been identified, and their names saved in the array GS(I).

When concatenating file names to build complete path names, we must not include any blank spaces, or the attempt to open the file will result in a SYNTAX ERROR. The routine in lines 500-530 takes care of this by augmenting the pathnames character by character until a delimiting space is found.

The set of GS(I) directory names is displayed (lines 350-380), and each cataloged in turn (lines 600-650). It would be simple to use the command CAT for each of these, but then every one would be accompanied by the final line showing how many blocks have been used, and how many remain. This is avoided by reading line by line, and stopping on the second blank. Superfluous information about the individual files is eliminated by suitable line truncation (lines 620-630).

Listing

```
 10 REM ************************
 20 REM *                      *
 30 REM *        SKIN.CAT      *
 40 REM *                      *
 50 REM *     Chester H. Page  *
 70 REM *       March 1986     *
 80 REM *                      *
 90 REM ************************
100 FOR I = 0 TO 10: READ A: POKE 768 + I,A: NEXT
110 DATA 32,0,191,197,7,3,96,2,96,32,3
120 DS = CHRS (4)
130 X = PEEK (107) + 256 * PEEK (108)
```

contd.

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```
140 POKE X,70: POKE X + 1,128: POKE X + 3,32:
    POKE X + 4,3
150 CALL 768
160 POKE X + 2, PEEK (800) - 16 * INT (PEEK (800)
    / 16) + 1
170 POKE 800,47
180 X = X + 7
190 POKE 108, INT (X /256)
200 POKE 107,X - 256 * INT (X / 256)
210 POKE 109, PEEK (107): POKE 110, PEEK (108)
220 FS = FS + "": REM NEEDED FOR 250/260
230 N = 3: I = 0: J = 0
240 GS(0) = FS
250 PRINT DS"OPEN"FS",TDIR"
260 PRINT DS"READ"FS
270 FOR L = 1 TO N: INPUT LS: NEXT
280 INPUT LS
290 IF MIDS (LS,18,3) = "DIR" THEN 500
300 IF LS < > "" GOTO 280
310 PRINT DS"CLOSE"
320 I = I + 1
330 N = 3
340 FS = GS(I): J = J - 1: IF GS(I) < > "" GOTO 250
350 PRINT "THE FOLLOWING FILES ARE
    DIRECTORIES: ": PRINT
360 I = 0
370 IF GS(I) < > "" THEN  PRINT GS(I): I = I + 1:
    GOTO 370
380 PRINT
390 PRINT "THESE DIRECTORIES WILL NOW
    BE CATALOGED"
400 PRINT DS"CAT"GS(0): REM USE "CATALOG"
    FOR FULL 80-COL INFORMATION
410 I = 1
420 IF GS(I) < > "" THEN GOSUB 600: GOTO 420
430 END
500 B = 2: HS = ""
510 IF MIDS (LS,B,1) < > "" THEN HS = HS +
    MIDS (LS,B,1): B = B +1: GOTO 510
520 GS(I + J + 1) = FS + "/" + HS
530 J = J + 1: N = 1: GOTO 280
600 PRINT DS"OPEN"GS(I)",TDIR"
610 PRINT DS"READ"GS(I)
620 FOR N = 1 TO 3: INPUT LS: PRINT
    LEFTS (LS,28): NEXT
630 INPUT LS: PRINT LEFTS (LS,28)
640 IF LS < > "" THEN 630
650 PRINT DS:CLOSE": I = I + 1: RETURN
```

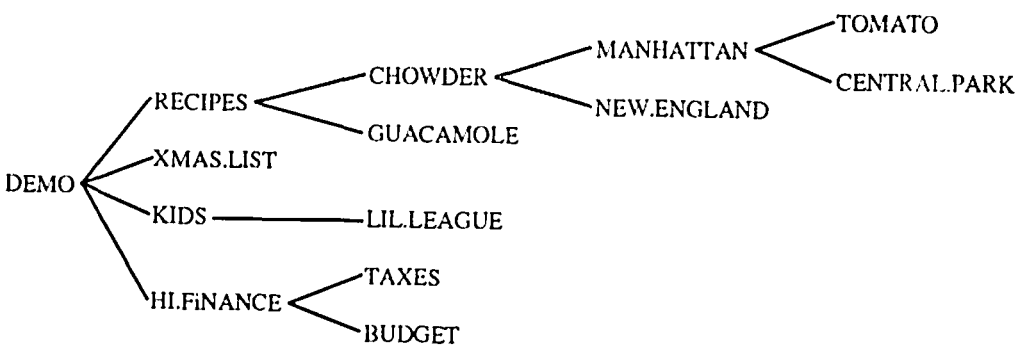

Figure 1

```
]RUN
THE FOLLOWING FILES ARE DIRECTORIES:
 /DEMO
 /DEMO/RECIPES
 /DEMO/KIDS
 /DEMO/HI.FINANCE
 /DEMO/RECIPES/CHOWDER
 /DEMO/RECIPES/CHOWDER/MANHATTAN
THESE DIRECTORIES WILL NOW BE CATALOGED
 /DEMO
 NAME            TYPE    BLOCKS    MODIFIED
 RECIPES         DIR          1    <NO DATE>
 XMAS.LIST       TXT          1    <NO DATE>
 KIDS            DIR          1    <NO DATE>
 HI.FINANCE      DIR          1    <NO DATE>
BLOCKS FREE:     260     BLOCKS USED:  20
RECIPES
 NAME            TYPE    BLOCKS
 CHOWDER         DIR          1
 GUACAMOLE       TXT          1
KIDS
 NAME            TYPE    BLOCKS
 LIL.LEAGUE      TXT          1
HI.FINANCE
 NAME            TYPE    BLOCKS
 TAXES           BIN          1
 BUDGET          BAS          1
CHOWDER
 NAME            TYPE    BLOCKS
 MANHATTAN       DIR          1
 NEW.ENGLAND     TXT          1
MANHATTAN
 NAME            TYPE    BLOCKS
 TOMATO          TXT          1
 CENTRAL.PARK    TXT          1
```

Figure 2

The Washington Apple Pi Music Sig is a special interest group devoted to music synthesis and sound applications using computers. Music Sig meets at 1:30 P.M. on the second Saturday of each month. Meetings are held on both sides of the river, so interested parties should call me (490-7484) or Gary Larson (337-4267) to get the specific location and directions.

Our first two meetings were held in College Park, and featured demonstrations of two CASIO CZ-101 synthesizers running in tandem, the Decillionix sound sampler and the Alpha Syntauri synthesizer. We also had a discussion of the MIDI interface for Apple, Macintosh and other computers.

The offices of Chairman, Vice-chairman, Treasurer and Journalist were filled by R. Hobbs, G. Larson, J. Moore and K. Carpentre, respectively.

The third meeting was held in McLean, Virginia on May 10, and featured a demonstration of the Korg Poly 800 synthesizer. There was also a demonstration and talk on musical instrument creation using techniques of waveform and envelope modification.

Our next meeting will again be in College Park, on Saturday, June 14 at 1:30 P.M., and will feature a demonstration of the Ensoniq Mirage digital sampling keyboard. This is a very recent development in music synthesis, and should be both informative and entertaining. Call Gary Larson or me for transportation or directions.

BYLAWS CHANGES

Amend: ARTICLE VIII SECTION 9. TELECOMMUNICATIONS SYSTEM OPERATOR. The Board of Directors shall appoint a Telecommunications System Operator who shall chair the standing Telecommunications System Committee.

Amend: ARTICLE XI, to renumber SECTION 2 "OTHER COMMITTEES", to SECTION 3. Insert new Section 2 as follows: SECTION 2. TELECOMMUNICATIONS SYSTEM COMMITTEE. The Telecommunications Systems Committee shall be a standing committee established by the Board of Directors. The Telecommunications System Operator shall chair the Telecommunications System Committee and shall appoint such additional committee members as necessary to conduct the business of the Telecommunications System of Washington Apple Pi. The committee shall establish policy for and operate the Telecommunications System subject to the general policy directions of the Board of Directors. An operating budget shall be prepared by the committee and submitted annually to the Board of Directors for review and recommendation to the membership.

Repeal: ARTICLE IX SECTION 5, "INTERIM OFFICERS AND DIRECTORS-AT-LARGE.

BEST OF THE APPLE ITEMS FROM UBBS

by =Alexander-

II+ 80 Column Card

GARY HAYMAN ON 04/11

Does anyone know if any 80 column card can be used with Apple Writer II on an Apple II+. Right now I have a Videx Videoterm 80 column card that works but it requires a Pre-boot disk. If I get hold of a second II+ without the Videx card and get another 80 column card, will my Apple Writer II work in 80 column mode or will I need a special pre-boot disk. Does anyone have the configuration of an Apple II+, using Apple Writer, with a non-Videx 80 column card? Responses would be appreciated.

RICHARD ROWELL ON 04/12

Although I have not examined them all, my expectation is that you will need a pre-boot with all 80 column card - AppleWriter II - Apple][+ combinations. I tried for a year to get or write a patch to AppleWriter II to run on an Apple 80 column card on a //e. Everyone told me it couldn't be done, and at least in my case they were right. Probably time for you to bite the bullet and switch to a different word processor or get a //c.

EDMON J. DONNELLAN ON 04/15

If you do get an Ultraterm, I think you'll enjoy it—it has very nice fonts and graphics characters, and it's easy enough to program directly to get some wild effects. You get as many as 48 lines with 80 columns, or 160 columns with 24 lines. Ideally you need a monitor with a bandwidth of at least 15 mhz, and a persistent phosphor to minimize flicker. Videx recommends the Amdek 300A and the Apple Monitor III, although the latter can't quite do the 160 columns. I use a NEC JB-1201 and have been happy; it flickers a little in interlace mode. Another benefit compared with the 80-column //e is that screen update is much faster.

Assembler 2 Text

MICHAEL ASTOR ON 03/27

Question: Is there any way to put a dissassembled listing of a machine language program into a text file. I know how to put an Applesoft program into a text file for transmission and 'EXEC' purposes, but I can't figure out a way to do it with disassembled listings. This is what I want to do:

```
OPEN FILENAME
WRITE FILENAME
CALL -151
*800L
800- AD 03 C0  LDA SC003
803- 60        RTS
```

etc. Any help would be appreciated!

ERIC RALL ON 03/28

Here goes. The problem lies in the CALL-151. When you enter the monitor, you leave Applesoft. Since you are not in Applesoft anymore, you stop executing the Basic program. You need to call the list routine from Applesoft. It lives at $FE5E. (CALL-418). To call it you need to set up the starting place to read from. Zero page locations $3A & $3B hold the least signicant byte and the most significant byte (respectively). So to start at $800: First POKE 58,0 (location $3A gets a zero for the 00 in $0800), then POKE 59,8 (That's the $08 part), then issue your CALL-418. If you want more than 20 lines listed you can loop around the CALL-418. For example: POKE 58,0 : POKE 59,8 : FOR I = 1 TO 5 : CALL -418 : NEXT I. That would disassemble 100 lines. Use the rest of your text file generating "OPENs, WRITEs, CLOSEs, etc" around this routine and it should work. I know this works for ProDOS. DOS 3.3 eats the zero page locations used by the monitor disassemble routines. If you want to specify lines see message next in line (142).

ERIC RALL ON 03/28

If you want to write a text file from the monitor disassembly, try this on ProDos. DOS 3.3 and the monitor argue with each other and would require major (to me) surgery to get to work. You can always CONVERT the ProDos to DOS if you need DOS. Step 1: enter monitor and move the start of the disassembly routine into RAM. I moved it to the tail of the input buffer ($200). Most programs you would want to list should be elsewhere in memory. So..

```
]CALL-151      *2DE<FE5E.FE74M
```

Reenter Basic with *3D0G. Now type the following program:

```
]10 DS=CHR$(4)
]20 PRINT DS"OPEN FILENAME"
]30 POKE 738,L  :  REM   L is the number of lines to disassemble
]40 POKE 58, LS : POKE 59, MS : REM LS & MS least and most significant bytes of the start of the program to be disassembled. (convert to Decimal!)
]50 PRINT DS"WRITE FILENAME"
]60 CALL 734
]70 PRINT DS"CLOSE"
```

That should do the job.

Carrier Detect

ROBERT B. CALHOUN ON 03/27

A few of you may have noticed my (and other's!) trials with the promodem 1200A. One of the problems was that I had to switch a DIP switch to "true carrier detect" to get their software to work right. I did that; however, now I can't use ASCII Pro. It doesn't let me get to the "normal" commands like (D)ial anymore...it thinks I want a macro. Now, to the best of my knowledge, the manual just says "if you have a smartmodem you MUST change the install menu to reflect this and also select 'permanent carrier'." That is fine, but I no longer have a permanent carrier. (I think they are really annoying...you can't tell if someone hung up on you sometimes.) Now, is there a way to get ASCII Express to work with normal carrier detect, or do smartmodems need to be "on line" continuously in order to interpret the AT commands?

GEORGE KINAL ON 03/27 TO ROBERT B. CALHOUN

Smart modems need permanent carrier detect because, in the absence of carrier, the interface will refuse to transmit. So, the rule is, carrier detect ON for originate use, off for auto-answer use. What you said isn't quite correct, though. When the carrier drops, the modem will say "NO CARRIER". In other words, all status tasks have been transferred from hardware to software.

COPY II Bugs & Fixes

DAVE HARVEY ON 04/16

There's been much discussion about problems with Copy II+ and other programs. The programs, when used to alphabetize a ProDOS directory, garble the directory. The following program can be used as a check to see if your program for alphabetizing a directory or sub-directory under ProDOS is working correctly. Program courtesy of Glen E. Brendon. Format a new floppy. Name it /TEST. Type in this order:

```
PREFIX /TEST
```

contd.

CREATE DIR2
CREATE DIR1
Then use your sorter so that DIR1 will occur first. Type in and RUN this:

```
10 PRINT CHR$(4) "PREFIX /TEST/DIR2"
20 FOR I=15 TO 0 STEP -1
30 PRINT CHR$(4) "CREATE SUBDIR.";I
40 NEXT
```

Then type CATALOG to catalog /TEST/DIR2. If you get a RANGE ERROR then do not under any circumstances use that sorter again. Even if you don't get this I suggest you continue testing by sorting DIR2, deleting about 10 files from DIR2 and keeping your eyes open for anything suspicious.

WALT MOSSBERG ON 04/18
Mike (and Dave Harvey): Central Point HAS now fixed Copy II+ in versions 6.1 through 6.4 so it passes Glen Bredon's test program. I'm the one who told them about the alphabetizing bug in the first place and I (along with a few others on MAUG) beta-tested version 6.1 for them.They simultaneously fixed a few more minor bugs, mainly one that didn't properly rename volumes in all circumstances. They have been very cooperative. BUT...there is another serious bug in 6.1 and above (even 6.4) involving the copying of unprotected ProDOS files between volumes on a hard disk. The copies of the files show different endfile numbers and, in the case of AppleWorks on my system at least, the copies crashed when RUN. Central Point knows of this problem, which has been experienced by two others on MAUG, but hasn't solved it yet. Til it's solved, I don't copy files with COPY II+.

FROM MIKE UNGERMAN, ON 04/22
and on and on!!!! I really don't see why major software outfits like Central Point don't ask for help in Beta Testing their products. Sure glad I don't use a hard disk myself, but I know we have copied many programs from one Hard Disk volume to another at the Pi office for this BBS, and have used Copy II+ to do it!

WALT MOSSBERG ON 04/22
I'm happy to announce that the months of frustration with Copy][+ appear finally to have ended with the release of version 6.5, which I just got in the mail. This version fixes the last major bug of which I was aware (and of which I informed them)—flawed file copying in some circumstances, leading to different endfile listings for the originals and images and, in some cases (like AppleWorks on my Sider) copies which crashed. So now they appear to have solved (a) the alphabetizing bug, (b) the volume renaming bug, and (c) the flawed file copy bug. It was disappointing that Central Point could offer software with such important bugs still in it. But I have to say they have been highly responsive to customer complaints about them. I now once more feel comfortable about recommending the new ProDOS Copy][+, BUT STAY AWAY FROM VERSIONS LOWER THAN 6.5.

CRT Cleaning

RICHARD ROWELL ON 04/05
Here's a high-tech question ... I have an Apple green screen Moniter ///, with the non-glare surface on the screen. The screen has two tiny (2mm x 2mm) marks on it. I suspect that these are food stains from a #S@^&%!! kid opening a can of Coke in front of the monitor. ... How do I clean it? I've tried a soft anti-static cloth. I've very gingerly tried Windex. I worried about physically marring the surface if I really attack it, but my gentle approaches have not removed the offending irritations. What should I do (to the CRT, not the kid)?

JOE ENGLAND ON 04/05
I have a couple of friends who've turned small spots into large nearly opaque areas by using the wrong cleaning methods or chemicals, so be careful. If you know how to avoid the high voltage that lingers in your CRT for a while (even after it's unplugged) you might try removing the glare screen so you can get at the other side of it with your anti-static cloth. Does anyone know whether washing the (removed) glare screen gently in mild soap and water would be harmful or not?

KEN DE VITO ON 04/06
Richard, to clean the screen use a soft rag dampened with Isopropyl Alcohol. Don't use normal Rubbing Alcohol. I used to have a green screen Apple /// monitor and the instructions provided this info and it worked well for me.

JIM KELLOCK ON 04/07
Isopropyl alcohol can leave residue too. Denatured alcohol does not leave any, and cleans screen, case, etc. A can of denatured alcohol, cotton balls, que-tips, and a photo air-gun should handle all your external cleaning.

Drafting Software

FRANK SORNATALE ON 04/02
I would like to know what, if any software may be available to help me do some unprofessional diagramming, construction, etc. projects at home and work. Is there anything that allows you to construct a floor plan in scale for example. Do these graphics tablets—Koala pads—have anything to do with this type of work. Anyway you see I don't know much so any help would be appreciated.

EDMON J. DONNELLAN ON 04/03
I don't know much about it either, but I don't think a Koala pad would be the answer. It's fun to play with but, unless you drew and saved multiple pictures, the resolution wouldn't be good enough—even then, the lack of ability to move things around in it and the hassles in aligning adjacent pictures wouldn't be worth the trouble.

THERON FULLER ON 04/03
There are some real problems with getting "professional" type graphics on an Apple //. First of all, the screen resolution isn't very good. Another problem is that the pixel dimensions on the Apple screen don't correspond to the "pixel" dimensions on dot-matrix and other type printers. Thus, what appears to be a good representation of a circle on an Apple monitor screen, will print out as an ellipse. The cheaper "Koala" type pads and associated software don't contribute much to the solution of the problem, either. Their resolution just isn't fine enough to act as precision drafting instruments. There is CAD-CAM software available for the Apple // somewhere in the $1,000-$1,500 range, and you can probably still get an Apple // graphics tablet, and by using a good plotter (more big bucks) you can probably draw decent floor plans. But then, why not spend that money and get a Mac?

FRANK SORNATALE ON 04/04
Thanks for the info. I don't have the kind of money you suggest is required. I was hoping for something much more inexpensive.I don't have professional needs but simply wanted to do some drawings for work that could be printed out on a dot-matrix printer. I guess I will have to wait a little longer until something is developed for the //e and my new mouse that is affordable for the masses.

RICHARD ROWELL ON 04/05
Try FONTRIX with the FontPak that includes the Architectural "fonts" (I believe that this is FontPak #2). If you use a recent version of Fontrix - such as version 1.5 -you can rotate the printing 90 degrees and probably get pretty good scaling (at least for "unprofessional diagram-

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ming"). If you need any help with this—or want a loan of the program for trial/demo purposes let me know. Try 231-9086 first, and if no answer try 770-5260 (if you can get through between teen-agers.

KEN DE VITO ON 04/06
... Dazzle Draw and Fontrix 1.5 will do in a pinch, but if you want scaled floor plans then it looks like Nibble Architect should do the trick. I just learned of it in the April issue of "Nibble", page 94....The first Letter to the Editor in that issue also deals with Nibble Architect and dumping to the screen using an Imagewriter. Best of all it costs only $29.95.

II+ Troubles
DOUGLAS WADE ON 04/03
I have a fairly old II+ (1980). For some time now it would not boot up the disk drive, or any thing else. At first I could fix it by cleaning the contacts of the controller card. This worked fine for about a year. Then the problem began to migrate to other slots, and became more frequent. It now occurs every time the computer has been off for 24 hours. I suspect oxide on the card connecters, but I've cleaned as best as I can. Any other idea?

JOE ENGLAND ON 04/04
Sounds a little like the power supply problem I was having a while back. Easiest way to tell would be to find someone who wouldn't mind letting you borrow their power supply for a day or two. Very easy to swap in - a few screws and a connector. If problem goes away you've isolated it. Solution for me was to replace capacitor c7 in the power supply, as suggested by Tom Vier. Worked like a charm.

Joysticks
BRETT PARKS ON 04/21
Ok folks, a little opinion samplin' here. What is the best joystick for the //e? I mean, like nice smooth function, auto center (defeatable?), rugged. Want to get a good one for use with F-15 strike Eagle (have a couple of simulated Lybia raids I want to run thru.). Have a TG now that seems to be a little "spotty", jumps around a bit.

JOE ENGLAND ON 04/21
I guess this is just subjective opinion, but I've used several joysticks and I prefer the Hayes Mach II (or Mach III if you like the extra fire button on the joystick).

MIKE UNGERMAN ON 04/22
I prefer the Atari type switched joysticks attached to the Apple with the Wilco joystick adapter. This way, you can use some of the best acting joysticks as long as your game program doesn't require continuously variable input. Most don't, as they switch from left to center to right as the value of the input reaches specific plateaus from 0-255.

MARK UHRMACHER ON 04/22
I had a TG too and it broke so I upgraded to a CH products joystick. It works nicely, has both buttons, has a three position self-centering switch (self centering, half self-centering, and no self-centering) and has knobs to control where it self centers (the knobs are better than the ones on TG, e.g. the self-centering switch is better—on the CH it's a real switch instead of a push down little @!#S** knob). It isn't very expensive (though it ain't cheap!). I like it and it comes in 16 and 9 pin formats.

MARCO BARIO ON 04/25
I have the Apple Joystick //e which for accuracy seems to work perfectly, but on the ruggedness scale I'd give it a 4 because my second one just went bad on me. On my first the stick stopped responding properly and on this one, button 0 only works when I put all my might into pushing it down.

Modem Deals
MIKE UNGERMAN ON 03/28
I am sure frequenters of this board and the TelecomSIG have heard the question many times, "What is the best modem to buy?" and "What's the best deal for the money?" Well, I don't claim to have all the answers, but a pretty good deal is available from the new telecom utility, Viewtron. They are offering their service at an introductory rate which includes a modem/serial card combination for a fairly reasonable price. Their combinations include:

300 BAUD Signalman by Anchor for $89.95
300 BAUD Signalman & Apricorn serial card for $149.90
300/1200 Volksmodem by Anchor for $189.95
300/1200 Volksmodem & Apricorn for $249.90

Above prices include their service and free time on the air. You can sign up by calling 1-800-543-1300.

MIKE UNGERMAN ON 03/29
The DAK smart Duck is a clone of the Promethius, which is a smart modem with a terminal program in ROM aboard. The Volksmodem is a fairly dumb modem in the Hayes AT protocol (got it right George?) which can operate the same as the DAK if you are using ASCII Express. The combination of the modem, serial card and service seemed fairly good for the price. I paid $190 for the Volksmodem last Spring and have seen it for $169 recently (but you have to buy a cable for $15 which I think comes with the package deal.) The sales catalog of Call-A.P.P.L.E. just came out and they have a modem by Cermetek(?) available for $199. It's a SINGLE card internal 300/1200 II/+/e modem with full Hayes compat., pulse/tone dial, speaker, ROM terminal program, auto answer, call progress tone dectection (dial, ring-back, busy, voice and connect) and built in diagnostics. Price is good til 4/15 for Call-A.P.P.L.E. members only (but if you like their deals you can join when you order.) Lots of other stuff in the catalog which I'll mention on the hardware board. For Mac'ers, they have a "MAC Package" Multimodem AH2 with Red Ryder software and cable for $299. Hayes compat., auto dial/ans, stores numbers for calling, 2-year warranty. Not sure how this compares to other Mac modems you are all aware of, but thought I'd mention it. Call-A.P.P.L.E.'s number is 1-800-426-3667.

MIKE UNGERMAN ON 03/30
The prime benefit of an external modem is that it is transferable to another computer at a later date. Also, it does not overload the Apple's power supply or add heat internally. If your Apple is like mine, all 8 sots are full and I have a couple of cards in my desk drawer! The nice thing about an internal modem is that you don't have to interface it to a serial card made by another manufacturer and worry about having the right cable and connectors.

ELI BERGMAN ON 03/31
BCE advertisement in Wash. Post business section today 3/31 offers Hayes compatible 1200b modem w/communications software for $149. The illustration in the advertisement shows "General Datacomm" superimposed on modem. The claims include: autodial/autoanswer; works with IBM and Apple; external rs-232-c interface; 2-year warranty. If it has all these things, this deal beats the A.P.P.L.E offer and Dak's Smartduck. Anybody know anything about the modem and about BCE?

ALLAN LEVY ON 04/02
The Volksmodem does not have a speaker. I find that an

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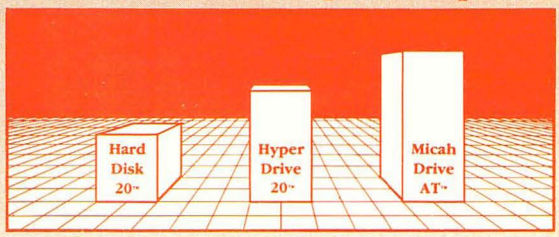

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impossible drawback. If you are auto-dialing and waking someone up you should hear and stop it. An autodialing program with a Volksmodem has the potential to keep calling a wrong or changed number and unnecessarily annoying someone at 2:00am. Since I do late night modeming I try to avoid situations like that.

GEORGE KINAL ON 04/03
I must say the new CERMETEK internal Apple II modem looks very, very good on paper. It carries a list price of $300, so should be available from the discounters for about $200 before long. The Cermetek modem modules are well-known as quality items, and I can see a 6551 ACIA chip on the card (same as the SSC), so compatibility should be very good. As for whether the DAK Duck vs Volksmodem, I think the Duck is just more bang for the buck. One thing it has that the Volks doesn't is a clock. With a $60 SSC clone, you can match the $249 Volks plus card deal. This whole business is changing so fast it's impossible to keep up!

PAUL KELBUAGH ON 04/04
Mike Ungerman and all who have interest in Viewtron introductory offer. It is my understanding the company has gone belly-up within the last week due to a lack of interest. While the modem prices are/were reasonable, it won't do you much good if they are sleeping with the fishes. I advise erasing them from consideration.

STEVEN KUO ON 04/20
Personally, I believe that an external modem is the best. Someone said that it is transportable from computer to computer, and I think that this is the most important factor. If you upgrade your computer (e.g. //c -> Mac) you will not have to buy a new modem. To me, at least, this was the main reason that I bought an external modem (DAK Duck—which is still in the catalog..

Sider Operation
JOHN MASSEY ON 03/31
What's the general practice for you sider owners on powering the Sider? Do you turn the system off daily or leave on all the time? If you turn it off, why?

EDMON J. DONNELLAN ON 04/01
I turn mine off when I'm not using it: (1) out of a general irrational Calvinistic inclination; (2) because I think anything mechanical must have some definite, limited lifetime. Probably wrong on both counts, but I haven't had any trouble with the Sider in a year.

TOM VIER ON 04/01
I hope it parks the heads on power-down. Otherwise the heads "land" on the media and can cause excessive wear. If you have no worry about lightning or other power fluctuations, I would leave it up all the time. The heads "fly" and the bearings SHOULD last for years and years. (The Corvus here has...)

EDMON J. DONNELLAN ON 04/02
The Sider has a command on its boot-up menu to park the heads, which is one thing I'm pretty reliable about doing before I turn it off. I live in Montgomery Village, where the power company is constantly and without warning turning off the electricity to run lines into new developments. Would you recommend turning off the Sider under these conditions anyway? Appreciate your advice.

MIKE UNGERMAN ON 04/02
Ed: take a look at what you have invested in your hardware and software. Try adding it up and figuring out what it would cost to replace if you got a bad surge/lightning strike etc. The only answer, and the obvious one, in your case is to get an uninterruptable power supply (UPS). This will ensure that you power down in total blackouts in a sane manner and isolate your equipment from the glitches of modern day power. I might add that I have a home in the Fl Keys where the power is totally unreliable. I plan on getting a generator for the house when I move back there with an electric startup on power failure. The computer room will also have a UPS.

President's Corner contd. from pg 4
the back of your Journal. After your WAP number are the year and month your membership expires.)

For well-to-do Macintosh owners: Check out ***MacInTouch,*** one of the most interesting Mac newsletters around. MacInTouch covers the Macintosh market from the computer industry's and the user's standpoint, a rare combination. One thing I enjoy is that it treats the Mac with respect, not worship, the way other magazines, especially MacWorld, sometimes do. Its one drawback is price: $48 a year for 11 issues of about 36 pages each. Write Ford-LePage, Inc., P.O. Box 786, Framingham, Massachusetts 01701, (617) 527-5808.

For brave Macintosh owners: Boot ResEdit 1.0D5. Select the "About ResEdit" menu item to see what it says. Then, for an interesting time, try selecting that item with the Command and Option keys down. Then, for an even more interesting time, select "About ResEdit" with the Shift, Command and Option keys down. And then—unless you know what "pig mode" is—do it again. Thanks (?) to Tim Buehrer, our Macintosh programmers' group chairman, for passing this on.

The View from Durham

by Chris Klugewicz

Once again, I missed last month's Journal deadline; however, at least I have a good excuse: I took the MCAT (Medical College Admission Test) on April 19, and I spent the six weeks before that studying for it. (The MCAT, by the way, is one of the most horrible experiences one is likely to face: it's not that the test is that difficult (I'm not saying it was easy--believe me, it was **not** easy!), it's just that it's so *long* ! We got to the test center at 8 AM and didn't get out again until 6:30 PM, with only an hour for lunch and two ten-minute breaks! Arrrgh!) My apologies to all, and--since I'm in Washington until the end of August, with nary a care in the world (well, not too many, at least)--"The View from Durham" will appear with clock-like regularity fom this point on. I want to thank Bernie Urban, too, for being so understanding about my missing deadlines. (Have you noticed how many sets of parentheses there are in this paragraph?)

Onward (to the mailbox)! Surprisingly, no more mail concerning mail-order problems arrived. I did receive a note from Scott Peters, though, in regard to my comments on theatre work and stagecraft. He mentioned a piece of software reviewed in the latest "Wheels for the Mind" (a hefty journal published semi-regularly by the Apple University Consortium). Unfortunately, I haven't been able to get my hands on a copy yet, so I'm not sure what the program does--but I'm rather excited to find out. (There are a lot of people in the Drama Department here who are interested also; more on this when I get a chance to check out "Wheels for the Mind".)

(Great) News. I doubt that this will be any news at all to the GAMESIG people (especially not to GAMESIG's guru, Ron Wartow), but Microsoft is now shipping "Flight Simulator" for the Macintosh! It runs on all three Macs (Thin, Fat, and Plus), and it has been "significantly enhanced," according to Microsoft. You can fly a Cessna 182 (the standard Flight Simulator aircraft) or a Learjet 25G or a WWI biplane. 38(!) airports have been added, as has more scenery. Multiple windows are supported, with views from the cockpit, control tower, or spotter plane possible. The game is priced at $49.95. I have the distinct feeling that this is going to be a VERY hot item for quite some time. (I grew up with "Flight Simulator" in its various incarnations: I started out with SubLOGIC's original "Flight Simulator II" on a 48K Apple][+, moved on to the Microsoft version on a 128K IBM PC, and I've been waiting for this program since I bought my Mac. The minute my next paycheck arrives, I'm heading for the software store!)

More news. I got a brochure from Hallmark (yes, the greeting card company) about a new service they're offering on CompuServe: Color Mail. With Color Mail software, you can send electronic greeting cards (composed of music, pictures, and text that you assemble from a library created and updated by Hallmark) through CompuServe's own EasyPlex system. This sounds like a ton of fun to me, but right now it's only available for Apple // series and Commodore 64/128 computers. Hopefully, the service will be successful, and they'll offer a version for the Mac (he said, without a trace of selfishness).

The continuing saga of my malfunctioning modem... ("As the disk turns"?) Three cheers for Prometheus Products, Inc.! I finally managed to get around to calling them about my modem (which, you'll recall, pooped out on me over the Christmas holidays), and they agreed to repair it free of charge, under the warranty (which, by the bye, is a full year--not just 90 days, like Apple's). It's on its way back to them now; more on this next time.

Computing here in Gothic Wonderland. (For those of you who've never seen Duke, the main campus is built in the English Gothic style, remarkably reminiscent of Princeton University. Students--especially slightly cynical seniors--often refer to it as our "Gothic Wonderland" or our "Gothic Playground.") Duke has become a member of Apple's University Consortium, and as part of that agreement, has placed a bunch of Fat Macs and LaserWriters around the campus. This has led to two things: increased sales of 3.5" disks, and long lines at the LaserWriters. I've seen more LaserWritten papers and resumés lately! Personally, I think this is a very good thing (except when I need to use a LaserWriter), and of course you all understand that I am completely without bias on this subject.

Grrrrrr... For the second time in two weeks, my Mac ate one of my disks. Unfortunately, the latest was the disk on which I kept all of my old "Durham" columns, and--contrary to everything I tell everyone who asks, I did not have a backup. The moral: do as I say, not as I do. (Incidentally, there's nothing wrong with my drive, as far as I can tell. I ran a bunch of diagnostics on it, and it seems fine. Both disks were Verbatim Datalife diskettes; I hope it's not another problem batch of those things--remember the problems with them way back in 1984?)

Jonathan, again, and other topics. I hate to say "I told you so," but I told you so. The latest word from Apple is that the open-architecture Macintosh will be available in the "near future." Methinks this hath to do with the very strong sales of the Mac Plus. Speaking of the Mac Plus (which, I see by the latest issue of the Journal, has been dubbed "Mac+"), I think that this machine will finally give Apple the success it has so long sought in the business market. Although I don't think that there will ever be more Macs than IBM PC's on executive desks, I do believe that corporations will begin to see it as less of a risk to buy Apple machines. The Mac's graphics and user interface coupled with speed, power, and an attractive price (from a business point of view, anyhow) is a tempting package.

Apple // thoughts. I don't know exactly what's up with the // series. Rumors abound, most of them centering around the mysterious "//x" that Apple supposedly has under development.

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However, there is also talk about the "Apple interface" (formerly the "Mac interface") being extended to the //. (See Leon Raesly's April 1986 Journal article for commentary on this from an experienced // user.) Personally, I'd like to see the // stay a //, and not become a "poor man's Macintosh." People buy a // because it is a wonderful machine with an enormous software base and a reasonable price. If they *really* want a Macintosh, they'll buy one. 800K disk drives are fine (though why they're called "Unidisks" I'll never know--they aren't the same format as the Mac drives), more RAM is fine, and more speed is fine. But why force // owners--every last one of whom is perfectly happy with his machine--to use an unfamiliar (and to the //, alien) user interface? (Some of you may notice the change of heart I've experienced since my February column.) I don't know about anyone else out there, but every so often I have an intense desire to simply type "RUN LEMONADE" instead of double-clicking my mouse button on an icon--and I haven't used an Apple // in three years. Apple should make the "Apple interface" an option, not a new release of the //'s operating system.

Macintosh pet peeve department. There are still some things that annoy me about the Mac. For one, I hate the way LaserWriter fonts appear on the screen, especially in small sizes. (I just noticed this because I've just begun using LaserWriters. This is the first column I've sent to Bernie in the Times font, rather than in basic Geneva.) Also, I wish Apple would quit releasing software with bugs in it, especially system software. (System version 3.1 has a couple of serious bugs in it, by most reports. Be careful, and get 3.2 as soon as its out--Real Soon Now.) MacWrite 4.5 *still* bothers me no end (I have an Anorexic Mac--128K RAM and a single disk drive--and the damnable program beeps at me and tells me that I'm almost out of memory every time I change styles). I resent the fact, too, that I can't have someone else upgrade my machine without jeapordizing my future upgrades. There: I feel much better now.

Speaking of word processing... Why hasn't anyone brought out a power word processor for the Mac? (I mean besides Microsoft's Word, a program I despise.) Oh, to have a program like SSI's "Word Perfect" version 4.1 running on my Mac!!! ("Word Perfect" earned *InfoWorld* 's highest software rating ever: 9.1 and 5 disks. If you own an IBM PC and do lots of word processing, this is the program for you.) I suppose Apple unintentionally killed the word processing market by providing a perfectly adequate word processor with the machine itself. Hopefully, as the Mac Plus begins to be used more heavily in business, more powerful word processors will appear. Maybe Satellite Software International will even write a version of "Word Perfect" for the Mac Plus. Hint hint.

Freak error department. Just when I thought I'd seen every error imaginable (I've experimented a lot with my machine), a new one surfaces (just minutes ago, too). I quit MacWrite to return to the Finder, and lo! A brand new folder! ("Unnamed #1" was the name.) When the Desktop file (which is invisible under the normal Finder) is damaged, the operating system can sometimes reconstruct folders; they all appear with "Unnamed #n" as their titles. I suspected the Desktop immediately, but nothing else had been disturbed. Weird.

Minor annoyance department. Why do new document files always appear to the LEFT of applications under Finder 4.1 instead of to the RIGHT, as they did in Finder 1.1g? Is there a way to fix this?

Major annoyance department. In my opinion, one of the worst crimes of the decade was IBM's decision to redesign its Selectric keyboard for use on its PC line. The result, the now-industry standard, is a nightmare for touch typists: the miniscule Return key is too far to the right, the even smaller left Shift key is hidden among several similar-sized keys and is displaced from its usual spot next to the Z, and so on. If it didn't have the best "feel" of any keyboard on the market--bar none--I'm sure the market for replacement keyboards would be ten times what it is now. Well, perhaps in response to complaints like this, IBM has finally decided to replace the keyboard that accompanies its PCs. The bad news? This new keyboard is *even worse* ! Once again, IBM has moved all of the important keys around--Control is now at the lower left and right, the function keys are now spread out across the top, etc. John C. Dvorak, a contributing editor of *InfoWorld*, writes, "I was told that IBM used a lot of consultants to come up with this crazy-quilt keyboard. Who are these guys? Can they type?" (Dvorak's commentary on this subject is absolutely hilarious; you'll find it in the April 14 issue of *InfoWorld*.) You've really got to try this keyboard to appreciate just how hard it is to get used to. I suspect that Keytronic, a company that makes replacement keyboards for the PCs, is just rubbing its hands together over this one.

Commodore's troubles. I saw an ad this week in one of the trade magazines for a $500 rebate on the Amiga. Evidently, Commodore's flagship is on the rocks (no pun intended, of course). I still haven't seen any software for it, and no one I know actually owns one. It's unfortunate, too, because the Amiga is really a good machine. Amiga's biggest problem now, however, is the Mac Plus--with which it cannot compete in any area except graphics. (And as the business world has proven by continuing to buy IBM PC's, graphics ain't everything.)

Rumors (or rather, the lack thereof). I want to apologize for the lack of any substantial rumors lately. As I've written previously, my modem (besides *InfoWorld* , my only link to the outside computer world while I'm here at Duke) went into a coma around Christmas time. You wouldn't believe how isolated and uninformed I've been feeling lately!

my summer address:

12400 Kembridge Drive
Bowie, Maryland 20715

MAC Q & A
by Jonathan E. Hardis

Q: I own software that is copy protected. I'd like to copy this software from 400K disks to 800K disks in order to take advantage of the extra space and faster speed. When will Copy II Mac be updated to do this?

A: My understanding is that Central Point software is not planning to have such a feature in Copy II Mac, at least in the near term. It may be that there is no general way to transfer such software to 800K disks, in that copy "protected" software may make too many assumptions about the kind of disk drive it is running on. There are, however, companies which sell utility programs that claim to take the copy "protection" off of other programs. You can then transfer them to whatever you want: hard disks, 800K floppy disks, but hopefully, only to your own disks. These products include MacBackup, Hard Disk Utility, and MacZap, as well as Copy II Mac itself.

I feel that any programmer who really wanted to could write his or her program to introduce problems should someone vigorously attempt (and succeed) in copying it. When you use such patched (modified) applications, you walk on thin ice. You have to believe that the original application was not put out by a vindictive company, and that the company that supplies the utility program will continue to provide complete patches in a timely manner for all updates to your software. What an awful and needless situation to be put in!

Software that isn't copy "protected" is worth extra money, and I avoid buying "protected" software as much as I possibly can. Copy "protection" isn't protection for anybody, either the producer or the consumer. And "copy protection" joins my list of phrases replaced by more meaningful ones. From now on, I'll refer to such software as copy blocked.

Q: Arggh! I upgraded my Macintosh, but I kept my old 400K external disk drive. When I wanted to run the system update routine against an old 400K disk, I found that there wasn't enough room on the disk. So, since the program was not copy blocked, I transferred the contents of the old 400K disk to a new 800K disk first. After HUNDREDS of disk swaps, the installer finally finished. Is there a better way?

A: It's easy to forget that with one 800K disk drive and one 400K disk drive, in many ways you have a single drive Mac again. In addition to the ideas mentioned last month, consider using a RAM disk to hold the new system files and the installer program. Alternatively, consider putting the new system files and the installer program on a 400K disk first. Even if you have to remove fonts from the new System file to make it fit on the smaller disk, you can always put them back in later (on the updated 800K disk) using the Font/DA Mover. (For software that isn't copy blocked, I still prefer to Finder drag the old application program to a copy of a "build disk", as described last month.)

Q: In last month's column, you said that Apple will make Mac system software free and accessible ("Publicly Available"), but not Public Domain. What's the distinction?

A: "Public Domain" means that no one owns it, that no one can (through property rights) restrict your use of it, and that no one can claim a royalty (or sue for damages) if you make money off of it. The alphabet is in the public domain, as are old folk songs. Some publications from the Government are also in the public domain. After all, we all paid for their production with our taxes. But anything written by a private party that bears a valid copyright notice is not in the public domain. You may be allowed free use of it, but the author retains ownership rights. The vast majority of programs on "Public Domain" disks are not in the public domain.

Q: Help! Cutting and Pasting doesn't work within MacPaint when using the new ROMs.

A: David Dunham, author of the shareware desk accessory Disk Info, says that if you develop such trouble you can use his product to remedy the problem. Select the disk with the System and Finder on it, and then click "Make Default". (If memory serves, Disk Info was revised this year for the Mac+ and the new ROMs. I don't believe that it's on a SigMac disk, yet.)

Q: What is the best way to travel with a Mac on an airplane?

A: I've never tried it, but the consensus seems to be that it's no problem. Don't check a computer as baggage unless it is very well packed for shipping. (That is, use at least as much protection as used in the original box that it came in. And never, never, rely on only a carrying case.) It will fit under the seat on many airplanes. But if it doesn't fit, let the cabin crew stow it in a safe closet. A Mac is too heavy for the overhead compartment. (Ed. Note: I took the office Mac to and from SF in the overhead compartment.) Keep the magnetic media, including the hard disk, away from the X-Ray machine. The danger isn't so much in the X-Rays, but in the magnetic fields produced by the conveyor belt motors. Be prepared to demonstrate to security that it really is a computer. That is, carry along a startup disk, the power cord, mouse, and so on. And try not to do anything that will cause the bomb icon to appear. And of course, take along a backup copy of everything.

Q: How do I get an upgrade for Battery Pak? I've seen conflicting stories, in particular about

contd.

whether the update is free.

A: Evan Gross (Batteries Included) says that you have two choices. Either (1) take your original disk back to your dealer, who is authorized to update it for free if he has the latest version on hand, or (2) send your original disk back to Batteries Included with $10. With the second method (only), you will get the latest documentation, too.

Q: When I got my Mac+, the new System file had LaserWriter fonts in it that worked fine. But when I used Font/DA mover to add the larger sizes to the file, NONE of them worked anymore. Why?

A: The Mac+, and other Macs with the new ROMs, require the new Font/DA Mover to handle the new Font Manager resources. While you should have received this version with your new purchase, and while you can still get it for free from your dealer, it is also on SIGMac disk 37. You also have to be careful to use only fonts provided with the Mac+, the ROM upgrade, or the LaserWriter+. Only these have the new Font Manager resources included.

Q: Help! When I add up all the file sizes on my hard disk, they no longer sum to the capacity of the hard disk. I've "lost" disk space. How do I get it back?

A: Backup all your files to floppy disks. Twice. A backup program such as the one from PCPC (the MacBottom people) helps. Then, reinitialize (erase and reformat) your hard disk and rebuild it from your backup copy. You should not only find the space back again, but you'll find that things will run faster, too. This is because you'll have compacted all of the files together and reduced "fragmentation", a situation where parts of a single file or related files are scattered over widely distant sections of the disk. You may find it worthwhile to do this periodically just for the performance improvement.

Q: Why doesn't the Finder on the Mac+ show how much space is taken up by a folder, as it did on the old Macs?

A: The only way to compute that would be to open up all folders within the folders within the folder and to add up all the space used by the files contained within them. Someone must have decided that it wasn't worth the time or trouble to do it since there could be thousands of files involved. But that is the normal behavior of the Finder.

Q: I'm using the new Mac+ system software, and I set which port my ImageWriter printer is connected to using the Chooser desk accessory. Even though I keep specifying that the printer is attached to the printer port, when I reboot, it gets set back to the modem port. What do I do?

A: You've found a bug in Chooser, and Chuck Weger provides a work-around. The problem is that Chooser only uses the copy of long term, battery powered memory that is held in the main memory. It doesn't update the battery powered memory as it should. But if you run either the Alarm Clock DA or the Control Panel DA after you run Chooser, and if you change anything (and change it back, of course), these DAs will then correctly rewrite the battery powered memory with all of your instructions.

Q: What's the best way to treat an 800K disk drive?

A: There were several remarks made at the meeting on the care and feeding of 800K disk drives. One person said that you should gently insert a disk using only one finger. One person remarked that the paper clip should only be used as a last resort, since it is much harder to eject an 800K disk than a 400K disk. (Of course, the paper clip is a last resort on a 400K disk drive, also.) People reported some trouble with disks getting stuck, and of having to have the whole drive replaced. Some of these cases were because the disk labels had came unstuck and jammed the mechanism.

There was a divergence of opinion on the need for cleaning the heads. Some people insisted it was a good idea, others reported it was not a good idea. (I note that Apple recommends in the instruction manual how you should clean the mouse ball and how you should use the yellow plastic disk insert, but nowhere says you should clean the disk heads.)

Q: In a previous column you said that Haba had a cure if their 800K disk drive became too loud. They told me tough luck.

A: That answer was reported by a satisfied Haba owner on CompuServe. Your best bet might be to go straight to the top and to ask Larry Moss, Product Marketing Manager, at (818) 901-8828.

Q: What are owner's reactions to third-party 800K disk drives.

A: At the meeting, representative owners of the Haba product, the Mirror Magnum, and the MicroTech 525 all said nice things about their disk drives. No major complaints were raised. However, the sample size was so small, I don't claim this to be an authoritative answer.

Q: In the May Journal, in Steve Brecher's Disk Speed article, what are the units of the numbers that are used?

A: The numbers are counts of "clock ticks", of the Mac's clock which ticks 60 times a second. So for example, the first number, 8756, means 145.9 seconds. The larger the number, the longer the operation took.

There are at least two reasons why these numbers should be viewed with caution. Under some circumstances, such as when a floppy disk is in use, the clock is "turned off" for short periods. So floppy disk timings will seem deceptively fast. Some hard disk speeds may seem fast for the same reason. Also, while Disk Bench makes a point of reading and writing multiple disk sectors with one I/O directive, in real life it is rare that your application programs will actually do this. It gives MicahDrive an apparent advantage since it is the only

contd. on pg 69

MacNovice Column

by Ralph J. Begleiter

Using a Data Base (Part 1)

If you're among those of us who began using a computer regularly only when you got your Macintosh, you probably are just beginning to appreciate the power that a computer has to organize information and present it in various ways to make your work easier. Using a "Data Base" program is one of the ways the Macintosh can keep files for you. Using a database offers some advantages over a "paper" filing system:

+ Information may be "dropped" into the file in any order at any time

+ Information may be retrieved from the file in any order at any time

+ Information may be compiled automatically, especially if it's numerical information

+ Files may be summarized and "reported" in various formats, to suit your needs at any time

Using a database program has some disadvantages compared to a "paper" file:

- Information can't be as quickly "stored" as simply dropping a piece of paper into a file folder

- Information must be "massaged" a bit before it is useful in a database program

- The form of your "file" must often be given careful thought before you begin storing information in it (unlike a desk drawer into which you simply throw pieces of paper).

Actually, the Macintosh "Finder" itself... the small program which allows you to see the desktop... is a kind of "database" program. It stores information about each file you create, and allows you to retrieve that information easily. For instance, the Finder stores the name of your document. It stores the kind of document it is (so it can find the correct computer program to work with it when you want to open it). It stores the size of your documents. And it stores information about how you like to arrange your documents in folders, disks and windows.

When you see that small dialogue box with its list of documents, you are looking at a small "database" program which helps you find and open the documents you want to use.

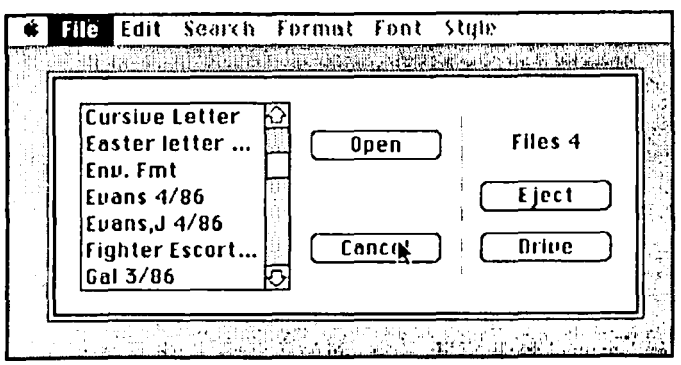

Figure 1: "Document List" Data Base

The key to using a database program properly is to understand from the beginning what kinds of attributes about your information you are likely to be interested in "sorting" later on. That allows you to "tag" or "flag" your information with those attributes when you enter new data, so it may be retrieved later.

Probably the most difficult thing for MacNovices to grasp about using a database is that to earn the benefits of manipulation of information, you must think in advance of how you plan to manipulate your data later on. It's important to embed those "flags" in your file so the computer can later do the searching and rearranging for you.

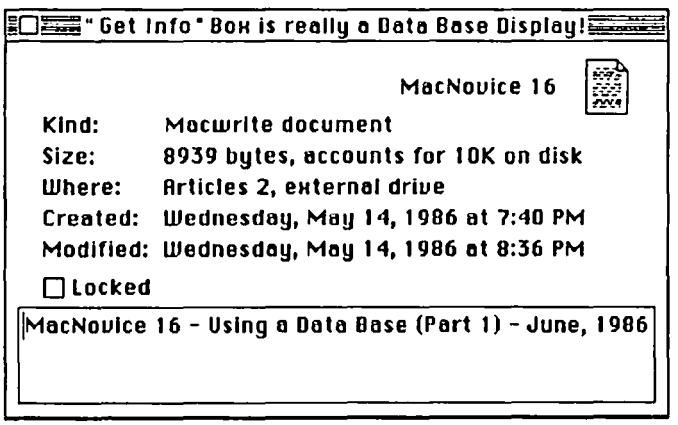

Figure 2: "Finder" document data base file

For instance, in the case of the "Finder", the Macintosh automatically records the date of creation, the kind of document and the size and name of the document as you create it. Later, when you choose different options from the "View" menu, the "Finder" database can sort through your documents quickly to arrange them the way you chose to do so.

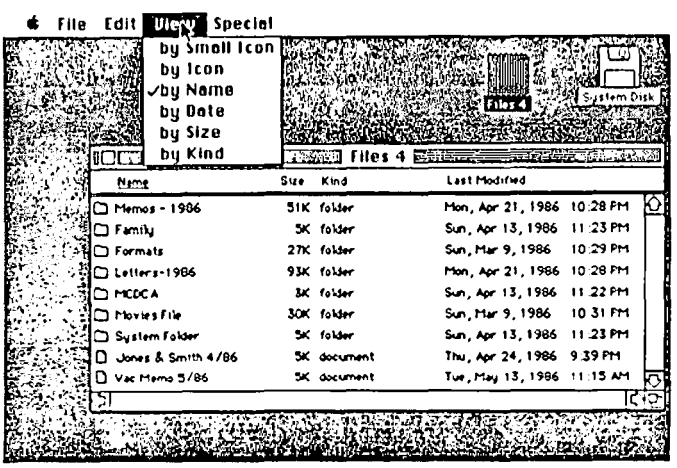

Fig 3: "View" is a 'report' from the Finder Data Base

contd.

Let's look at a concrete example to help you visualize the importance of thinking ahead when creating a database file. Suppose, as we suggested in a previous MacNovice column, you'd like to maintain your Income Tax records annually in a database file.

When it's time to prepare your taxes, you'll need your deductions listed by type ("cash" or "kind" contributions). You'll want them listed by date, and by amount (so you may report them properly on your tax form). You may want them listed by some sub-categories, too. For example, by "taxpayer" (so you can separate them for separate-spouse tax returns). And you might like to have a listing of check numbers, so you can find each deduction in your checkbook at audit time. Perhaps you have other "flags" you'd like to attach to your tax data.

The point is: give some thought to the way you'll want to use your data, before you begin listing it. (With some Macintosh database programs, it's possible to change your mind about your data entries after you've begun entering raw information. In fact, as Mac databases have improved, they've become more flexible. It is now possible to add information... and even to add new "flags" to already-entered information... after creating the data file. I have used databases without this allowance for changing-your-mind, but I wouldn't go back to them after having "discovered" better programs with more flexibility!) Even if your database program allows you to change your mind later, it's a good idea to plan ahead from the beginning.

Once you've given some thought to the "scope" of the information you'll be collecting in your tax file, you'll need to set up a blank "form" on which to collect each piece of information. The form should include space for all the "flags" you have in mind. In the case of the tax records file, you'll need spaces for at least the following attributes:

- Name of deduction
- Check number
- Type of deduction
- Amount of deduction
- Date of expense
- Taxpayer (yourself or spouse)

And, perhaps, you'll want to leave space for some miscellaneous "comments" about each deduction. This space might be used to give a more detailed description (helpful at audit time) or an explanation of how this deduction came about. So add a space for

- Comments

You may think of others later, in which case, with many programs, you may add them later. If you're an avid Macintosher, you might enjoy or appreciate including some graphics in your data file. For instance, you might create "icons" to associate with each type of deduction. Or, you might include pictures of people or items in your file for later identification (A personnel record file in a large firm might make use of graphics in a database to include a "digitized" - computerized - photograph of each employee, for example.) If you want to include graphics, be sure to leave a space for them in your original "form".

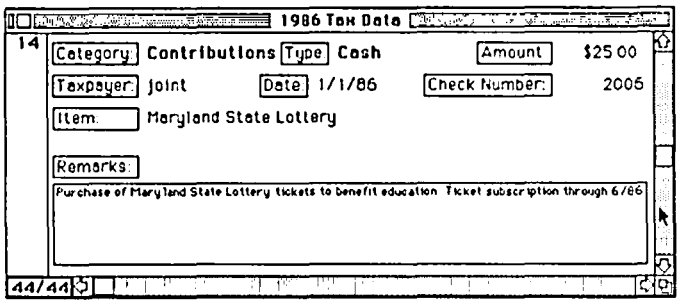

Fig 4: Income Tax Data Base "Form"

Before beginning your database file, it's a good idea to give some thought to how you'd like to physically see the "reports" of your data at the end of the tax year. Would you like to see each deduction listed on a separate page? Or should it be a tabular list on a single page? Various attributes of each deduction could be listed horizontally across the page... or you might prefer to see them listed under each deduction's headline, in a vertical format.

In my next columm, I'll help guide you through some of the jargon which has become attached to the concepts we've discussed here. "Flags" and "forms" and "reports" all have their own terminology in computerese, and it's hard to use a database without understanding some of these terms. Then, we'll see how to construct a specific database, how to make changes, and how to use the results of your work.

Meantime, start thinking about which project you'd like to engage in the database effort: taxes, lists of movies, friends' addresses... whatever. And give some thought to the elements of that collection of information and how you'd like to use it in the future. Then be prepared to dig into that database program and put it to use yourself!

FREDERICK APPLE CORE

A SLICE OF THE WASHINGTON APPLE PI

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SIG MAC Chairman	- Lynn R. Trusal
SYSOP	- Scott Galbraith

The Frederick Apple Core meets the second Thursday of each month in the large conference room of the U.S. Army Medical Research Institute of Infectious Diseases, Ft. Detrick, Frederick, MD 21701-5011 at 7:30 PM.

Upcoming Programs

June 12 - Program to be announced

HOTLINE MEMBERS

Lynn R. Trusal	- (301) 845-2651
Scott Galbraith	- (301) 865-3035
Kurt Holter	- (301) 663-4199
Bruce Taylor	- (301) 371-6181

The above members of the "Frederick Apple Core" (FAC) have agreed to field questions on Apple computer hardware and software for FAC members. Please no calls after 10:00 PM.

The SIG MAC of the Frederick Apple Core meets on the fourth Tuesday of each month in the same location and at the same time. Mac owners in the local area are welcome. Call Lynn R. Trusal at (301) 845-2651 for details.

SIG MAC Upcoming Programs

May 27 - Macintosh Plus

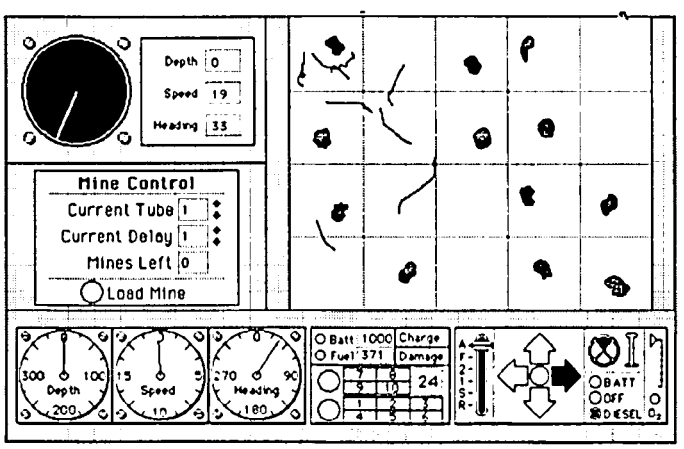
June 24 - Desk Accessory Prog.(Sidekick, etc.)

GATO - "THE GAME FOR THE REST OF US"

by Lynn R. Trusal (Frederick Apple Core)

Someone might ask why I have chosen the title "Gato–the Game for the Rest of Us." Not only is it Apple's catchy phrase for the Macintosh, but also a game for those of us who do not normally spend our computer hours playing games. To paraphrase the title of Howard Cosell's new book, "I never played the game", I had never been a player of computer games. I always had too many serious and practical uses for my Apple //e or Macintosh to partake in computer games. Being an avid reader of a number of computer magazines, I saw references and reviews of GATO. I decided to order it from a wholesale mail order firm ($26) and give it a try.

GATO is produced by Spectrum Holobyte, Inc., of Boulder, CO (303-443-0191) and comes with 1 disk and a 42-page manual. There are GATO versions for the Macintosh, IBM, and Apple //, but only the superior graphics of the Mac do it justice. The manual is fairly well laid out but there are a number of minor questions left unanswered, such as the maximun depth the sub can be to fire a torpedo successfully. GATO is designed as a real-time simulation of a World War II attack submarine. It provides a three-dimensional object perspective with depth of field and realistic offensive and evasive ship movement. The enemy may evade, flee, or attack the sub if you are detected. Each mission begins with a coded radio message assigning your objective and the mission is relayed in actual morse code. In fact, you can type in your own messages and they are sent in actual morse code when the "send" button is selected. The navigational area is divided into 20 quadrants, some of which contain islands. You can view the entire chart area with all 20 quadrants or view only the quadrant where the submarine is located. Figure 1 illustrates the chart map and the view of all ships in each quadrant.



In this figure the submarine, on it's way to rescue a downed flier, is approaching 5 enemy ships in the vicinity of the island in the top-left quadrant. Each ship leaves a wake

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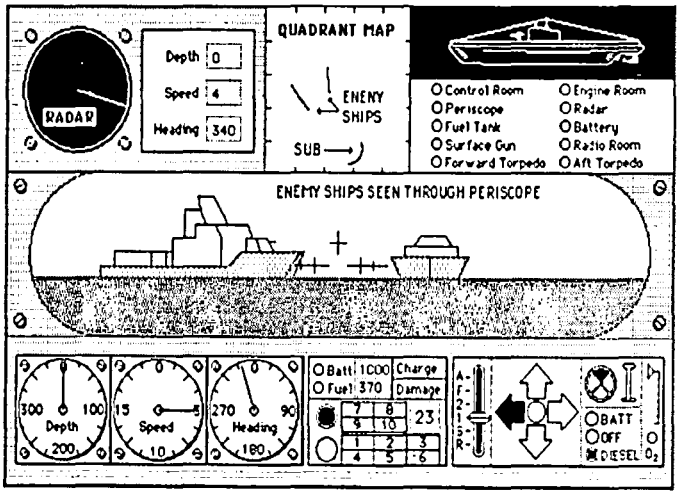
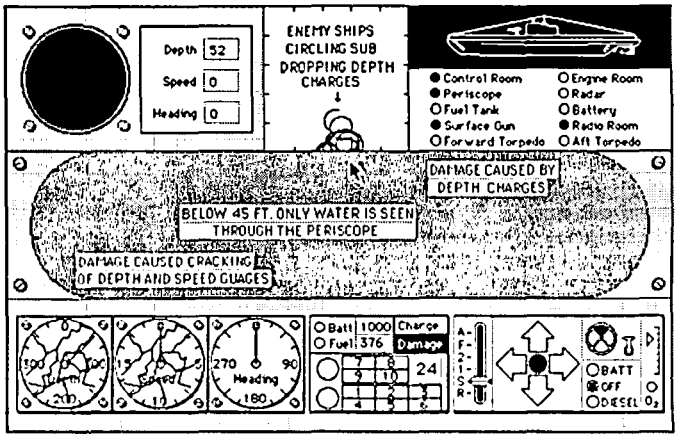
that remains visible until you switch to the "quadrant" map. The "mine" control is also visible in this figure. You can even control the time before the mines are activated and they blink on and off to show their location on the "quadrant" map. There are assigned missions, but you may create your own missions to include attack, mining, or rescue missions. The enemy ships may consist of destroyers, freighters, PT boats, or tankers. The player may set such parameters as the aggressiveness of the enemy, the speed of turns and diving, the strength of the hull, rate of oxygen usage, and battery charge. Your primary objective is to complete efficiently as many missions as possible with the supplies you carry on each patrol. The level of technical difficulty may be set by the user and the record of success is recorded in the "Captain's log". A current game may be stopped and saved for completion at a later date.

What impressed me the most about GATO was, not only the many variables that could be individually controlled, but the realism of an actual submarine in carrying out its mission. The screen displays include a depth gauge, and a speed and heading indicator (see Figure 2).



In this figure, there are two enemy ships visible in the periscope and their location can be seen in the "quadrant map" relative to the submarine. There are "fore" and "aft" torpedo tubes which have doors that must be opened before a torpedo or mine can be fired. The ratio of torpedoes to mines is controlled by the players at the start of the mission and both may be loaded into the torpedo tubes (not at the same time!). In addition, there are 6 speed controls from reverse to "all ahead flank", and rudder controls, for right or left rudder or for diving and surfacing. The periscope is also controlled by the player and may be up or down. Even though the periscope is up, once the sub dives beyond 45 feet, the surface view disappears (Figure 3).

Below 20 feet, the submarine cannot operate on diesel power and must rely on battery power. The battery usage is not the only limiting factor with regard to ship supplies. Once the sub dives, oxygen consumption goes up and you can literally sufficate your crew if you do not surface for air. I know this from experience! Should all else fail and you're spotted and attacked by enemy escort ships, you can dive to a safe depth and wait out the depth charges which explode at different depths. You can watch the enemy ships circling (quadrant or chart map) on the surface and hear their depth charges exploding. Should you not be deep enough, damage



will occur and is noted on the damage control part of the instrument panel (see Figure 3, top-right, where "black dots" indicate damage has occurred to several compartments of the submarine). By clicking one of the ship's compartments, the executive officer will give you the damage report and also eventually tell you when it is safe to surface. If there is damage to the control room, engine room, or radio, you may not be able to dive, surface, or radio for help. Your one hope is to to send an SOS (assuming no radio damage) to your submarine tender, which cruises in friendly waters. It will come to your location to effect repairs. The sub tender will also replenish fuel, torpedos and recharge the battery. Of course it may also be sunk if enemy ships are still in the vicinity.

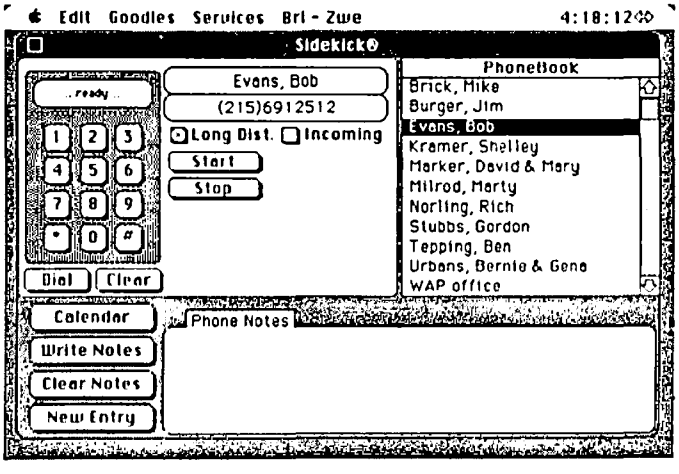
GATO shows much attention to detail and realism. When the aft or fore torpedo doors are opened to fire, speed decreases several knots because of increased drag. When the submarine passes under a ship on the surface, you must take into account the height of the periscope to be successful. Now that is attention to detail! Sound is also very realistic, with different sounds for torpedo firing, dive warning, depth charges, radar, and exploding enemy ships. The radar sounds one or more contacts when the sub gets a certain distance to any other ships and before you can visually sight ships on the horizon. The realism is further hightened by the view of enemy ships through the periscope and their actual position in reference to islands and to themselves. When a torpedo strikes an enemy ship, it explodes with realistic sound effects (not digitized sound) and an entry is made in the "Captains log." Should you dive too deep and crush the sub's hull, be sunk by depth charges, or crash into an island, the effect is the same. Cracks appears in the gauges (Figure 3, lower-left) and up the entire screen as the water level rises. Of course, this signifies the end of the game.

All in all, I found GATO to be quite realistic and challenging. It seems to have built-in intelligence and only with time and many missions did I begin to sense the best means of completing the mission without being one of the casualities in the "Captain's log." It is a good thing that I am in the U.S. Army and not the U.S. Navy! The company also provided a free upgrade (version 1.3) reportedly to fix some problems that users with 128K Mac's had experienced. These problems included, ejection of the original disk at odd times, system errors, and problems with loading and saving properly. GATO is definitely worth $26 (MacConnection), and when serious work gets you down, it is definitely the game "for the rest of us", non-game players.

Softviews
David Morganstein

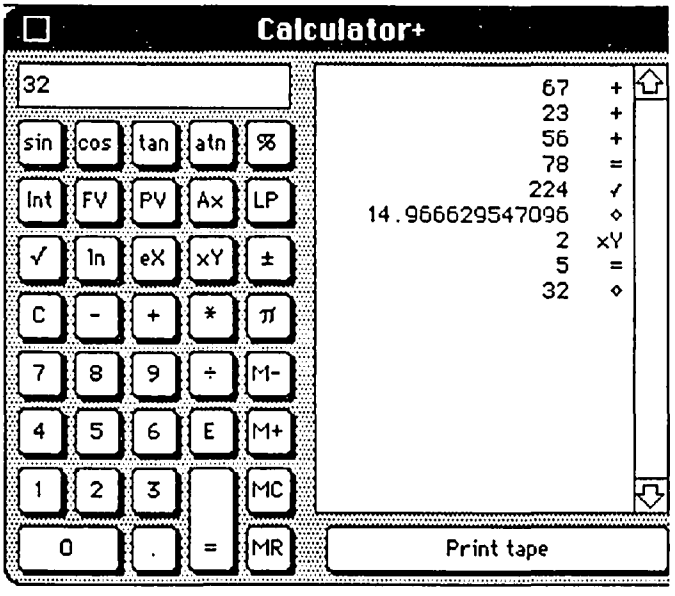
Sidekick (Version 1.10B) There are many products which were developed with the recognition that you may be spending a fair amount of your time setting in front of your Macintosh. If so, you will need to do many things while you are running a word processing, spreadsheet or graphics program. For example, you may need to make a phone call, take a note, use a calculator, schedule a meeting or telecommunicate. Apple provided a couple of these features in the form of a simple notepad and calculator. Borland offers a program which not only extends these two aids beyond Apple's but adds several other useful functions. These functions are delivered both as a single, stand-alone application and as a series of desk accessories.

The Main Features. The package is built around a phone dialer. The Sidekick application, the main screen of which is shown below, allows you to assemble a phone book of numbers which can be automatically dialed so long as you have either their "phone link" hardware or a compatible modem hooked to your Mac. The phone number system contains many subtleties. For one, you can indicate that certain numbers require the use of a long distance service. By entering the service phone number and account code into the Sidekick data base, it will be called up whenever you request a long distance number.



The on-screen display can keep track of the running time and cost of each call. In addition, Sidekick can maintain a log of all calls, containing their times and cost and any consulting fees you may be charging. (Talk about using your Mac to earn money!) Beside dialing from the main screen, you can: enter or edit names in your phonebook, bring up a monthly calendar to record notes, check an area code and reorder the names display by company or some category which you have defined.

The phone dialer is just one of the many functions performed by Sidekick. It also includes a multi-function, algebraic-style calculator capable of recording the results of your computations on a "paper" tape for later printing. It has a single memory and offers several business and scientific functions including present value, future value, sin, cos, logarithms and exponention. The following screen image of the calculator indicates its functions.



Quiksheets is Sidekick's name for a mini-data base. While the Quiksheets that come with Sidekick include templates for Credit Cards, Expenses, Scheduled Activities, and Alarms, you are not limited to these formats. Quikeditor, also included with Sidekick, allows you to create your own forms for regular data entry and display. The Alarms QuikSheet may be the most useful. It extends Apple's alarm clock by providing a list of up to 15 events when the alarm is to sound. A brief message can be displayed when the alarm goes off. However, I'm not too sure of the usefulness of the other QuikSheets. Each sheet has a limited capacity of lines. Even though a sheet can be "torn off" allowing for more space, I suspect the more traditional approach using a data base package is more practical.

Two other desk accessories you might recognize are Notepad+ and MacTerm. If you have seen CE software's excellent shareware programs, MockWrite and MockTerminal, you will be familiar with their SideKick versions. Notepad+ is a scrollable text editor using all of the familiar Mac editing features. It can read, write and print text files. Both MacWrite and Word allow you to save a document as text only, that is, without all the fancy formatting and font types. Notepad+ is several steps ahead of the original Apple notepad in allowing access to files and in the amount of text you can handle.

MacTerm is a terminal desk accessory which provides for automatic dialing to your favorite bulletin board, assuming

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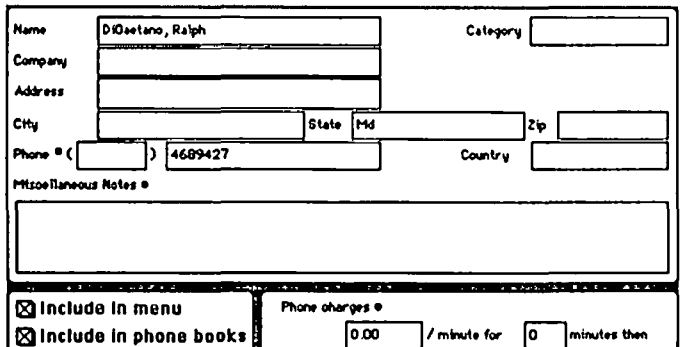
you have a modem attached to your Mac. A separate "configure" program is provided to select the output port, and telecommunications protocol. From the MacTerm menu you can choose a baud rate (300, 1200 or 2400) or route the received info to a text file for later editing or printing. A continuous dialing option allows you to walk away while MacTerm keeps on trying to get through.

Those who do a lot of text file printing will find SideKick's ReadiPrinter print spooler helpful. You can send a file to your printer and then be free to do something else while the printer does its "thing". Unfortunately, I rarely work with text files and find this DA to be less valuable.

If you use many of SideKick's functions, you will find that you have entered a lot of information in the PhoneBook, Calendar and QuikSheets. A friendly computer will allow you to get all of this useful data back again and SideKick's Print Manager application is the Mac's assistant for doing just this. You can use the Print Manager to format your PhoneBook names into index cards, mailing labels or disk files for merging with letters written with Microsoft Word. You can print a Week-at-a-Peek and a Year-at-a-Glance from the CalendarBook file.

Using the Features. To build the phone numbers data base, a single, record-entry window is used, shown in the following screen shot. In addition to basic information, the record contains a field to enter the charges to the area code involved and one to enter consulting fees. Fields are provided to indicate if a number should be dialed through the long distance service and whether to include the number in a phone book. All the usual Mac editing features are available as you enter or change data in the fields provided by Borland.



I found SideKick easy to install and to use. The dialer desk accessory does not have all of the features of the application. For example, you can not enter phone or consulting rates from the desk accessory. While the terminal DA can be used as a stand-alone program, a separate configure program is required to change telecommunication protocols or to select the port for output. Oddly, the DA installer program that Borland provides does not work under Apple's new HFS software. This is documented in an accompanying update sheet. If you are using Finder 5.0 (or later), you can rely on Apple's Font/DA Mover program for installation.

It seems to me that an 800K drive or a Hard Disk is required for anyone going the Desk Accessories route. Even with more than 400K of disk space, there are eight different accessories and installing them all will fill many of the available accessory slots. On the other hand, the SideKick application would seem most practical only when used under Apple's Switcher. I doubt that you would want to leave and return to an application just to make a phone call. Using SideKick with Switcher means at least a 512K machine and probably a MacPlus.

Documentation. I found the 160+ page manual to be well organized and readable. The manual has both a Table of Contents and an Index. It begins with an overview of the many pieces of SideKick. After the "Fast Track" introduction, it covers the application and the desk accessories in adequate detail. It ends with a discussion of the print manager application. A six page addendum is included which describes the latest enhancements. One oddity is its Appendices. Appendix A covers SideKick's use on a Hard Disk, which seems like a good idea to include. Then, however, it has an Appendix B on converting files from other products and on the QuikEditor for hand tailoring your QuikSheets, almost as if it was an afterthought. This topic ought to be in the chapter on QuikSheets, but if that is their worst sin, they have done a credible job!

Miscellaneous. SideKick allows you to read phone listings from several other dialing programs, Habadex and MacPhone, if you want to abandom them in favor of the Borland product. The application is Switcher compatible and works fine on the Apple HD 20 using the new hierarchical file operating system. To their credit, Borland has not copy-protected the program.

The phonelink hardware is easy to install in just a few seconds. It attaches to the Mac audio output connector and plugs in between your phone and the wall socket or between your hand set and your phone. It allows you to hear the dialing over a small speaker built into the phone link (unfortunately, your Mac's speaker is re-routed to this tiny speaker, as well). If you have a modem, you don't need phonelink, as SideKick can be configured to dial through the modem port.

Summary. SideKick is a funny kind of product. The main application has a number of useful features in addition to its basic phone dialing function. Recognizing that most people need to use the phone at random times and probably will not be willing to leave an application to go to SideKick to make a call, Borland created eight desk accessories, any of which can be called up while doing something else. Unfortunately, desk accessory space is often at a premium and you will, no doubt, have to be selective in which of the eight you wish to install! Of course, if you have a MacPlus and use Switcher, you can keep the SideKick application in one of its partitions for instant access. (If you have a 128K Mac, I would encourage you to upgrade...1 meg of memory and 800K drives change the whole feel of the machine.) If you already own MockWrite and MockTerminal, you will gain little from Borland's version of these two DA's. If you are looking for an automatic phone dialer, I think you will find SideKick to be well designed. Borland International, 4585 Scotts Valley Dr., Scotts Valley, Ca. 95066. Phone (408) 438-8400. Price $84.95 for SideKick, $19.95 for PhoneLink. Together: $99.95.

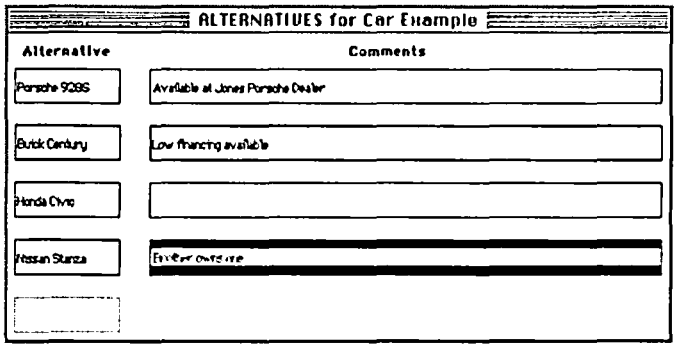
Decision Map. How do you make decisions? Perhaps

contd.

you react quickly on the spur of the moment, using your right brain. More analytical souls make lists of pros and cons and see which is longer. If you want the advice of your Macintosh, you can use DM (Ed. Note: But when are you available?) to give it certain critical items, after which it can add up the scores and arrive at a suggested approach.

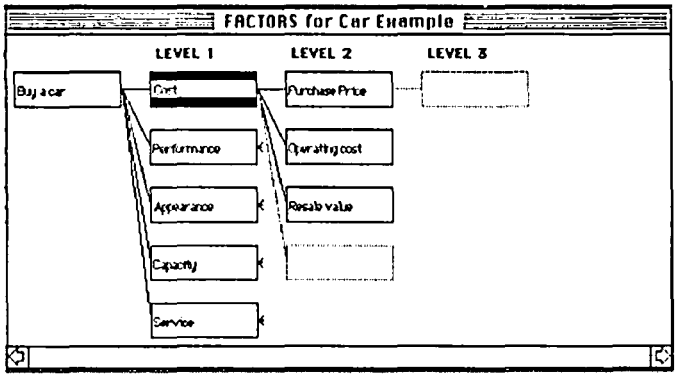
To use DM to help you choose among several paths, you begin by entering the alternatives. These might be different houses you are considering, different jobs you want to choose between or places to go for your vacation. Next, you establish a set of criteria, factors upon which you will make your decision. If you are trying to choose between several houses, these would include: the price, the community, the style, the condition, the size, etc. Within some factors you might need sub-factors. The community factor might have sub-factors of access to transportation or to shopping, quality of school system, etc. For each factor, you would provide a weight indicating how important the factor is in the decision. If the price is the over-riding consideration, it will get the biggest weight. Lastly, you must score each of your alternatives on each factor. DM will take your scores and the weights and produce an index for each alternative. The highest one will garner the most points. Lets go through each step.

Entering the Alternatives. Using the screen shown below, you enter up to five alternatives. A maximum of five seems a bit restrictive to me. The example included here is a sample decision contained on the DM disk. I have added a car, the Nissan, to the three already provided. There is room for a comment, but I never found how the comment was used, beyond displaying it on this screen.

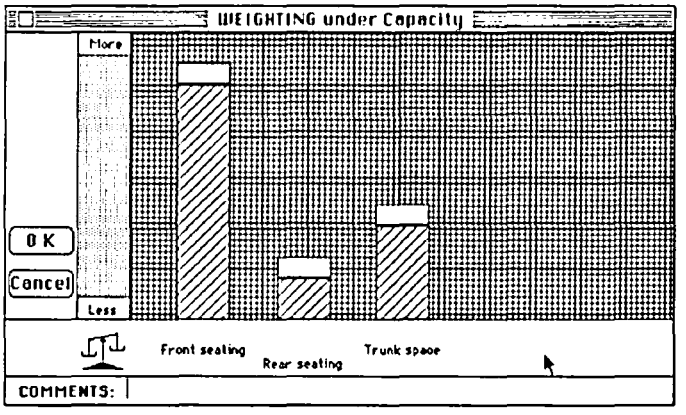


Entering the Factors and Their Weights. The factors used to select a car are entered in the following screen. Each of the up to five primary factors can have up to five sub-factors, called detail factors. Each detail factor can have the same number of sub-sub-factors and so on for four levels. While the window into which you enter the Factor name (e.g. Cost, Puchase Price, etc.) appears to allow for up to 30 characters; in fact, a maximum of 20 is permitted and all of these may not show on the screen! My impression is that enough space is allowed but the inconsistency is misleading. Only five factors at any level can be entered. The picture you see below is drawn for you. There is no dragging around of the boxes or rearranging the order.

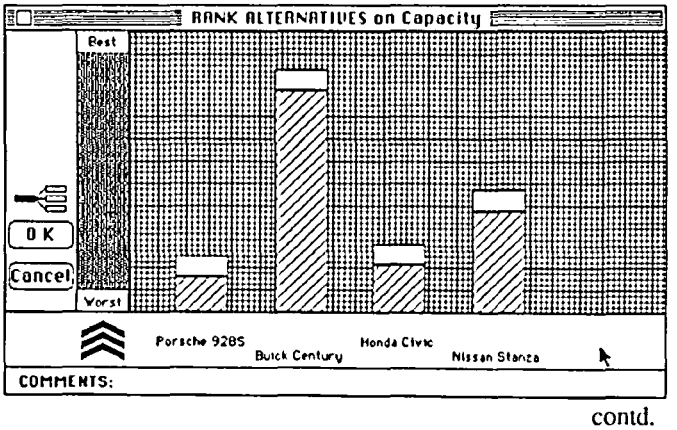
After the factors have been entered, they must be given weights to arrive at a "best" choice. The system for doing this, although rough, is well-implemented. The same procedure is used to rank the alternatives on the factors. The Level 1 factor Capacity has three detail factors: Front Seating,



Rear Seating and Trunk Space. A bar chart describing relative weight (see below) is constructed by raising the bar for each item to an appropriate height. In the chart below, Front Seating is considered the most important while Rear Seating is considered the least important. Unfortunately, there is no scale to indicate the value associated with each factor. You have to guess that Front Seating is about twice as important as Trunk Space. Most of the display is static and only for show. The More and Less just remind you which direction indicates increased weight. The scales are cute but they do nothing.

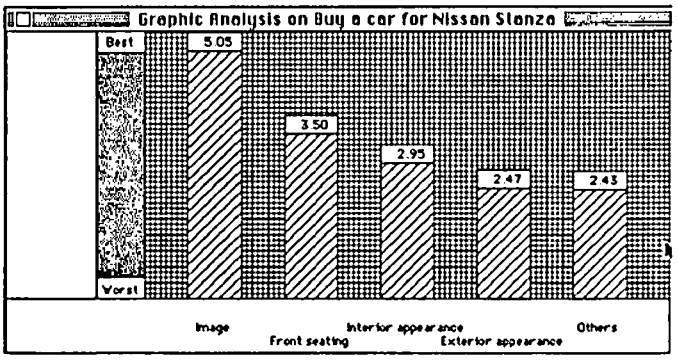


Ranking the Alternatives. The last step is to rank each alternative on the various factors. The procedure is similar to the one above and the screen used is basically the same. Here again, you merely assign a relative value to each alternative, in this case car, indicating which is best, next best and so on. The actual height of the bar is used in the selecting the "best" not just the rank. As before, the screen does not display the value assigned to the position you have chosen for each bar. You can see that the Buick wins on capacity while the Porsche and Honda are almost tied for worst case.

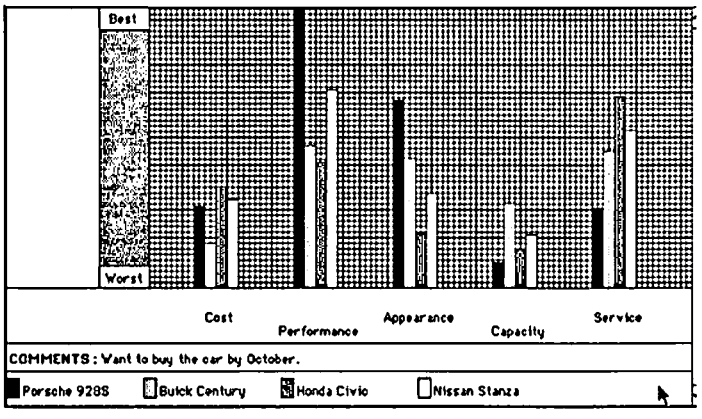


contd.

Getting the Results. My initial thought was that DM would give an answer to only one question, "Which one is best?" Actually it gives many intermediate results along the way. By selecting either a factor or an alternative, DM will be directed to summarize which is best at that level. For example, the first chart below gives a score for the four most influential factors for the Nissan alternative. As an alternative to the graph, you can obtain the results in what are called numeric or in text forms. The numeric form is similar to the graph in content except that actual values are given rather than a bar chart without a scale. The text output is much more detailed including the ranking of each choice at each detail level. Any of the results can by copied and pasted elsewhere. While the graph is copied with a single Copy command, to copy the numeric or text reports, you must select the text area you want by clicking and dragging.



To compare various alternatives, a chart showing who won which contest is provided. Below, you can see which alternatives scored well on which factors.



Conclusion. I would imagine that the majority of us do not use a "scientific" system for making most decisions. The makers of DM would like us to think that their program provides a more objective technique. In some ways I would concur. The advantage of a program like DM is that it makes you think about and order the factors you will use to make the decision. The assignment of weights has a great deal of subjectivity; however, you can use DM to see how variations in the weighting and the priorities will affect the decision. For me, using DM will require a lot more discipline than I usually employ to make a decision... (Ed. Note: Yeah, and have you heard the one about choosing a secretary?)

The program is easy to use and the 60 page manual is well written and well illustrated, containing both a table of contents and an index. Overall there is not a lot of the usual Mac motions to go through since almost all of the screens are static. Your actions are limited to a few text entries and setting the heights of the bars. DM does support Desk Accessories and Switcher but there appears to be no way to enter data from any source other than the keyboard. While many comment fields are provided, I'm not sure why. They do not seem very useful, given what the program does; although, they do appear on the text form of the analysis reports. The limitations of five alternatives, four detail levels and five factors per level seem a bit constraining. Softstyle, 7192 Kalanianaole Hwy., Suite 205, Honolulu, Hawaii. 96825. Phone (808) 396-6368. Price: $145.00

DISABLING LASERWRITER FROM PRINTING TEST SHEET AT POWERUP

by John Monaco

Switch LaserWriter off and remove Appletalk cables and hook up either (Apple cable # 590-0197-A [DB-9 to DB-9] for the 512 Mac) or (Apple cable #590-0332-B [DB-9 to mini 8] for the Mac Plus, to the modem port on the Mac and the other end to the DB-9 on the LaserWriter. Change the setting on the LaserWriter to 9600 or 1200 baud and turn power on, then start up a terminal program at the correct baud rate and 8 bits 2 stop and no parity.

Type:

"executive" Return

The LaserWriter will respond with:

PostScript(tm) Version 23.0

Copyright (c) 1984 Adobe Systems Incorporated.

PS>

At the prompt Type:

"serverdict begin 0 exitserver statusdict begin false setdostartpage" Return

The LaserWriter will respond with:

%%[exitserver: permanent state may be changed]%%

This acknowledgement says that you have changed this parameter permanently.

P.S. type only what is in the quote marks don't type the quote marks. In the statement " server begin 0 " the 0 is a zero not the letter O.

If you want to change it back perform the same procedure but substistute "true" for "false".

If you have any questions send E-mail to John Monaco on Compuserve "73317,3677" or on GEnie "J Monaco".

USING THIRTY FONTS IN MACDRAW

by Jonathan E. Hardis

MacDraw is a wonderful program, that has some obvious shortcomings. One of the most serious is that the Font menu only allows for eleven fonts, maximum. Your System File may contain many more fonts than that, but MacDraw is unable to use them. To date, Apple alone has supplied 22 fonts. The most recent batch contains the fonts for use with the LaserWriter Plus. So for serious work with a LaserWriter, using MacDraw can be a frustrating experience.

This article is a "how-to" guide to allow you to patch MacDraw, version 1.9, in a manner which will allow you to have up to 30 fonts in the Font menu. If you don't yet have version 1.9, take your original master disk to your Apple dealer (after you make a backup copy). It is a free upgrade, and he will copy the new master onto your old disk. You can tell which version of MacDraw you are using by looking at the "About MacDraw..." dialog.

You will also need System file version 3.1 (or later), together with the other contents of the newer System Folder, such as Finder 5.2 (or later). Without these, the modified version of MacDraw won't work properly. These files can be found at your dealer on his LaserWriter Plus demonstration disk, his MacPascal update disk, and sooner or later (after System 3.2 is ready) on an official System Update Disk. The new System file contains new software for handling menus. Unlike the old software, which limited menus to 20 items, the new software allows menus of virtually unlimited length. If you drag to the end of a menu it will scroll, showing you additional entries.

(If the length is unlimited, then why limit MacDraw to 30 fonts? MacDraw was written with the font names and font sizes together in a single menu. Between them is a "disabled" (dimmed) menu item. For technical reasons, that item can not be allowed to occur past menu position 31. Moving the font sizes to be under another menu title is beyond the scope of this report.)

To "patch" a program is to change it. And we will change it the only way we can, by altering some of the bytes in the file MacDraw on the disk. While a programmer once wrote MacDraw in Pascal, an advanced programming language, we neither have a copy of the Pascal program nor the compiler to use with it. We must rely on a disk editing utility program such as FEdit, found on SigMac disk 21, to alter the results of a previous compilation.

What follows is a step-by-step guide for using FEdit to modify MacDraw. The general methods used by all Macintosh programs apply. However, FEdit is a powerful tool that gives you complete freedom to wipe out the contents of a disk. If you make a mistake you often can't undo it, except by restoring a disk from its backup copy. The altered MacDraw will fail to work properly if any of the changes are omitted or made incorrectly.

Start by putting a copy of FEdit and MacDraw 1.9 on a 400K (single sided) scratch disk. Rename MacDraw to something else, such as NewDraw, so that you'll be able to tell it apart from any other copy of MacDraw you might have around. Double click on the FEdit icon to open it. Read the startup screen. If you use FEdit, you owe John Mitchell $30. Open the file NewDraw. Then choose "Display Sector in Hex" from the menus.

What you are looking at at this point are the contents of a single "sector" of the disk. Information on the disk is stored in units of sectors. Each sector contains 512 bytes, and each disk file (such as applications and documents) is a related collection of sectors. In particular, you are looking at the first sector of the MacDraw application file. On the left half of the screen, each byte of the sector is represented as two "hexadecimal" digits. The hexadecimal number system uses 16 different symbols, starting with 0 to 9 and continuing upward using A to F. We need not worry about the details here. The scroll bar on the right of the window flips between a view of the beginning and of the end of the sector. Note that 512 (bytes) expressed as a hexadecimal number is 200, and that the bytes of the sector are labeled as 0 to 1FF (instead of 1 to 200). Each row has 16 bytes in it, and there are 32 rows, labeled 00 to 1F. At the bottom of the window, the scroll bar is used to display the different sectors making up the file. MacDraw takes up 196 sectors, numbered 0 to C3.

If you've taken time out to explore FEdit, make sure that the bottom scroll bar is all the way to left, and that the first hexadecimal character of the first sectors is selected. Now, we can proceed to make the first patch from the list below. We will edit the hexadecimal representation of disk sectors just as we would edit text using a word processor. Using the Hex Search menu selection (Command-F), search for the string (series) of hexadecimal characters 00000C60. Type these characters into the dialog box, and push Search. (FEdit doesn't care if you add blanks in the string to improve its readability.) FEdit will read the disk until it finds these characters, and then it will stop with the first of these characters highlighted.

I have tried to give enough hex characters in each case to specify the portion of the file uniquely. As a check, try to find the next occurrence of 00000C60. You can do this by Repeating the Search (Command-R). If you find that it isn't unique, STOP NOW. Changing the wrong occurrence would introduce unpredictable errors. For each change, I indicate where in my copy of MacDraw that string was found. If you find them in different places, be wary about proceeding to make the changes. In this case, the highlighted character should be at the start of byte E9 (in the 15th row, the 19th hex character) of sector 07.

We only have to change the character 6 following the highlighted 0 to a B. So click on that 6 to select it. Choose Hex Modify from the Edit menu (Command-H) and then type B to make the change. To make the change permanent, choose Write Sector from the Edit menu (Command-W) and confirm the dialog with an OK. (Enter and Return cancel the dialog.) Congratulations, you've just made your first change to MacDraw.

Well, what have we really done? This particular change

contd.

tells the part of the Mac's ROM that starts MacDraw running to allocate extra room in "global area" of memory. We need this extra room to hold information on the additional fonts we will use. The other patches stem from similar considerations.

Before you continue to make the rest of the patches, I recommend that you do it in two passes. In the first pass, search for the strings, note where they are, and check to see if my list of occurrences matches yours. In the second pass, make all the changes to a sector at the same time. When you've made all the changes, Quit FEdit. Then double click on the NewDraw icon to try out your work. If anything seems wrong, no matter how small, stop and repeat the process.

There are some warnings which I have to stress. First of all, while these changes represent my best understanding of MacDraw, there is a good probability that I haven't found all the changes that have to be made. Treat the modified MacDraw as experimental, and don't trust any valuable work to it. I would be interested in hearing of any bad experiences you might have, so I may publish updates to this report later. Secondly, in order to keep track of more fonts, I had to take the liberty of appropriating unused space in the MacDraw document. Therefore, documents created with the modified MacDraw will almost certainly be incompatible with the next version of MacDraw that Apple releases. And certainly, unmodified MacDraw 1.9 won't work with such documents either.

Just a reminder: MacDraw is a copyrighted program. While you may make changes to it for your own, personal use, you may not distribute copies.

Have fun!

Patches to MacDraw:

Search for:	Change to:	Occurrences (Sector:Byte)
0000 0C60	0000 0CB0	07:E9
0014 6F02 7C14	0027 6F02 7C27	58:7D
000B FACE	001E FACE	58:A5, 58:AD
41ED FAD6	41ED F350	4D:1F7, 4F:DF, 58:10B, 5A:4B, 82:1F3, 83:15D, 97:12B, 98:7D, B5:137
00E9 00	0089 00	81:191
FFC6 206E 00	FF8A 206E 00	81:1E9
FFEA 7005	FF8A 700E	81:1F1
3290 2F2E	2290 2F2E	81:1FB
FFEA 4EBA FF	FF8A 4EBA FF	82:2B
41EC 4DE8	41EC FDC2	82:1C5, 82:1DF, 83:0B
0C46 000B	BC6D FACE	83:15
0B 6FB8	1E 6FB8	83:20
4E56 FDEA	4E56 FDC4	83:2D
486E FDEA	486E FDC4	83:55
0C47 000B 6FE2	BE6D FACE 6FE2	83:173
0C47 0015	0C47 0028	B4:2B
4E56 FFBE	4E56 FF96	B4:C3
70E1	7095	B4:27, B4:95, B5:89
FFE1 4E	FF95 4E	B4:1C9, B5:D5
0001 00E1	0001 0095	B5:A3, B5:101, B5:1D9
10E1	1095	B5:1AB

The Musical Apple

.....by Raymond Hobbs

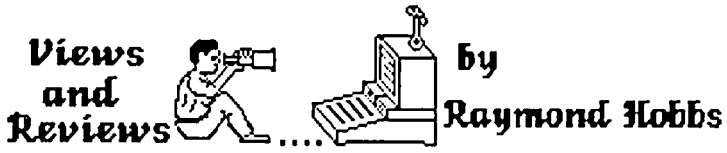
I was one of the first on the block. When Mountain Computer came out with the Music System a half dozen years ago, I couldn't wait. None of the sounds that the synthesizer made were perfect, but some of them came pretty close. There was a good bass fiddle, a respectible clarinet and, of course, the ubiquitous Hammond B-3. Still, the thing was reasonably difficult to work with, and maximum file size was quite restricted unless you chained several files together, so eventually the thing spent a good deal of time on the shelf.

A couple of summers ago, I took more than a passing look at the Alpha Syntauri and Passport synthesizers for the Apple. Both featured keyboard input of musical data and both offered expanded data buffers plus a much easier method of modification of instrument parms. It doesn't take too awfully much to convince me. I bought the Alpha, and within a week I was playing in massive amounts of music and getting out massive amounts of sound. The Alpha's limitations were that there was no easy way to enter written music text into the system, a hardware interface that depended on the will of the gods to keep itself going, and no decent brass or double reed sounds. The result was a vast improvement over what I had before, but still not quite enough to produce a real quality piece of music for a number of instruments.

Concertware on the Mac improved the musical text entry problem about 372 percent, and made access to instrument parameters about twice as easy as it was with the other systems, but the quality of instrument sounds dropped significantly, since Concertware had to rely on the Mac's rather primitive synthesizer. Still, using Concertware on the Mac as an adjunct to the Alpha system improved the ease of producing the music, if not the instrument sounds themselves.

MIDI! In 1984, MIDI interfaces began to appear for personal computers, and all of a sudden the door was open to use other synthesizers with a microcomputer. MIDI (Musical Instrument Digital Interface) is nothing more than a specification for electronic connections and data structures for musical information. Synthesizers which conform to this specification may be hooked up willy-nilly to any old computer which happens to sport a MIDI interface (and software which knows what MIDI information is). For those who do telecommunications, MIDI is something like the RS-232 interface and the XMODEM protocol, wrapped up in one specification. In any event, by late 1985, MIDI interfaces were available for the Apple, Macintosh, Commodore and IBM PC computers. Now anybody can hook into just about any synthesizer at all. That means that the Yamahas, Korgs, Rolands, Casios, Sequentials, Moogs and what-have-yous can

contd. on pg 61



In this month's column I would like to look at two database management systems for the Macintosh (sorry, Apple folks...). For those of you who are fairly new to computing, a database management system (DBMS) is a program that is designed to store volumes of information in such a way that it may be easily retrieved, sorted and selected for reporting purposes. Programs such as the public domain FILE-CABINET are simple DBMS programs—so simple, in fact, that we usually refer to them as "List Handlers" rather than true database handlers. The two packages reviewed here are not extremely powerful DBMS systems—they lack many of the features found in such packages as dBASE II or III or NOMAD or FOCUS—but I believe that they represent the way that DBMS programs are going to be used in the future on home computers. These two reviews were done by Patricia Kirby and Shirley Weaver, and I have presented them here with little or no editing. As you read these reviews please note how the author of the program has tailored general database management functions to accomplish specific purposes. In the case of the first program, **The Housekeeper**, this purpose is to accomplish a certain task (home inventory), while in the case of the second package, **Filevision**, the purpose is to allow the user to manage the data in a completely different (and potentially more useful) way.

The Housekeeper (Aegis Development, Inc., 2210 Wilshire Blvd., Suite 277, Santa Monica, CA 90403). List Price $59.95. Reviewed by **Shirley Weaver.**

Everyone knows that they should have a household inventory of everything in their house in case of theft or fire, but how many of us have taken the time to list all of our possessions? The Housekeeper will help make this job a little easier.

The Housekeeper is a household inventory program that keeps track of all your property by categories identified by picture icons such as Cars, Jewelry, Art, Tools, Recordings, Electrical, Clothing, Furniture, Household and Miscellaneous. The items are linked to one of three insurance companies if appropriate. Each item can be described by up to eleven fields including cost, description, serial number and location. The eleven fields are shown at the top of the screen, while the list of items at the bottom can be scrolled until the desired item appears. This item can be selected by clicking on it and all the relevant info is then shown in the eleven field boxes. The Find and Sort functions can be used to facilitate finding an entry in a particular category.

If there is a loss, a police report (and insurance report) can be generated for the missing items just by checking the missing items. If your basement floods, you have a listing of everything that was down there without trying to remember how much you paid for it and how many years ago you purchased it. If you own more than one property, a separate file can be kept for each.

The Housekeeper program will not keep you from having to list your possessions and typing them into the file, but once it is done, and you have made a copy to store in a safe place (like a safe deposit box), reports with any desired criteria can be generated with just a few clicks of the mouse. This would be time and money well spent in the event of a disaster of any kind. I have seen this program listed in a mail order ad for as little as $32.00.

Filevision (Telos Software Products, 3420 Ocean Park Blvd., Santa Monica, CA 90405). Price: About $125. Reviewed by **Patricia Kirby.**

If "a picture is worth a thousand words," how much more when combined with computer data-base power? Joining *some* MacPaint and MacWrite features, Filevision is one software package that truly gives the Macintosh a chance to take advantage of the capabilities with which it was designed. Filevision is called a *"visual data base,"* but that term does not begin to convey the wealth of its amazingly broad range of possible uses—business, education/training, the social sciences, demography, sales, home computing, games, and personal information management, for instance.

For an itemized comparison of MacPaint vs. Filevision features, see *"Filevision: a Data Base in Pictures,"* by Jim Forbes (MacWorld, January, 1985). In this review, the example is given of how Filevision could help you visualize how your garden would look on a certain important date—June 15, the date of your daughter's large wedding reception. You could—despite lack of actual on-screen color—see on-screen the pattern distribution of white and red roses, yellow marigolds, etc., in your garden and plan accordingly. To get this portrayal, you would have earlier (1) fed information to Filevision about the type of flower and the growing dates of the seeds in each flower bed, and (2) drawn a basic background layout or template of your garden landscape.

Filevision's *Guided Tour* places the user in the position of managing a wine cellar—certainly a duty rather out of the ordinary for those of us who live in apartments, the cellars of which contain only laundry machines and garages. In the *Tour's* on-screen "cellar," six "bins" form the template or "background type." Within each bin, small bottles comprise one of the hierarchically lower types, in this case, "wine." It's something like "99 Bottles of Beer on the Wall," only none of the bottles happen to fall. They do happen to come into or go out of the bins, though, as each bottle is used or new ones arrive. Or their symbols might be changed as it is deemed helpful to visualize wine types more clearly—for instance, changing the wine bottle symbol form to differentiate "red" from "white," easily accomplished by editing the "drawing file" in a Fat Bits mode.

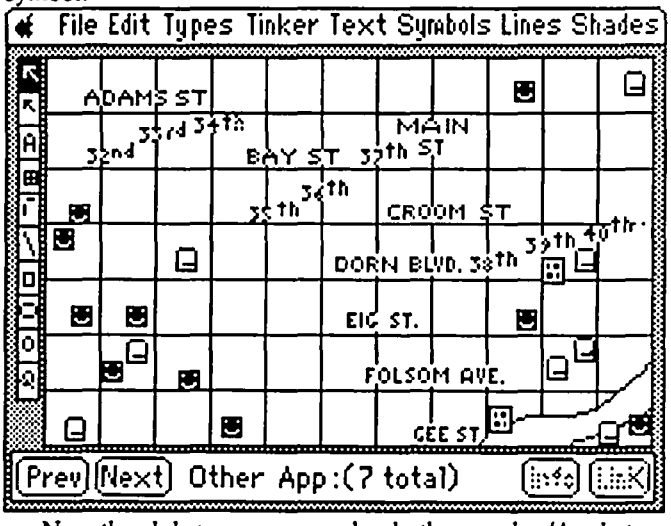
You can go from a symbol in the "drawing file" to its accompanying information by clicking on the symbol. What type wine is in the first bottle in Bin 1, for instance? You find out by clicking once on the first bottle—at the bottom of the screen, it tells you that it represents Chardonnay Matthews. To learn even more about this particular wine, you click twice on its symbol. Doing so takes you to the

contd.

information record, where you learn that the wine comes from the Yakima Valley; that it is a white wine bottled in 1981; that it has dry, medium body; that it costs $6.99—and that there are in fact 12 bottles of this wine in the wine cellar at this time.

Here's an example of how Filevision could be used a little closer to home, perhaps, than a formal garden or a wine cellar. Suppose the budding Appleblossom Users' Group wanted to categorize and portray its members by geographical location. The AUG could make a map of the areas from which members are drawn—then break the map down into smaller units (zip codes, wards, or neighborhoods)—and make a symbol to represent each member on the block of his residence. The club would then have an on-screen regional demographic "pin map" of members .

Now let's say the club wanted to differentiate members by type of computer owned. Which are Mac owners and which are " other Apple" owners? All members with Macs are assigned the cheerful little Mac face - and "other Apple owners" are assigned a little computer. One day it occurs to the club members that they need yet another symbol to represent a third category of members: those with both "another Apple" and a PC—so they decide a combination symbol.

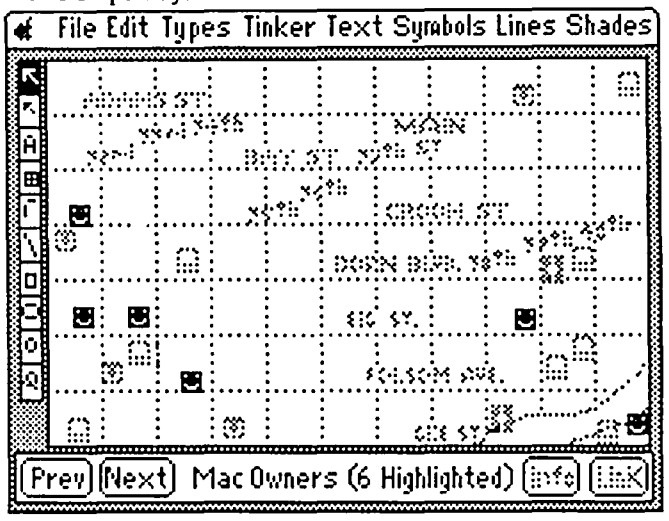


Now the club can see more clearly the member/Apple type distribution it has.

To find out some information about any particular Appleblossom member, the AUG could click once on any given symbol. Say that you want to know which members live near you at 33rd & Dorn. By clicking once on each symbol within a small cluster around that area, you could learn each name.

By clicking twice, you could find out more from individual member records, because the club has the following information in its Filevision member data base: (1)name of member; (2) address; (3) town ; (4) zip code; (5) sex; (6) whether or not the member has a modem; (7) level of computer expertise; and (8) specific kinds of software the member is familiar with. The club has coded "Y" or "N" for whether the member has a modem, and "1," 2", or "3" for whether he has beginner, intermediate, or advanced computer expertise.

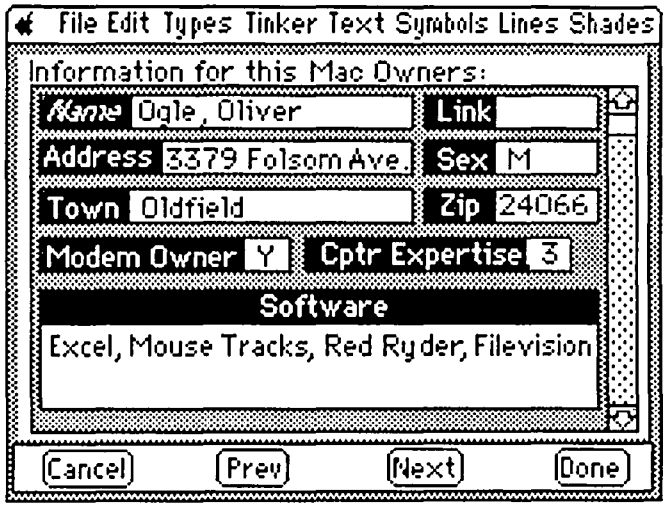
One day the club president, trying to plan club activities, wonders:*"How many Appleblossom members with Macintoshes own a modem and have at least intermediate level computer know-how?"* With a flick of his finger, he gets a Filevision portrayal of this information as shown below.



To create your Filevision "drawing file," you first create a *"background"* —the most basic of the types, the overall category into which all other categories fit. In the Appleblossom club's drawing file, for example, the *background* would be the map grid.

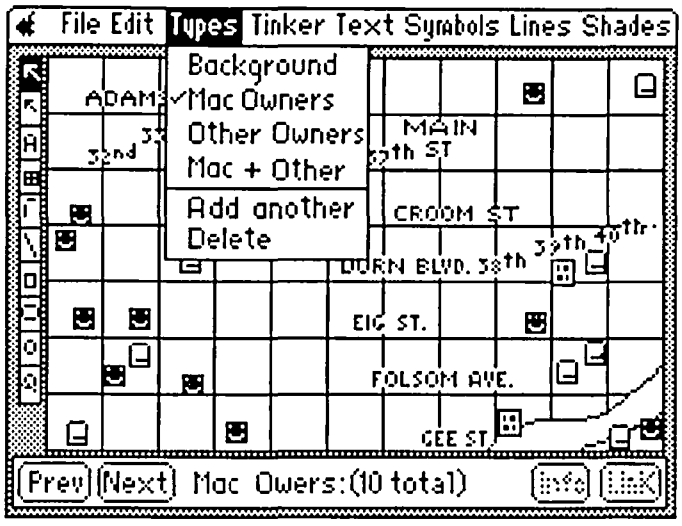
When a sub-category of information is deemed important enough, it should become a *type* such as type of computer the Apple club members own. *Types* can be given different symbols to differentiate them clearly against their background.

To create this type in this Appleblossom drawing file, you would go into the TYPES menu and choose the selection "ADD ANOTHER." The words "TYPE A" come up. This is a generic name you then rename, in this case, let's say, "Mac Owners." Next time you select "ADD ANOTHER," "TYPE B" comes up; let's say you would rename it "Other Apple Owners"; and the third type, "TYPE C," could become " Other Apple Owners + PC." At the top of each individual records is the type it belongs to. Here is a record filled in for Oliver Ogle, one of the club members who is a Mac owner.

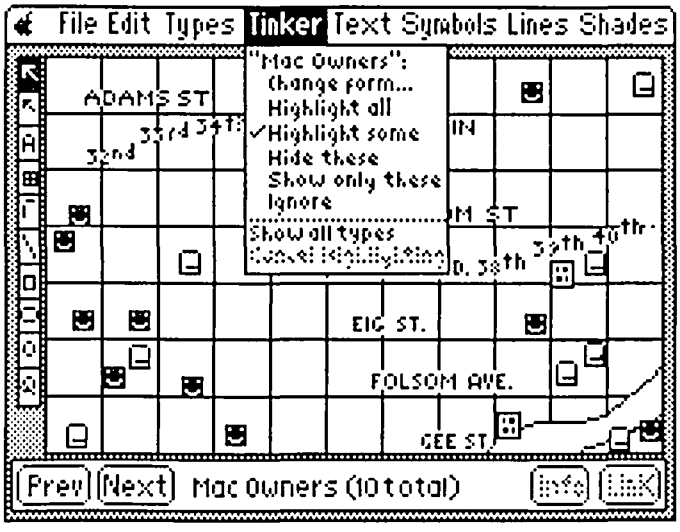


You recall the club president wished to find out which members were Macintosh and modem owners and had at least intermediate computer expertise. He would first go to the TYPES menu and select "MAC OWNERS,"

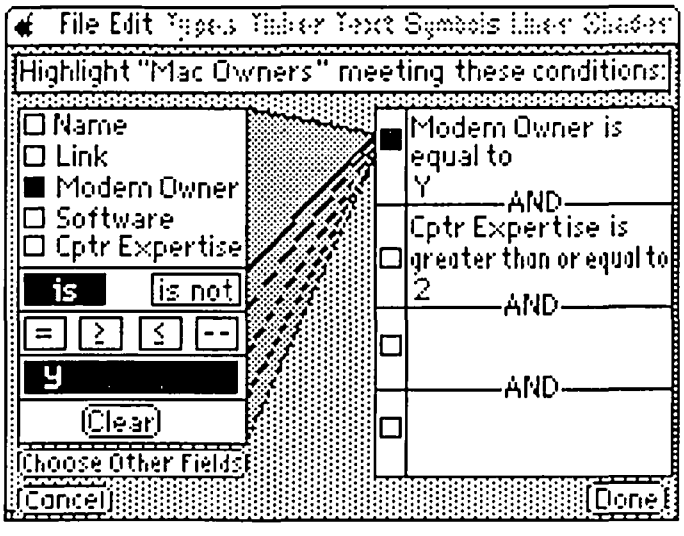
contd.



then go to the "TINKER" menu and select "HIGHLIGHT SOME."



The following screen comes up:



When "HIGHLIGHT SOME" came up, he could then ask information for up to four categories. He wants only two in this case. For the first category, "modem ownership," he would set the desired condition "IS EQUAL TO" at "Y" for "YES."

For the second category, he would want to set the condition "IS GREATER THAN 1"—where "1" referred to "beginner" computer know-how level (however that was measured). He then has a choice of the way to print the results. We have already seen the map format for this information. Suppose he wants a print-out record by record—or simply a list of the Mac modem owners with at least intermediate computer expertise. He decides to ask for a simple list with name and address, and the information requested will be printed.

Turning to the instructions that come with the Filevision software, I believe that the manual would have been much clearer for many learners if it had (1) explained the hierarchical nature of the software, with visuals of "Background" related below to "Type" and so forth, and (2) offered a situation such as the above with a series of problems or questions to explore. Some learners need an overall picture (literally or figuratively) of what they are about to learn and the reasons why they will be asked to take certain steps. Though relatively clear, Filevision's manual is written more for those who happily plod away step by step as told, starting with the WHAT and *maybe* end up with the WHY. Other learners may find, as I did, that the *Guided Tour* is enjoyable but that they never understand what they are doing and how each step is related to the other ones until they repeat the example about three times—because there are few "pegs" on which to "hang what you are learning."

Another problem I found was being told prior to doing anything on the *Guided Tour* , or for that matter on the disk, that there was "no room on the disk" to do what the manual asked me to do! Had a more knowledgeable user not been available and told me I should copy the program on a separate disk, I would have been stymied. The manual gave no warning about such possibilities, yet evidently they can occur in general computer usage.

But these difficulties are minor in comparison to Filevision's assets, such as the LINK feature, one of its best. You may have noticed that on Oliver Ogle's record earlier there was a box entitled "LINK." With this feature, you can link one type of data *hierarchically* to another. Educational and training possibilities that could use the LINK feature abound. For example, because parts of the body can be linked to the whole, a medical student perusing a Filevision lesson using a diagram of the human body could click on the eye, get a blow-up of the eye for more detail, then return to the diagram of the whole body once again.

To take another example, in a unit on military history, the learner could have a diagram of a ship, with the first screen saying, "Here are all the types of ships—warships, military ships, etc. What kind do you want to see?" The learner could click on "military ships." The lesson could then ask, "What kind of military ships—Phoenician galleys, Roman galleys, etc.?" The learner clicks on "Phoenician galley"—but then he would also be on a "warship," since the galley could be used for both purposes. He could go up and down the hierarchies to explore what's there.

Lessons in Filevision may be built by splitting the screen and writing text on the side to explain what's displayed. It is possible to build a programmed instructional lesson by telling

contd.

the learner to push various buttons to see such and such. However—and this is a drawback—he couldn't compare answers to see if they're right or not.

Some other major limitations of Filevision are the following.

Information between types of data cannot be compared. You can search for information only within types. For instance, in the Appleblossom Users' Group example above, I was unable to get a printout of ALL COMPUTER OWNERS WITH A MODEM together on the same screen. I would have to print separately the Mac owners with modems, the Other Apple Owners with modems, and the Other Apple + PC Owners with modems. I found a way around this to some extent by using the "HIDE" feature, in which I could ask for all extraneous data such as computer ownership in the two non-Macintosh categories and the background map to be hidden when printed. Then I could superimpose each owner category over the other. But this is awkward because of the need for very careful roll-back and realignment of the paper.

The Filevision data base is not powerful in traditional data base terms, but on the other hand there are some very intriguing uses not available in traditional data bases. Let's look at some of the applications Filevision has been used so far in its brief life.

One local Filevisioner in a nationwide insurance agency has depicted on a US map—a copy of a US map comes with the software package, by the way—to show which of his company's centers around the country would be opening when and where. To see when Virginia centers would open, he could click on the picture of Virginia on the map. Such a Filevision use would certainly give added perspective to managers in planning ahead for company needs, and other staff could see more clearly how their center fits into the total picture.

This same user, who is a counselor and trainer, attempted to use Filevision to show a client (1) the point he was at in a given process, and (2) the point desirable for him to be at—at which point he could trace a path between the two points to help the client visualize the route he would need to take within the framework of the training situation to arrive at the desired end point. While the user did not decide to go with Filevision for this purpose because he could not incorporate precise calculations of dates, costs, etc., still a visual depiction of the client's path could be quite helpful.

Telos sponsored a contest to foment brainstorming on Filevision uses last year, and received 200 entries. *(See the May 6, 1985, issue of InfoWorld, Sparking Users' Imaginations," by Neale McGoldrick for a more complete write-up about the winning entries.)* The company received a rich diversity of applications. The grand prize winner, a staff member of Arizona's Department of Transportation, linked airport layouts and airliner routes to Arizona's 60-airport transportation system. He says the Department plans to digitize aerial photos of the airports under its control and create data bases about those airports which are linked to the pictures. Through storage of text and related graphics files, and overlay of drawings on the images, plans for runway expansion, for instance, could be portrayed.

Second-prize winner was an Egyptologist who overlaid pictorial representations of the Egyptian Kingdom and its nobles with biographical and historical data. Third prize went to a Utah fur farm depicting the layout of their rabbit farm, the types of rabbits in each hutch, and all the pedigrees. (As you can imagine, the fur farm had to do frequent record updating for each hutch!)

Game designers will find Filevision has something for them, too, as did an archaeologist in Utah who devised a game, *Suicide Sub*, in which a sub commander, facing fuel depletion and enemy boats, races time in order to save the United States. Also in the gaming mode, the insurance-company employee previously mentioned has used Filevision to write a fantasy book, laying out *Dungeons and Dragons* - type "country."

There are many applications in social science which could join "straight information" to "game." In an anthropology unit, for instance, Mayan civilization and its progress could be depicted. On a map of Mexico, the learner could click on a city, then see a detailed city map—and then move from one period of history to another, tracing the way the city changed over time due to various sociocultural influences. In a gaming context, using the same map in different historical periods, the learner could be asked to make decisions from the natives' or the conquerors' viewpoints and view their consequences.

As McGoldrick noted, full-fledged genealogists, as well as just ordinary family members, could use Filevision to show their family tree. Developing this idea further, Filevision could also be used to portray the varying family relationships used in other cultures. Familiilial terminology can be hard to keep straight even with a basic chart, but the chart coupled with pictures can be much clearer, especially when joined with Filevision's ability to take the user to ever-deeper levels of specificity, or generality.

Because the very nature of Filevision is hierarchical, no doubt it could be used to teach the structure of logical thinking itself. It could be a quite enjoyable task for a learner of any age to be given a relevant problem and have to design Filevision portrayals thereof. A child, for instance, could be asked to depict his house and all the furniture in the various rooms, using *types* for similar furniture—then he could be asked to "show all toy containers" and put the individual toys into them, placing data about each toy on an individual record.

I myself used Filevision to rearrange a room with furniture hard to visualize in different places without laboriously moving them. But with Filevision, I could rearrange on-screen very well. Filevision goes far beyond MacPaint in tasks like this. I write this review happily ensconced in my new surroundings.

THE NEW LASERWRITER PLUS

by Earl W. Douglas

The call came on March 17, a Monday afternoon. "This is Frederick Computer calling," said the operator, "your LaserWriter Plus upgrade is ready. When would you like to pick it up?" Although my schedule was filled until Friday afternoon, Tuesday morning I was headed north on I-270 toward Frederick Computer Products. Strange how you can find the time for the things you want to do.

I went to the sales desk at Frederick Computer and told the girl (apologies to Regina) there was an order ready for me. It took about ten minutes for them to find my sales order and to prepare the bill ($712.95, if you are curious). I had the presence of mind to ask them to add a LaserWriter Toner cartridge to my order, but needless to say, they did not have any in stock, a typical LaserWriter owner's dilemma.

After charging the upgrade to Apple plastic, I headed to the warehouse to pick up the upgrade kit and then to the Service Department. With excitement in my eyes, I gave my receipt and kit to the 18-year old service technician (they all look 18). Then my excitement turned to terror as I heard the words **"We haven't done any LaserWriter Plus upgrades yet. Yours is our first one."** I was told that it would take an hour because they had to do some soldering on the board, so I left for lunch at a nearby Roy Rogers. As I ate my roast beef sandwich, visions of Avant Garde and Zapf Chancery filled my head, so I hurried through lunch and returned a half hour later to see two technicians (total age at this point was now 40, a little better) huddled over the new board soldering some joints. The younger one apparently had need for assistance from a more experienced hand.

Everything appeared to be going well until they tried to print the startup sheet. Well, it printed a blank sheet, then another, and another, and another. They tried replacing the ROM chips but that didn't help, so they tried it with the original set again. At one point they had three technicians pondering the deep mysteries of the memory board, and they even had their official LaserWriter Repair School graduate (he appeared to be closer to 25 or 26) working on it. At this point they were beginning to think the problem was with the I/O board. This would mean a 24 to 48 hour delay until they could get the replacement. After two hours and 45 minutes of waiting I had to leave for work. Upon reaching work some 25 minutes later the phone rang, and I was informed by my father that he had just received a call from Frederick Computer, saying they had fixed the problem, a bad solder connection, ten minutes after I had left, and that they would deliver it the next day. My LaserWriter Plus arrived the next day at noon in working condition, apparently surviving the ordeal better than I had. Ah—the thrill of being an Apple pioneer.

Now here is the information you have been waiting for. The LaserWriter Plus includes the following fonts: Times Roman, Helvetica, Narrow Helvetica, Courier, Palatino, ITC Avant Garde, Gothic Book, ITC Bookman Light, *ITC Zapf Chancery*, ✩✱✣ ✹❁❑❁ (ITC Zapf Dingbats), New Century Schoolbook, αvδ Σψμβολ (Symbols); a grand total of nine font families and 35 typefaces. The LaserWriterPlus requires the new Hierarchical File System (HFS), Finder Version 5.1 or later, and LaserWriter driver and Laser Prep Version 3.0 or later. If you print with the Macintosh File System (MFS) and the older LaserWriter driver and Laser Prep versions (1.1), it will print only Helvetica, Times, Courier and Symbols at 300 DPI; the new fonts will print bit mapped.

The first thing you will notice when powering up your LaserWriter Plus is the new Test Sheet, which now reads LaserWriter Plus at the top. The number under the Line chart is now 2.0, and the number of prints to date is two. (The first one was printed by the service technician.) To keep an accurate record, print and file one last Startup sheet prior to having the LaserWriter upgraded to the LaserWriter Plus. Keep this in mind if you ever consider purchasing a used LaserWriter Plus.

After powering up, you should change all the Startup disks to the latest versions of the System, Finder, LaserWriter driver and Laser Prep. You can use the Printer Installer supplied with the LaserWriter Plus but a quicker way is to trash the old versions, then copy the new ones from the Printer Installer Disk by dragging them to the startup disk. The new system is stripped down to the new Key Caps, Control Panel, and Chooser, which replaces the Choose Printer utility. (AppleTalk is controlled from the the Control Panel, and Key Caps now boasts font selection.) The Font D/A Mover can then be used to replace any desk accessories you want to retain. Try installing the accessories on only one Startup disk until you are sure they will not corrupt the system file. The fonts in the new system disk have a minimum set installed. Use the Font D/A mover to copy the new screen fonts to your system disk. If you want the full set of the screen fonts for the LaserWriter Plus you must have a 800K or hard disk drive.

The files on our system disk take up 542K, and include the full set of new screen fonts, System, Finder, LaserWriter driver, Laser Prep, and the Font D/A Mover, without adding any additional desk accessories. You can remove any unneeded screen fonts to make it fit on one 400K disk but there will not be room for an application on the same disk.

Be sure to update all system files that will be using the LaserWriter Plus so they will all be the same version. If you are using two Macintoshes on the Apple Talk network and they have different LaserWriter drivers (e.g., Version 1.1 and 3.0), when you attempt to print from the second Macintosh an alert will ask you to reinitialize the printer by turning it off and then on again.

We have used MacWrite, MacDraw, MacPaint, Microsoft Word, ReadySetGo, PageMaker, and Double Helix with HFS and the LaserWriter Plus with no apparent problems, but the tests have not been extensive. There have been problems using various combinations of the Macintosh, Macintosh Plus and the LaserWriter Plus, the worst being that PageMaker Version 1.1 will not work properly with the LaserWriter Plus.

contd.

PageMaker Customer Services informed me that to print from the LaserWriter Plus you must use the Namer program to change the device name from LaserWriter Plus to LaserWriter. Of course, you can not print any of the new LaserWriter Plus fonts with this arrangement, but it will still print Helvetica, Times, Courier and Symbols at 300 dots per inch. After changing the name and selecting the print command a dialog box comes up that says it will attempt to print to device called ImageWriter. You then select Continue or press the Enter key and then it will print to the LaserWriter.

PageMaker Version 1.2 has now been released. It is compatible with the LaserWriter Plus. Additional features are included, the most important being the ability to download PostScript fonts into the LaserWriter Plus RAM automatically for separate text blocks. With other applications the downloaded font is for the entire document but PageMaker will download the required fonts for a text block, process that block, clear the memory, and go on to the next text block. However, it will still be limited to two or three downloadable fonts at a time.

The other problem we had was with MacDraw and the new ROM on the Macintosh Plus. The new ROM places your fonts in alphabetical order in the pull down menus. MacDraw, which can not scroll, restricts you to 11 selectable fonts on the menu. The three system fonts Geneva, Monaco, and Chicago, which are useless on any LaserWriter, plus the 11 fonts in the LaserWriter Plus ROM makes for a total of 14 fonts. No problem you say; just use the Font D/A mover and press the option key when opening the font file and load it right into MacDraw itself. Wrong! The new ROM places the fonts in alphabetical order with Zapf Chancery and Zapf Dingbats as numbers 13 and 14, which thus cannot be selected from the menu. The Zapf Fonts are especially useful in MacDraw where display advertisements may frequently use Zapf Chancery and Zapf Dingbat.

With the 512K Mac and the old ROM you can still load fonts into your applications to push your system fonts Geneva, Chicago and Monaco off the menu. Removing Courier, Symbol, and ITC Schoolbook leaves 11 laser fonts to select from, including Zapf Chancery and Zapf Dingbats. Unfortunately, the only thing you can do with the Macintosh Plus system file is to have a special Startup disk for MacDraw and be aware of the limitations of the three system fonts and eight selectable Laser fonts. This is a potential problem with the users of MacDraw and laser printing services such as ours. The best solution we can see is for clients to include their system file with the Macdraw documents to be printed, which we will use to assure that the required fonts are available to the LaserWriter.

Now a word on fonts and their styles. With all the new downloadable PostScript fonts becoming available, the LaserWriter user should be aware of their limitations. The new LaserWriter driver (V3.0 or later) features automatic downloading of laser fonts (PostScript files) to the LaserWriter or LaserWriter Plus from just about any application. The PostScript files describing the laser fonts should either be in the system folder or be on the desktop when opening your applications. The screen fonts must also have been loaded into the system for your selection from the font menu. You select the screen font and lay out our document as you would with any other laser font. After you complete your document and select the print command the Driver looks for the PostScript file with the name identified by the screen font, downloads it to the RAM of the LaserWriter or LaserWriter Plus, and then processes your document as if the font were resident in the LaserWriter Plus ROM.

The limitations of automatic downloading become apparent by considering the LaserWriter and LaserWriter Plus RAM available for downloading, and what constitutes a font. Macintosh styles are not produced in the same way by all manufacturers. Adobe downloadable laser fonts, such as the ITC Souvenir family, have four faces: Plain, Bold, Italic, and Bold Italic. When you select Souvenir as the active font and select the Plain style, it will load that font face. If you select the Bold style, it will load the Bold face and so on for the other two. The styles Underline, Outline and Shadow are Macintosh generated and do not look for faces associated with them when selected. So if you used Souvenir with all of the above styles, all four faces will be downloaded into RAM. I tried it and could not print until I simplified the document by removing the Bold Italic style. As a further example of how Adobe handles fonts, try selecting Zapf Chancery and print it in Plain, Bold, Italic, and Bold Italic. Since the LaserWriter Plus will find only the Zapf Chancery Medium Italic when it looks for these faces, all will be printed the same. However, Underline, Outline, and Shadow of Zapf Chancery will print as you would expect.

Century Software handles their fonts in a different way. If you select their Manistee font, for instance, and select Plain, Bold, Italic or Bold Italic, these are **ALL** styles generated by the Macintosh and count as one downloaded font as opposed to Souvenir, which uses four faces. This way you could use two or three font families from Century in contrast to two or three faces in one family from Adobe.

LaserWriter Plus with automatic downloading is a big step in the right direction, but is still limited by its 1.5-Megabyte RAM. Careful management of fonts is essential to prevent overloading the memory.

A word about the author: Earl W. Douglas, along with his father Wm. J. Douglas, operate MacTography, a LaserWriter printing service in Rockville, Maryland.

Musical Apple contd. from pg 55

be driven directly from your micro!

What is happening in 1986? The biggest news is probably that of the digital sampling synthesizers, both with and without keyboards. With these synthesizers, you can get extremely close to a pure instrument sound because the data that is input into the sampler can be a recording of the instrument itself! It doesn't matter how complex the waveform is. For example, I have a sixty-piece orchestra synthesized on my Ensoniq Mirage, available at the strike of a key. The sounds that are available with these new synthesizers are truly astonishing in their realism.

In future columns, I will write about the hardware/software combinations necessary to make use of MIDI and the new synthesizers which have become available.

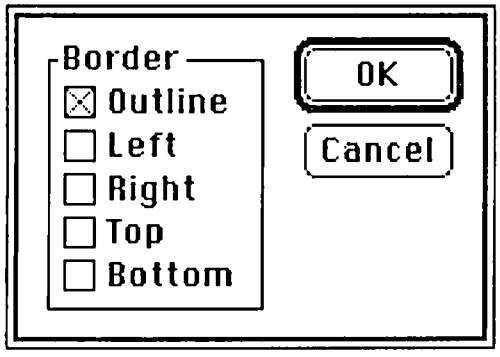
For now, I'm just going to relax and play Mahler for a while.

EXCEL'ing WITH YOUR MAC: Part 5

by David Morganstein

This "Macro of the Month" was suggested by one of my co-workers who frequently "boxes in" an area of the spreadsheet to set it apart and highlight it. It's easy enough to make a border around the entire area using Format/Border/Outline. But, it is a bit tedious to manually select each column of the rectangle, activate the Format menu, select border and finally turn on the "Right" option, repeating this process for every column. As Ed Myerson likes to say, "That sounds like a job for a computer!"

The macro Boxin, shown near the end of this article, assumes that you begin by selecting the area to be boxed prior to issuing the macro command. From there on, Excel does all the work. The first three lines create variables "rows", "cols" and "counter". Since we used these commands last month, you are familiar with what they do.



Next the BORDER command is given, =BORDER (TRUE,,,,). It has room for five parameters corresponding to the five options you see in the Format/Border dialog box, shown above. Each parameter must be either TRUE or FALSE, the former indicating that the particular choice has been selected, just as if you "X'ed" in any one or more of the five boxes. Note that only the first parameter, the one associated with an outline border has an entry. This allows the status of the other four to remain unchanged. Putting a FALSE in any of those positions would, say, turn off the border on the top, right or whatever side. Since we do not need to do that, these parameters are not set.

After outlining the entire area with the first border statement, the macro checks to see if the area is only one column wide. If so, it is time to return since no more borders are needed. Most of the hard work is done with the SELECT command, also discussed last month. The first SELECT identifies the left most column of the rectangle. In the SELECT, you see the command OFFSET and a reference to the ACTIVE.CELL(). At the start of the macro, ACTIVE.CELL() is the one you first clicked in or held the button within. I have set up the macro assuming you will start in the upper left-hand corner of the area and either click and drag down and to the right or shift-click in the bottom right corner (if this is not the case, the wrong area will be boxed! With a little more work, we could come up with a fool-proof version, but at the rates I'm paid I'll leave that to the student as a homework assignment...).

OFFSET takes three arguments and identifies a second cell relative to the one appearing as the first argument. In every case, the term ACTIVE.CELL is used as the reference point; however, as you will see, the cell to which the term ACTIVE.CELL refers changes. Note there are two cells included in the select and that they are separated by a colon, just like the language you see at the top of the screen when you physically select say A1 to A5. You see A1:A5. The SELECT identifies the rectangle defined by these two cells. The first SELECT goes from ACTIVE.CELL offset by 0,0 (that is, the ACTIVE.CELL()), to a position which is "rows-1" rows below it (this selects the left-most column of the area). As the macro progresses, it will select the next column to the right until reaching the right-hand side of the original rectangle.

	A
66	BOXIN
67	=SET.NAME("rows",ROWS(SELECTION()))
68	=SET.NAME("cols",COLUMNS(SELECTION()))
69	=SET.NAME("counter",0)
70	=BORDER(TRUE,,,,)
71	=IF(cols=1,RETURN())
72	=SELECT(OFFSET(ACTIVE.CELL(),0,0),OFFSET(ACTIVE.CELL(),rows-1,0))
73	=BORDER(,,TRUE,,)
74	=SELECT(OFFSET(ACTIVE.CELL(),0,1),OFFSET(ACTIVE.CELL(),rows-1,1))
75	=BORDER(,,TRUE,,)
76	=SET.NAME("counter",counter+1)
77	=IF(counter>cols-2,RETURN(),GOTO(A74))

After putting a right-hand border on the first column, the SELECT in A74 moves the ACTIVE.CELL one column to the right. This SELECT forms the beginning of a loop in which we move to the right and put a border on the right side. After this, counter is increased and tested to see if we have reached the last column. If not, we jump back to A74, select and border again. When counter is greater than cols-2, we have reached the right hand edge of the original area and we can exit from the macro through a RETURN(). QUESTION: Why did we test against "cols-2"?

Mac BBS contd. from pg 71

STEPHEN C. WARREN ON 04/24 TO BERNIE URBAN
I've tried MacWrite but with no success. One trick to pull on it is to print out one column on a page, and go back into Write and change the left hand column placement to about the middle of the page. Then, rewind the paper in the printer, and print out your new material in column two. It's possible, but slow. I'd like to test Word but don't have access to it. One way you can still use the word processors is to just use it for printing out pre-measured column material, and then use traditional xacto knife and rubber cement procedures for preparing your mechanical. Most printers have no problem getting rid of the cut lines. But I'm still looking for a multi-column capability in a low-budget package.

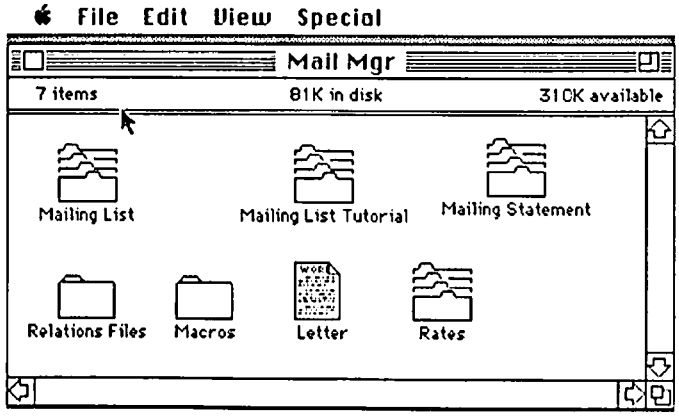
TOM PIWOWAR ON 04/25 TO STEPHEN C. WARREN
I don't think you can do multi-columns well, if at all, with a spreadsheet (neither Multiplan nor Excel). You could try to use MacDraw.

MANAGING YOUR BULK MAILING

by Martin Milrod

OverVUE is a well-known data base management system (DBMS) for small to medium data bases that works entirely in Random Access Memory (RAM). Hence its overall capacity is limited to the size of your Mac's RAM. 512K Macs can maintain a collection of perhaps as much as 4,000 - 5,000 names and addresses, while Mac+ gormands can indulge in the luxury of maintaining twice that amount.

ProVUE, the manufacturer of OverVUE, has released a functional set of templates to assist you in handling bulk mailing production while maintaining organizational rosters within a DBMS environment. These provide a great deal of utility for religious and social organizations and clubs; with the introduction of multi-Meg RAM capacity, this program can meet the needs of many medium-to-large-size organizations. The opening screen looks like this.



Mail Manager is accompanied by a well-written, simplified manual so that users will be able to handle the bulk mailing and label production needs of organizations with ease. These templates and macros must be used with OverVUE 2.0 and later versions; they do not work with version 1.x.

An initial problem lies in creating a mailing list, and OverVUE's normal importation procedures, while somewhat limited, are available. The use of "AddressOne," "AddressTwo" and a few other such labels are necessary to maintain to run the macros. Of course, considerable help is available to help you adjust, say, a single CityStateZIP entry into three distinct entries—City, State, and ZIP—and to check for duplicate entries. These have relatively simple and straightfoward instructions to follow. In addition you can select single (1-up) or multiple (3-up) labels and you can alter the macros to produce other versions of label production across a page. Easy entry into Microsoft Word mail merge feature is also provided by OverVue and is a most attractive feature. «DATA» entries that Word can use are automatically set up for you, although you have to avoid placing commas in fields since Word reads these as a field "separator" for mail merging.

Of greatest interest to mailing houses or bulk mailing users is the program's ability to sort labels and letters by ZIP code and to provide counts for Post Office bulk mailing. (A brief, clear primer on Postal Service bulk mailing requirements is presented in the manual.) Presorting of labels and mail merges are broken down into five-digit, three-digit, State and Mixed States zip codes, together with "reference" labels that compute total mailing costs using postal mail rates, which can be adjusted for future changes.

With the advent of Meg-level RAM Macintoshes, OverVUE takes on a new significance for users such as I, who always felt that the RAM limitation of OverVUE created problems. The Mail Manager Template makes what was already a fast DBMS program into a serious contender to be the DBMS of choice for religious and social organizations. After all, being able to produce rosters, labels, letters and prepare bulk mailing details with rapid sort and resort capability is most attractive. Using the manual is necessary, but the program is easy to learn. At $150 through most mail order houses, OverVUE presents considerable rapid crunching power. Mail Manager Templates bring still another argument in favor of using this swift program, particularly if you have a Meg or more of memory available to you. I like it.

ANSWERS TO LAST MONTH'S WAP ACROSTIC

"The combined meeting format we tried for the first time in January was a success. Perhaps too much so, in fact. We had more people, by my count, at the Desktop Publishing program than we've had at any general WAP meeting in the past year."

Author: Tom Warrick
Work : President's Corner
Source: WAP Journal, March 1986, p4

Words

A. Thought	J. Knotweed	S. Toffee
B. Outstate	K. Pathways	T. Stephen
C. Memory	L. Rejigger	U. Cohorts
D. Washerman	M. Encamped	V. Optional
E. Attempt	N. Shipmate	W. Rabb
F. Rainwash	O. Imide	X. Narrowly
G. Remphan	P. Dystopia	Y. Effusive
H. Impunity	Q. Eine	Z. Ragbag
I. Clutched	R. Nascence	

GENERATING MACPAINT DOCUMENTS FROM MACFORTH

by Bill Wurzel

I needed a 1986 calendar—one with all twelve months on a single page. Until last year, I had used a public domain CP/M FORTRAN program running on the Apple][: you just input the year and it generated a text file which you could then TYPE to the printer and voilà—twelve months worth of calendar. A Mac version of this routine was clearly in order—a routine which would accept the year from the keyboard and output the appropriate calendar to a MacPaint type file for final editing and general prettying up.

Now the question was which language to write it in. Modula-2 is a beautifully designed language and the implementation by Modula Corp. appears thorough and reliable. But, compared to other Mac languages, the compile time is long and I just didn't feel up to the task of learning about bitmaps and the Modula-to-Mac interface at five to ten minutes a compilation. Assembler? My rule is: never program in assembler unless, because of time, space or flexibility requirements, you absolutely have to. BASIC was next. I attempted the routine in Microsoft BASIC, but couldn't seem to generate more than one Mac screen of calendars at a time. I don't think BASIC likes pictures larger than one screen. So I genned up the obvious kludge: put a switch in the program to generate the top or bottom half of the calendar and cut/paste each half to a single MacPaint document. Messy! And the beauty of putting in a year and getting back a MacPaint document was lost.

FORTH was next in line. I hadn't programmed the application in FORTH originally because I was too lazy to write the words to handle the 3-dimensional array processing that the program logic required! Actually, FORTH is a great language for execution speed and power (you can do anything in FORTH—the trick is figuring out how!). But you have to be careful to write code that you can understand and modify down the road—it's very easy to cut corners and write stuff that's almost incomprehensible to you six months later! There aren't yet many implementations of FORTH commercially available for the Mac. MacFORTH, developed by Creative Solutions, Inc. is a powerful and easy-to-use implementation that is marketed in three levels of price and sophistication. Level One contains all the features necessary to write the calendar generator—if you're satisfied with doing array manipulation in high-level FORTH. To speed it up in 68000 assembler, you need Level Two. Nice, but not necessary.

In the following paragraphs, I'd like to address the general task of creating MacPaint documents in MacFORTH. (If you're interested in the specific problem of generating the perpetual calendar, I've donated the MacFORTH screens to the WAP library.) The task splits neatly into two parts: 1) generating the bit image of the MacPaint document in RAM and 2) creating the MacPaint disk file from the RAM image.

1) **Generating the bit image:** We'd like to end up with something like this:

```
START.BIT.IMAGE
        PAGE  0 GET.LINE.HEIGHT MOVE.TO
        BOLD UNDERLINE + TEXTSTYLE
        ." This is the forest primæval."  CR
END.BIT.IMAGE
```

where all the text and/or graphics-producing words between START.BIT.IMAGE and END.BIT.IMAGE produce bit images in a MacPaint sized chunk of RAM somewhere. This chunk of RAM can be almost anywhere you want to put it. If you equate it to the screen buffer address space, then Quickdraw will write directly to the screen "automatically," but you certainly don't have to do this! In fact, since we want our bit image to be larger than the screen, we must put it in non-screen RAMspace. The absolute address (baseAddr) of the chunk of RAM that contains the actual bit image is the first of three data elements in a structure the MacFolks call a BitMap. The other two are rowBytes, an integer containing the number of bytes in a single bitrow and **bounds**, a Rectangle specifying the extent of the BitMap. We need a FORTH word, then to create a BitMap, given the 'tlbr' of the bounds rectangle and address of the RAM image area on the stack. RowBytes can be calculated from the right and left coordinates of the bounds rectangle. (This word uses the LOCALS! feature of Kernel 2.4. If you don't already have it, the upgrade contains several very useful additions and is well worth the price!)

```
: MAKE.BITMAP ( t\Nb\r\ramimageaddr -- )
    LOCALS| &BMAP &R &B &L &T |
    &T &BMAP  6+ W!   &L &BMAP  8+ W!  \ fill in
    &B &BMAP 10+ W!   &R &BMAP 12 + W! \ bounds rect
    &R &L - 7 + 8/ DUP &BMAP 4+ W!     \ and rowBytes
    &B    &T -  * DUP>R FROM.HEAP  \ get RAM image
                                              from heap
  DUP LOCK.HANDLE            \ lock it down
    @ DUP &BMAP ! R> ERASE ;  \ and clear it to white
```

It's not strictly necessary to get our RAM from the heap. We could have ALLOTted space in the object area, but this has two disadvantages. First, we have to anticipate our RAM requirement in a previous MINIMUM.OBJECT invocation; second, if we're going to create a standalone application or a snapshot of this program, the object area (and consequently the disk file) will be over 50K larger than if we allocated memory dynamically from the heap. Also, since the handle to this RAM is (and must be) dereferenced in the BitMap, and since this RAM is active during Quickdraw calls (AND since you never know what shenanigans the Memory Manager gets up to during Quickdraw calls!) we're going to the lock this handle down tight!

A full MacPaint screen is 720 pixels high and 576 pixels wide, so we can create our BitMap as follows:

```
0 0 720 576 RECT BOUNDS.RECT
CREATE PAINTMAP 14 ALLOT
BOUNDS.RECT @RECT PAINTMAP MAKE.BITMAP
```

contd.

There! Now we need a graphport to write to. MacFORTH doesn't support graphports directly and rather than create a set of graphport handlers, it's probably easier to use a window since all windows contain graphports anyway. We could use the MacFORTH system window, but common sense tells us not to go monkeying around with the window that will output all our debugging information! So we'll create a new window. The attributes of the window aren't too important since we aren't interested in using the window part, just the graphport. One other little thing to keep in mind: The MacFORTH word ADD.WINDOW calls the Toolbox routine NewWindow, which initializes the visible region of the associated graphport to a rectangle the size of the Macintosh screen. So after ADD.WINDOW, we have to reset the visible region to our BOUNDS.RECT:

```
: GET.VIS.RGN ( wptr -- visregionhandle) 24 + @ ;
NEW.WINDOW PAINT.WINDOW
BOUNDS.RECT @RECT PAINT.WINDOW W.BOUNDS
0 PAINT.WINDOW W.BEHIND
PAINT.WINDOW ADD.WINDOW
HEX A8DF MT RECT.RGN DECIMAL
PAINT.WINDOW GET.VIS.RGN BOUNDS.RECT
                                        RECT.RGN
```

Now, all that's necessary is to define some words to switch our BitMap into and out of the window graphport. We'll define a holding area to store the old window-specific status while we write to our own BitMap and restore from the holding area when we're done:

```
18 CONSTANT WINDOW.HOLD.SIZE
CREATE WINDOW.HOLD WINDOW.HOLD.SIZE 4*
                                        ALLOT
: TO.HOLD GET.WINDOW WINDOW.HOLD
            WINDOW.HOLD.SIZE LMOVE ;
: FROM.HOLD WINDOW.HOLD GET.WINDOW
            WINDOW.HOLD.SIZE LMOVE ;
HEX A875 MT SET.PORT.BITS  DECIMAL
: START.BIT.IMAGE PAINT.WINDOW WINDOW
                                        TO.HOLD
    PAINTMAP SET.PORT.BITS ;
: END.BIT.IMAGE FROM.HOLD SYS.WINDOW
                                        WINDOW ;
```

And that's all there is to creating the bit image in RAM. Now we have to create a MacPaint type file and write the bit image data into it.

2) Creating the MacPaint file: Somewhere, in some obscure Technical Note or other, there must be documentation on the structure of a MacPaint file—but I haven't come across it. So I've doped out what little we need to know by a technique known informally as "incremental mucking." This is the technique whereby one makes small changes in a program or file with a file editor and then sees what effect these changes have on the operation of the program or the appearance of the file. Incremental mucking with MacPaint document files seems to show that there are only two items of interest: the pattern set and the fullscreen picture. The first sector (512 bytes) of a MacPaint document file starts with a longword '2' (i.e. 00000002) followed by 38 patterns, each 8 bytes long. The remainder of the sector seems to be garbage. Also, as luck would have it, the "standard pattern" (the one MacPaint wakes up with) is available as a system resource of type=PAT# and ID=0. So creating the first sector of the MacPaint file is pretty straightforward.

But first, we have to create the file! That's easy enough to do--but we have to make the document file look like MacPaint created it. That means the file header's creator field must be 'MPNT' (so we can open it directly), and its file type must be 'PNTG' so it will appear in a MacPaint 'OPEN list' and be drawn on the desktop with the proper icon). Happily, MacFORTH gives us easy access to these two fields in the file header through the words CREATOR and DFLT.FILE.TYPE:

```
CREATE FILE.NAME 35 ALLOT
: GET.FILE.NAME
   CR CR ." Enter MacPaint filename (max. 30 chars): "
   FILENAME 30 INPUT.STRING CR ;
: ?YN ( -- f waits for keypress and returns TRUE  if
            Y or y entered and FALSE if N or n )
   BEGIN
    KEY 223 AND ( MAKE UPPERCASE) DUP
    ASCII Y = OVER ASCII N = OR
   UNTIL DUP EMIT ASCII Y = ;
ASCII PNTG CONSTANT 'PNTG
ASCII MPNT CONSTANT 'MPNT
VARIABLE FILENO
: MAKE.PAINT.FILE
   NEXT.FCB FILENO ! 'PNTG DFLT.FILE.TYPE !
                     'MPNT CREATOR !
    BEGIN
   GET.FILE.NAME FILENAME FILENO @ ASSIGN
     FILENO @ CREATE.FILE
     IO-RESULT @ ?DUP IF -48 = (does file already
                                    exist?)
       IF ." FILE ALREADY EXISTS. OVERWRITE  (Y/N): "
       ?YN
       ELSE ?FILE.ERROR THEN
     ELSE TRUE THEN
   UNTIL  FILENO @ OPEN ?FILE.ERROR ;
```

So far, so good. Now we can define our file buffer and write the words to put the standard pattern in the buffer and write the buffer to disk:

```
512 CONSTANT BUFF.LEN
CREATE BUFF BUFF.LEN 2* ALLOT  ( 2 buffers)
VARIABLE FILE.PTR
: GET.STD.PAT (-- f move standard patterns to BUFF)
  ASCII PAT# 0 GET.RESOURCE @ 2+
  BUFF 4+ 8 38 * CMOVE ;
: WRITE.BUFF  ( -- f write current BUFF to disk )
    BUFF BUFF.LEN FILE.PTR @ FILENO @ WRITE.
                                        VIRTUAL
   ?FILE.ERROR BUFF.LEN FILEPTR +! ;
```

Finally, we have to write the bit image in BitMap to disk. A little quick arithmetic tells us that if the fullscreen MacPaint BitMap is a little over 50K, then if we copied the BitMap to disk in bytewise fashion, it would take up a little more than 50K bytes on the disk. At 400K bytes per disk, we should only be able to store 7 MacPaint pictures on a disk. Since we can, in fact, store considerably more, the BitMap must not be copied byte for byte to disk. In fact, there exists a bit packing routine that takes advantage of the fact that in most pictures, there are large areas of white, large areas of black, or reasonably large areas of the same bit pattern. The toolbox routine PackBits compresses these areas of repeating bit sequences and it is this compressed image that is saved to

contd.

disk (in as many sectors as it takes) as the fullscreen MacPaint picture. We will use this toolbox routine to compress our BitMap (kept track of with a variable named SRC.PTR) into the output buffer (kept track of with DEST.PTR). We have defined an output buffer two sectors long. We will pack into the output buffer one line of bits (576 bits = 72 bytes) at a time and check after each packing to see if we have exceeded one sector's worth of bytes. If so, we will write out the full sector and copy the overflow from the second (adjacent) sector buffer back into the start of the first sector. This logic ensure that we must always flush the buffer prior to closing the file.

```
VARIABLE SRC.PTR      VARIABLE DST.PTR
: INIT.PTRS ( -- I initialize file processing ptrs )
   FILE.PTR OFF   BUFF BUFF.LEN 2* ERASE 2 BUFF !
   BMAP @ SRC.PTR !
   BUFF DST.PTR ! ;
: CHECK.BUFF  ( -- I write a buffer if overfull )
    DST.PTR @ BUFF - DUP>R BUFF.LEN >
                                        ( past end?)
    IF WRITE.BUFF BUFF DUP ( copy overflow
                                        to buffstart)
    BUFF.LEN + SWAP I CMOVE
    BUFF R> BUFF.LEN - + ( update DST.PTR to
                                        copied oflo)
    DST.PTR ! ELSE R>DROP THEN ;
: CLEANUP  "M4TH CREATOR !  "DATA
                                    DFLT.FILE.TYPE !
   FILENO @ REMOVE PAINTMAP @
                                    RECOVER.HANDLE
  DUP UNLOCK.HANDLE TO.HEAP ;
HEX A8CF W>MT PACK.BITS DECIMAL
: GEN.FILE ( -- I generate the MacPaint file )
   INIT.PTRS MAKE.PAINT.FILE
   GET.STD.PAT WRITE.BUFF
   720 0 DO SRC.PTR DST.PTR 72 PACK.BITS
   CHECK.BUFF LOOP
   WRITE.BUFF FILENO @ CLOSE CLEANUP ;
```

And that's it! You can try the program out with the following:

```
CREATE <WEAVE>  HEX F8742247 , 8F172271 ,
                                        DECIMAL
: TESTPAINT 10 10 PENSIZE <WEAVE> PENPAT
   100 300 350 350 FRAME RECTANGLE
   132 330 MOVE.TO
    ." What food these morsels be!" ;
 START.BIT.IMAGE TESTPAINT END.BIT.IMAGE
                                        GEN.FILE
```

From a clean K2.4 kernel, I just entered all the above FORTH code (onto screens, of course) , each line in the order in which it appeared above. Everything loaded okay and seems to work as it should. Notice that all interactive I/O should take place outside the code bounded by START. BIT.IMAGE and END.BIT.IMAGE. I haven't tried it, but there doesn't seem to be any reason why you can't use these words many times within a FORTH routine to turn on and off the output to your MacPaint document. Enjoy!

PASCAL NEWS
by Robert C. Platt

USUS Meeting. I enjoyed attending the UCSD p-system Users Society (USUS) convention in Dallas at the end of April. It was a good opportunity to see a number of WAP members and to catch up on the latest developments in Pascal and Modula-2. The next meeting will be held in New York City in the fall. That is just a train-ride away from Washington, so I expect we will have even a bigger WAP turnout.

Pecan Buys Volition. The big newsmaker in the Apple Pascal world is Eli Willner's Pecan Software. As you know, Apple Fortran, Pascal, PILOT (and even Wizardry) are based on the "p-System" which was developed at University of California San Diego. Most of the UCSD staff that worked on the project joined SoftTech Microsystems when the university had to end the project. Pecan purchased all rights to the p-System from SoftTech Microsystems. He has re-priced all of the SoftTech products so as to be competitive with Borland's TurboPascal. New systems and compilers cost between $79 and $199.

A splinter UCSD group formed Volition Systems which produced the Advanced System Editor (ASE) and a Modula-2 compiler. The ASE offers many features such as macros that are not available on the UCSD editor. In addition, the Volition Modula-2 compiler is the only implementation of that language on the Apple // or ///. As with most splinter groups, Volition went out of business about a year ago. However, the good news is that Pecan has also purchased Volition, and will return its products to market by this summer.

Pecan is also implementing the Volition Modula-2 compiler for the Macintosh. Unlike earlier Volition compilers, this one will produce the same p-codes as are generated by the Pascal compiler. This results in the ability to link Pascal and Modula-2 together. Pecan is preserving the standard Volition libraries (which have become a de facto standard among micro users.) However, Pecan is also adding library routines that will permit access to the Macintosh's ROMs and user interface.

Apple Pascal 1.3. Apple's new version of the Pascal compiler for the Apple // has received rave reviews. It permits longer procedures and allows access to the UniDisk 3.5. The new documentation is generally viewed as worth the price of a $75 upgrade.

New versions of MacAdvantage & p-System. Pecan also announced its upgrade policy for owners of SoftTech's MacAdvantage or Pascal compiler on the Mac. As written, these programs do not support the HFS operating system that was released with the Mac Plus. For example, my MacAdvantage compiler could not find files that were in folders. If you send your original disks plus an upgrade fee to Pecan, they will issue a new system, complete with revised documentation. (The fee depends on when you purchased your system—call for details.) Reportedly, Pecan will support the new HFS/Mac Plus ROM calls in the new version of MacAdvantage.

MAC SOFTWARE: LATEST VERSIONS

by David Morganstein

The following version numbers may help you keep up to date with your software. If you have a later version (one you have, not have "heard" about), please contact David Morganstein at (301) 972-4263 so we can keep our list current.

TITLE	VERSION NO.
ALTEC C	1.0G
BATTERY PAK	1.11
CALENDER MAKER	1.2
COLOR CHART	1.3
COLOR PRINT	2.01
CONCERTWARE +	3.0
COPY II MAC	5.2
CRICKET GRAPH	1.0
CRUNCH	1.0
DELUXE MUSIC CONST SET	
DECISION MAP	1.0
DISK INFO (DA)	1.4
DOLLARS & SENSE	1.3
EDIT	2.0D1
EXCEL	1.01
EXPERLISP	1.04
EXPERLOGO	1.1
FACTFINDER	1.1
FEDIT	3.6
FINDER	5.2
FONT/DA MOVER	3.2a6
FONTASTIC	2.6
FREETERM	1.8
FRONT DESK	1.0
GATO	1.3
HAYDEN SPELLER	1.2
HARD DISK 20	1.1A1
HARD DISK UTILITY	1.21
HAYDEN SPELLER	1.2C
HELIX	2.0 R5
HOME ACCOUNTANT	1.2
IMAGEWRITER	2.2
JAZZ	1A
JUST TEXT	1.1
LASERWRITER	3.0
MACDRAFT	1.1
MACDRAW	1.9
MACLABELER	2.0
MACLIGHTENING	1.0
MACNOSY	2.0
MACPAINT	1.5
MACPASCAL	2.0
MACPLOT	1.7
MACPROJECT	1.0
MACPUBLISHER	2.0
MACSPELL+	1.10
MACSPIN	1.0
MACTERMINAL	2.0
MAC TOOLS	5.2
MACWRITE	4.5
MAC ZAP COPIER	4.1
MAC ZAP TOOLS	3.5
MAC ZAP PATCHER	3.1
MICROPHONE	1.0
MICRO PLANNER	
MOCK PACKAGE	4.2b
MS BASIC	2.1
MS CHART	1.00
MS FILE	1.2
MS FORTRAN	2.1
MS WORD	1.05
MULTIPLAN	1.2
MUSIC WORKS	
OMNIS 3	3.11
OVERVUE	2.0D
PICTUREBASE	1.1
PAGEMAKER	1.2
PRETTY GOOD TERMINAL	2.0
PROFESSIONAL COMPOSER	
QUICK & DIRTY UTILS 1	1.05
QUICK & DIRTY UTILS 2	
QUICKSET	2.0
READY SET GO	2.1
RED RYDER	8.0
RES EDIT	1.0D11
RMAKER	2.0D2
SIDE KICK	1.1
SKIPFINDER	5.3
SMARTCOM II	2.2A
STATWORKS	1.2
SWITCHER	4.9
SYSTEM	3.1.1
TEMPO	1.1
THINK TANK 512	1.2
TIME BASE	1.6
TML PASCAL	1.11
TMON	
TURBOCHARGER	1.11
VERSATERM	2.10
WAYSTATION	2.3

NOTE: UPDATE FROM SYSTEM 3.0 IMMEDIATELY! IT "EATS" RESOURCES...

A DEVELOPER'S VIEW...

The LaserWriter, Finder 5.2, and Adobe's Uploadable Fonts

by Jim Lanford

The LaserWriter is probably the most desired peripheral for the Macintosh. Many Macintosh users know someone who has access to one. This article is for those who have obtained a few minutes of LaserWriter use and have not taken the time to read the necessary user manuals. It will also probably be useful to many LaserWriter owners who haven't taken the time to look at the manuals.

The most foolproof method to get the LaserWriter to work correctly is to select:

- **Chooser** (from the finder)
- **Page Setup** (from the application)
- **Print** (from the application).

To do this correctly involves four steps:

- Step 1: Make sure you have the necessary tools.
- Step 2: Hook up everything.
- Step 3: Let your application know.
- Step 4: Now print.

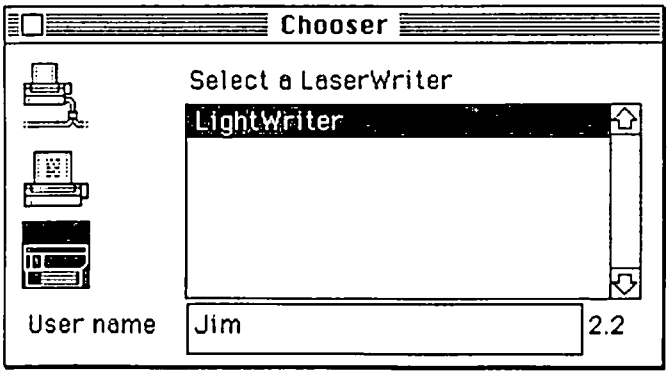
It is not always necessary to follow these steps, but they are probably your best bet. The following is an in-depth discussion of these steps.

Step 1: Make sure you have the necessary tools.

The LaserWriter and LaserWriter Plus operate best with Finder 5.2 and System 3.1.1. See your dealer if you do not have these upgrades yet. This upgrade works on any 512K or larger Macintosh. (Apple does not support Laser Printing on the 128K Mac.) It is also very important that everyone connected to the LaserWriter on AppleTalk use the same (latest) version of the LaserWriter Driver and Laser Prep.

These drivers are much improved over previous versions. First, when you try to print and the printer is busy, your Mac display will show you who is using the LaserWriter. Second, a help screen option replaces the printed instruction sheet describing how to use the manual sheet feed so that a piece of paper is no longer wasted every time you use this option. And third, these drivers tell you when someone on the net is using a less current (down level) version of the drivers.

Step 2: Hook up everything.

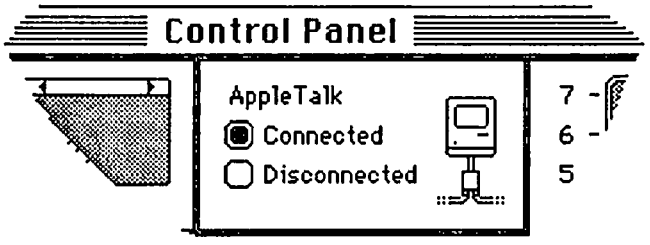


Pull down the Apple Menu and select the *Chooser*. If this option is called *Choose Printer* on your Mac, you do not have Finder 5.2. so go back to Step One and upgrade.

Chooser will allow you to check to see if AppleTalk is connected and if the LaserWriter is turned on. On the left you should see all the printer drivers in your System Folder. Select the LaserWriter driver if it is not already selected. After a few seconds you should see a list of all the LaserWriter printers connected to, and operating on, your AppleTalk network. Select the printer you wish to use. Fill in your name if you haven't already and close the window.

If your System did not respond as I described, stop and see what is not connected. You cannot print without a LaserWriter Driver in your System Folder, so if you do not see one in the left portion of the *Chooser* window, close the window and copy one to the System Folder.

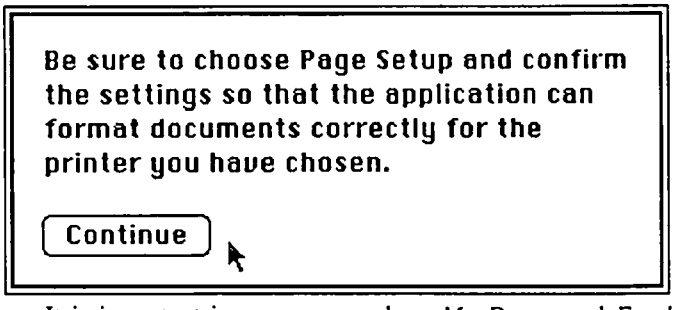
Next, pull down the Apple Menu and select the *Control Panel*. Verify that the Apple Talk Connected radio button is selected.



Try the *Chooser* again. If you still do not see the name of your LaserWriter, then check to see if your LaserWriter is turned on and that the AppleTalk cables are connected.

Step 3: Let your application know.

In this version of *Chooser*, Apple gives you a hint on what to do next.

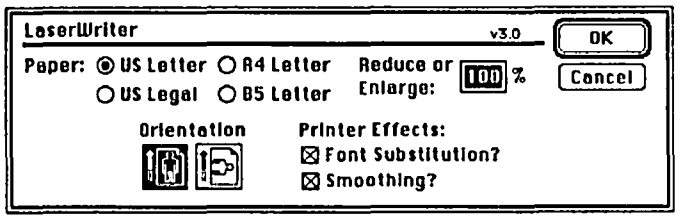


It is important in programs such as *MacDraw* and *Excel* to use Page Setup when you select the LaserWriter since it will change page breaks! *Excel* and *MultiPlan* also use the margin setting parameters to change page breaks.

Important note: If you are planning to give a disk to a friend to print on their LaserWriter, but are doing work on a Mac which is not connected to a LaserWriter, select the LaserWriter icon from *Chooser* anyway. No printers will be listed in the window, but Page Setup will still format your document for the LaserWriter. MacDraw users will experience this most accutely because of the one-half inch page boundary

contd.

difference. So when in your application, use Page Setup.

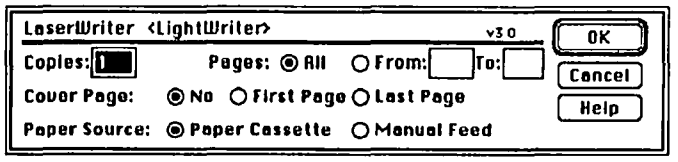


Notice that the dialog box is labeled LaserWriter and gives the version number of the driver (v3.0). *MacDraw* will reflect the Reduce or Enlarge setting when you click OK.

You can speed up the printing process a bit if you are positive you are only using laser fonts by clicking Font Substitution off. If you do not have any *MacPaint* type bitmapped graphics in your document, or you want the block pixel look, click Smoothing off to speed up the printing process a little more.

Step 4: Now print.

When you select *Print* from the File menu, you will notice the dialog box now gives the name of the LaserWriter selected. (Ours is named LightWriter.) There is also a Help button which gives the instructions on how to use the Manual Feed feature along with help on a few other things.



This is nice since earlier versions printed a sheet of instructions for each manual feed you performed. This irritated users to no end and caused many to not use that feature.

• **Adobe's uploadable Laser Fonts: you might not need a LaserWriter Plus.** The new LaserWriter drivers have several new features: there is much better error handling, a sheet of instructions is no longer ejected every time the sheet feed option is chosen, and most important, the new drivers support Adobe uploadable fonts.

At MacFest we ordered some Adobe uploadable fonts. Since we are planning to upgrade our LaserWriter, we ordered fonts which are not in the upgrade. However if we weren't going to upgrade our LaserWriter, we could have ordered the set which are contained in the ROMs in the LaserWriter Plus.

We have just received several font packages containing the following font styles: ITC Souvenir, Glypha, ITC American Typewriter, ITC MACHINE, ITC Lublin Graph, ITC Benguiat, ITC Friz Quadrata, ITC Garamond. It would be advisable to purchase a hard disk before one accumulates very many of the uploadable font files. Each font package contains four files between 28K and 44K in size. In a future article we will show samples of the various fonts.

Mac Q & A contd. from pg 45

one of the hard disks that achieves 1:1 interleaving. (That is, consecutive logical sectors are also consecutive physical sectors.) One set of demonstrations (by a competing hard disk company) showed that 6:1 interleaving would be optimal for a normal Mac tasks. (That is, consecutive logical sectors would be separated by 6 physical sectors.)

I don't doubt that the MicahDrive (for which Steve wrote some of the system software) is a fine product and a fast drive, but it would be wise for you to "test drive" a few hard disks for yourself before plunking down the $1000 or so that they cost.

Q: How do I tell which version of the Mac+ ROM I have? Last month you told us where to look, but not how to look there.

A: One way to see what version of the ROM you have is to install the "Programmer's Switch". This gives you access to two buttons. The button toward the front of the Mac is the "Reset" button, which will cause a reboot. The button toward the rear is to signal a "debugging" program to take over. If you don't have a debugging program installed, such as Macsbug (supplied by Apple) or TMON (from ICOM Simulations), with the old ROMs you would get the "Bomb" dialog and have to reboot. However, with the new 128K ROMs, you get a built-in mini-debugger. (And no, it isn't documented anywhere yet.) Try it—to exit the built-in debugger type G (for Go), followed by Return.

In the mini-Debugger, or Macsbug for that matter, you can display memory with the DM command. Type DM 400002. If the first byte displayed is 'EA', you have the most current ROM. If the first byte is 'EE', you have an early production model.

Q: Help! I've installed the Programmer's switch on my Mac+, but the buttons keep getting stuck.

A: This is a not uncommon problem. Take out the programmer's switch and with a penknife, whittle away. Make the plastic fingers less thick, especially toward the back where they bevel out. It doesn't hurt if you shave away more space for the fingers in the slots on the Mac case too, as long as you're careful not to cut into the parts on the circuit board. (And do it with the Mac unplugged!)

Q: There's one cable you still haven't told us about. How do we wire a PC to a Mac?

A: PC (DB-25) -> Mac (DE-9) , or Mac+ (mini-DIN-8): 1 -> Shell, Shell; 2 -> 9, 5; 3 -> 5, 3; and 7 -> 3, 4. In addition, on the PC's DB-25, jumper pins 4 and 5 together, and 6 and 20 together. On the Mac end, also jumper pin 8 (Mac or Mac+) to pin 3 (Mac) or pin 4 (Mac+).

A MAC COMPATIBLE HOME CONTROLLER

The X-10 Powerhouse: A Review

by William J. Jones

It has been my goal to connect my Macintosh to a control system to operate electric lights and appliances throughout my house. Having admired Steve Ciarcia's ambitious homebrew projects to that end as presented in Byte, I awaited the development of such a system "for the rest of us." The X-10 Powerhouse Model CP290 computer interface, distributed by X-10 (USA) Inc., 185 LeGrand Ave., Northvale, NJ 07647 is one such system. (I got mine from Advance Electronics, 26 w. 46th St., New York, NY 10036, phone 800 223-0474, for $49.95 plus $5 shipping. The same interface is available, with different software, for the //e and the //c, and also for Commodore and IBM PCs. I haven't seen those versions.)

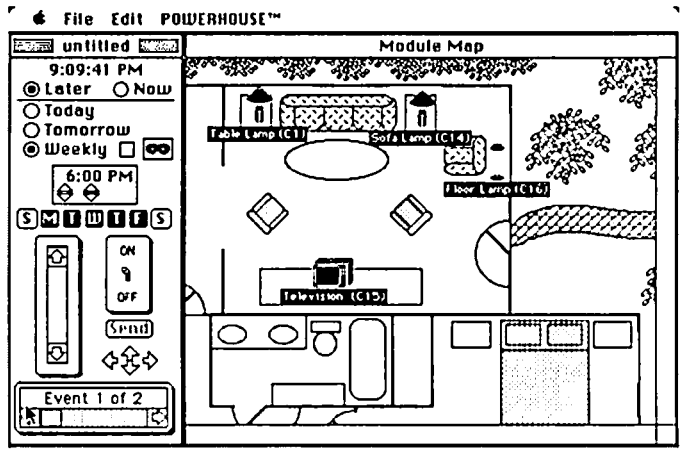
As the term "computer interface" indicates, the Powerhouse is an intermediary unit between the Macintosh and various switch modules which comprise the X-10 system. These modules, which have been around for some years under the X-10 name, are switches which receive commands from controllers such as the Powerhouse and less sophisticated timers and switches through the regular house wiring. The modules come in various types: lamp and appliance modules, modules built into wall switches and wall receptacles, and even a thermostat controller. (A nice feature of the lamp modules is that unlike mechanical plug-in switches, they can be overriden. If the module controlling a lamp is "off," flicking the lamp's switch a couple of times turns the module and the lamp on.)

The Powerhouse is a small white box about the size of the external disk drive but half as tall. On top are on-off push buttons to control eight X-10 modules manually. A line cord provides primary power and conveys the control commands to the modules. A 9-volt alkaline battery in the unit provides backup power. The connection to the Macintosh modem port for programming is a short cord with a 5-pin DIN plug on the Powerhouse end and the Mac modem plug on the other. Data transmission is RS-232 standard, 600 baud, 8 bits, no parity, 1 stop bit.

The software furnished for the Macintosh is aggressively "Mac-like," but it could be a bit more functional. When you open the Powerhouse icon, you see two windows: an Events window on the left, a Module Map on the right.

Using "New Module" in the Edit menu, you select one of forty icons representing various lights and appliances, identify it by its powercode letter and module number, and name it. (If none of the icons fit your needs, some available squares and rectangles serve as picture frames for your own drawing of the item.) The named icon then appears in the module map, in front of a MacPaint picture which can serve as a floorplan to show where your lights and so forth are. (Several sample pictures come on the disk, but unless you just happen to live in a house that looks like the ones they drew, you will want to draw your own.) The background doesn't work on a 128K Mac.

Once you have placed the modules on the map, (a bit of a chore, since some of the icons have rather skimpy active areas), you turn to the Event window to program the events. Although by clicking the Now button, you can use the events window to turn things on and off around the house as you sit at the computer (to the wonderment or consternation of your spouse, children, and guests), ordinarily you will want to to program future events, either once for the remainder of today or tomorrow, or on a regular ("weekly") basis. After you select the Weekly button, any of the days you don't want can be deselected. Select the icons you want to program, set the time of the event with the unfortunately small arrows under the time indicator, and click the lightswitch on or off. If a lamp module is involved, you can also set it to a level of brightness or dimness using the sliding control next to the light switch. To give an empty house a "lived in" look, check the box next to the burglar's mask, and the Powerhouse will set a different time within the hour selected when the event comes up each day.



[Figure 1]

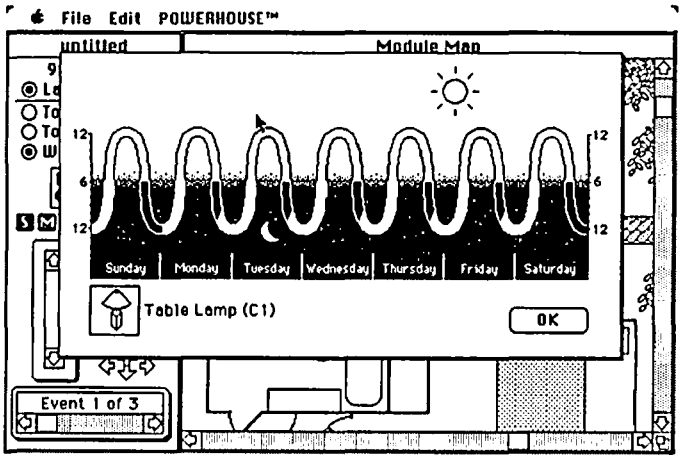
By using the shift key while clicking icons, you can set several modules to be controlled by the same event. If all the modules selected can't been seen on the module map at once, the direction arrows in the Events window will alert you which way to move the map to see those module icons. (Once you have set a number of events, they can be viewed chronologically by hour by scrolling through the event list at the bottom of the window. The Module Map will move around to show the affected module. If you hold down the option key, the event lost will show you just the events associated with any selected module.) The range of the Powerhouse should exceed practical necessity—128 events per event list, as many as 16 differently designated modules per event, and a total of 256 possible different house and event codes.

One problem with the Events Window is that when an event is displayed, any action taken on the screen, such as the selecting of a different module icon, modifies that event. You can avoid that by keeping your finger on the command

contd.

key while you move around the Module Map, but its still more awkward than it should be.

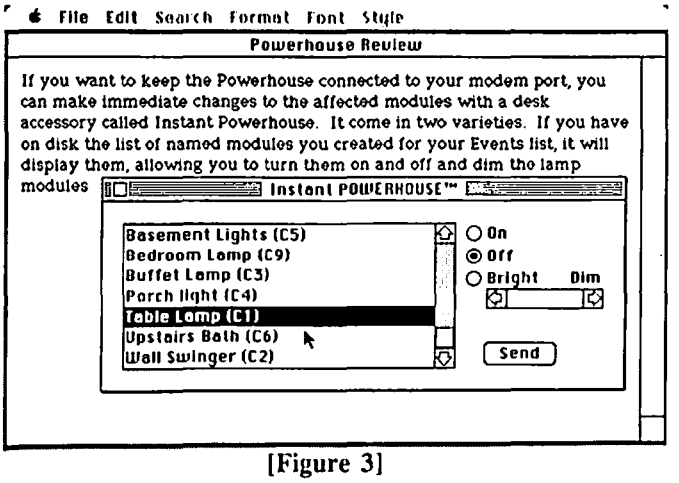
When you have an individual module set to your satisfaction, you can view its "module program," an excessively cute time-line chart which shows an individual unit's status throughout the week.



[Figure 2]

When you have a full set of events programmed, you can print out a listing of all the events. Unfortunately, there is no way to save the listing to disk or display it on the screen. When you have an events list as you like it, save it and send it to the Powerhouse, which will then execute the program selected throughout the week. At this point, you can disconnect the Powerhouse from the Macintosh, and it will perform on its own. Without the unit connected, you can't control it from your keyboard, but you can create new event lists which you can save until you are ready to hook up the Powerhouse to receive them. The software recognizes when the Powerhouse isn't connected, but will purport to let you do things that affect the Powerhouse anyway, such as resetting the Powerhouse clock. This is a minor bug.

If you want to keep the Powerhouse connected to your modem port, you can make immediate changes to connected modules with a desk accessory called Instant Powerhouse. It come in two varieties. If the list of named modules you created for your Events list is available, it will display them, allowing you to turn them on and off and dim the lamp modules.



[Figure 3]

If the module names aren't available, "Tiny Instant Powerhouse" lets you select modules by house code and unit code number and perform the same events.

The software is not copyprotected. According to the documentation, version 1.0 works under HFS only if kept in the root directory. The Powerhouse comes with adequate documentation, including a page of last minute comments on the disk. My software developed unexplained problems shortly after I got it, but under the warranty, $2.00 got me a replacement disk by mail within a week.

Conclusion: Powerhouse is a useful adjunct to the X-10 system, convenient for the computer user. While I suspect that the user interface could be improved, as it is, it is fully satisfactory for the Macintosh user.

Mac BBS contd. from pg 76

System, Finder, and HD20, then I can do anything with my MonsterMac that can be done with the Mac+ and then some. Also, using FEdit to put boot blocks on System 3.1.1 fits in here somewhere. I've done that to make a bootable MFS formatted disk using that System and the new Finder without HD20. The new Control Panel, fonts, etc., are real neat. I haven't tried to run any programs on it yet. Except I won't be able to use a SCSI port hard disk, which I don't care about anyway.

Edit, RMaker, and HFS

MICHAEL HARTMAN ON 04/24 TO REGINA LITMAN

As noted before, I have a very low opinion of Edit. From what I've read, anyone making serious use of Edit should consider buying QUED. It is fully HFS compatible, supports search and replace in all windows simultaneously, and has a number of other useful features from what I read. (I'd have shelled out by now, but I'm still doing my development on the Lisa Workshop, which has a nicer editor than anything I've seen for the Mac yet.)

Desk Top Publishing

Layout Tutorial Disk

STEPHEN C. WARREN ON 04/15 TO ALL

Who is interested in contributing to a disk on layout procedures and design ideas that we could distribute throught the Disketeria? I'm looking for anyone who has experience in this area from hopefully a traditional graphics background. There would be sections on the computer's potentional in desktop publishing, but mainly I want to assemble a disk with emphasis, again, on traditional techniques and design theory. If you work in this field, please leave a message here with your ideas for contributions. This can be an ongoing project for the D-Pub SIG, so there are no immediate deadlines.

Spreadsheets

STEPHEN C. WARREN ON 04/22 TO BERNIE URBAN

I have a question for you. Some people say you can do rough publications, at least in a multi-column format, with a spreadsheet package. I have Multiplan, but cannot seem to transfer data to MacWrite for font changes. Have you any knowledge of this procedure? I think this could save me some money by letting me put off buying PageMaker for a while.

BERNIE URBAN ON 04/24 TO STEPHEN C. WARREN

Have not heard of using spreadsheet package for roughing out multi-columned pubs. Perhaps someone else can comment? But, why not try Word if you have it? Leon Moore does his Biking newsletter with it. Perhaps even MacWrite can be tricked into doing multi-columns.

contd. on pg 62

POWER USER SHORTCUT SUMMARY

by Dan Allen, Apple Computer, Inc.

The Macintosh User Interface has been designed for ease of use by a wide range of users with many different levels of experience. In order to maintain your files, most operations in the Finder can be performed via menu items as well as by selecting, clicking, and dragging with the mouse. For power users there are many built in shortcuts and additions that provide further user customization of how Macintosh deals with your files. The following keyboard and mouse shortcuts are for the following items collectively: System 3.0, Finder 5.1, Font/DA Mover 3.0 or higher versions. The various features are gathered below by topic.

What Is It?

New ROMs?

You can determine if the machine that you are working on has new 128KB Macintosh Plus type ROMs by the following two methods. First, when booting Macintosh a keen eye can distinguish between the older shadowed alert box that says "Welcome to Macintosh" and the newer symmetrical alert box. Secondly, if you select the "About the Finder..." option while in Finder 5.1, the memory size is displayed in the lower left corner. If the memory size is followed by a period, then that Macintosh has the new 128KB ROMs. If there is no period, it has the original 64KB ROMs.

Hierarchical File System?

If you want to see if a particular disk is a HFS volume, open the disk's window in the Finder. Select an Icon view. If there is one pixel filled in at the upper left corner between the two lines near the top of this window then it is a HFS disk, otherwise it is an MFS disk.

Booting & Mounting Volumes

Mounting Order [Macintosh Plus]

The order of mounting volumes on a Macintosh Plus is: internal floppy drive, external floppy drive (regardless of whether it is plugged into an HD 20), HD 20 (if present), daisy chained HD 20 (if present), SCSI device 0, SCSI device 1, ... SCSI device 7.

Holding the Mouse Button Down At Boot [Hard Disk 20 when booted from floppy only]

As always, if you hold the mouse down when Macintosh is first starting up, the internal diskette is ejected. However, if you let Macintosh start normally and then hold the mouse button down when you see the "Welcome to Macintosh" box, the Startup disk will stay inserted in the drive and remain the current System and Finder that are in control rather than switch launching to the Hard Disk. This is often useful in troubleshooting the Hard Disk when the System or Finder on the Hard Disk is damaged or corrupted. If booting from the new 128KB ROMs, this feature is not present. Instead just boot from a floppy.

Mouse Down At Boot [using the MacsBug 5.0 debugger]

If you hold the mouse down during boot when you see the "Welcome to Macintosh" box and you are using the new MacsBug 5.0, the debugger will not be loaded. On a Macintosh Plus you still would have the built-in debugger to use in this situation.

Command-Option Mount [Finder]

If the Command and Option keys are held down while a disk is being mounted (while booting up or right after a disk is inserted), the Finder will ask you if you want to rebuild its invisible Desktop file. Incidentally, this is also what the Finder does whenever it displays the dialog telling you that a disk needs minor repairs. This is often useful in troubleshooting. (The main side effect here is that your GetInfo comments are erased. In addition, on MFS volumes your folders are renamed to Untitled 1,2,3...)

Command-Option-Tab Mount [Finder]

If the Command, Option and Tab keys are held down while a disk is being mounted (while booting up or right after a disk is inserted), the Finder will ask you if you want to initialize the disk. If you cancel this operation then it will "fall into" the dialog for rebuilding the DeskTop file. This is a last-ditch effort that is sometimes needed for recovering a truly munged hard disk.

Launching

Option Launch Application [Finder]

Holding down the option key while launching an application by double clicking on it transfers the active System and Finder to the disk that the application resides on (otherwise, if the System and Finder on a hard disk are active they will remain active). This is needed when using any of the various Installer programs, for example.

Command-Option Launch [Finder]

This has the same effect as above, but in addition it allows you to run any file, regardless of what kind of a file it is. (Caution: this means you can run such files as the Clipboard File and the System which were never designed to be run in this fashion. The result in these cases can be disastrous!) As the Finder is normally not a launchable application, by using this command you may launch the Finder on another disk. This is also useful in development when you want to launch a newly created application whose type has not yet been set to APPL.

Windows

Command Drag Window [ROM - Window Manager]

By holding down the command key you can select and drag a window on the Desktop or in an application without having the window become active. This allows you to move a window while keeping it behind the frontmost active window.

Option Mount [Finder]

If the option key is held down while a disk is being mounted, the Finder will not open any windows that (perhaps) would have been opened. This is useful if you want to quickly return to the Finder and you forgot to use Option Open (see below) when you originally opened up many windows in the search of a file.

contd.

Option Open Window [Finder]

If the option key is held down while a window is opened, the Finder will not 'remember' that the window has been opened. The net effect is that when you return to the Finder the next time after opening an application or document inside this window, the window will not open back up.

Option Close & Option Click Go-Away Box [Finder]

If the option key is held down while selecting the close option from the file menu, or if the go-away box is clicked on while holding the option key down, all of the windows on the desktop will be closed. (To earlier Finder users, this is the Close All command).

Icon Configuration Management

Option Clean Up [Finder]

By holding down the option key while selecting the Clean Up menu item (in the Special menu) all of the icons in the current window are automatically re-aligned from afresh to the grid.

Command Drag Icon [Finder]

By holding down the command key while dragging icons in a window, files are automatically aligned to the grid when released.

Option Drag to Trash [Finder]

Normally when you drag an application into the Trash the Finder will prompt you with "Are you sure you want to remove the application...?" However, if you have a lot of applications that you want to trash quickly, holding the Option key down while selecting and dragging the files will suppress this dialog. Doing this will also allow you to trash files that are locked.

Quitting

Option Quit [Minifinder]

With the MiniFinder active and installed, holding down the option key while quitting an application will return you to the regular Finder rather than the MiniFinder.

Command Quit [MacPaint]

Holding down the command key when quitting MacPaint will reboot Macintosh. We're talking a cold boot, folks. This is also true in QuickFile, another of Bill Atkinson's applications.

Enter [Minifinder]

Pressing the Enter key while in the MiniFinder is equivilent to selecting the Finder button with the mouse: It returns you to the Finder. (It may also be thought of as the MiniFinder quit button)

Tab [Minifinder]

Pressing the Tab key while in the MiniFinder is equivilent to selecting the Drive button with the mouse: It toggles which disk is active. By doing this you may specify which disk's Finder you wish to Quit to, as the MiniFinder will launch any Finder on any disk as long as a Finder exists on that disk.

Printing

Command-Shift-3 [System - FKEY]

This will take a "screen shot" of the current screen and save it as a MacPaint file named "Screen0" on your current System Disk. Additional screen shots are named Screen1 through Screen9. This is the only way to print screen shots on a LaserWriter, namely, by saving a screen shot, entering MacPaint, and printing to the LaserWriter in MacPaint. (Print draft is unsmoothed, Print final uses smoothing)

Command-Shift-4 [System - FKEY]

This will print the active window to the ImageWriter (the LaserWriter is not supported). If you hold down the mouse button while pressing Command-Shift-4, the action will start when you release the mouse button.

Command-Shift-4 w/Caps Lock down [System - FKEY]

This will print the entire screen to the ImageWriter (the LaserWriter is not supported). If you hold down the mouse button while pressing Command-Shift-4, the action will start when you release the mouse button.

Command-F When Printing To LaserWriter [LaserWriter]

If you wish to create a Postscript file on your disk rather than printing it to the LaserWriter, select Print from your application and when you get the standard LaserWriter box, immediately after saying okay press Command-F, which creates a file named "Postscript" which is a TEXT file containing the actual ASCII characters that would have been sent to the LaserWriter. You can then modify the code and resend it by using PSDump, a LaserWriter utility.

Miscellaneous Bizarrities

Option Launch [Font/DA Mover]

By holding down the option key while entering the Font/DA Mover you will select the Desk Accessory mode rather than the default Fonts mode.

Option Open [Font/DA Mover]

By holding down the option key while clicking on open in the Font/DA Mover, all of the files on the disk are displayed (not just font or DA files), allowing you to move fonts and desk accessories in and out of any files that have resource forks.

Option Close [Font/DA Mover]

By holding down the option key while closing a list of Fonts or DAs, the disk on which that file is located will be ejected.

Option Quit [Font/DA Mover]

By holding down the option key while selecting the Quit button all non-essential disks will be ejected, i.e., all disks other than the current system disk.

Tab in Standard File Package Used by Most Applications [System - PACK 3]

Pressing the Tab key in Standard File dialogs (the Save & Open dialogs) is equivalent to pressing the Drive button.

Typing In Standard File "GetFile" [System - PACK 3]

If you type a single letter when you are viewing a list of documents in an open dialog, the first file that begins with that letter (or the next file that follows) will be selected. If you quickly type more characters in the filename, then any file whose name starts with all the characters typed will be chosen.

Cursor Keys In Standard File [System - PACK 3]

The cursor keys on the new Macintosh Plus keyboard allow you to move up and down through the hierarchy when

contd. on pg 78

BEST OF THE MAC ITEMS FROM UBBS
by Regina Litman

Mac Hardware

Mac+ ROMs

JOHN M. HOPE ON 04/09 TO ALL

There is considerable discussion going on around the country on various BBS and comercial services about Mac Plus ROMs. Specifically, there exist at least three versions (EE, EA, and F4), and two of the three are known to contain bugs. I have seen far too many messages on this subject for it to be dismissed as merely "rumor". Can anyone set the record straight on this? Some folks have stated that they are having system-related problems only to be asked what ROM they have. Frequently, the answer is, "Oh you have an 'old' Mac+ ROM." I am getting ready to purchase a Mac+, but quite frankly, this subject gives me pause. Maybe I should wait a few months until all this shakes out. Apparently, the way to tell which ROM you have is to go to the Desktop and press the interrupt key on the side. Then when the dialog box appears, type in DM400000<cr>, and read the 5th and 6th character of the top line. Would appreciate it if anyone could shed some light on all of this.

New Mac+ Connectors

MARCO BARIO ON 04/15 TO BOB MASSO

Question: What is EMI?? Also: What about CS? (Customer Support!) It wouldn't be so bad if they would just include adaptors with the new pluses or send them to all the dealers to sell for $10 or so!

EMI = ???

BOB MASSO ON 04/17 TO MARCO BARIO

EMI stands for Electro-Magnetic activity, such as your old Apple][+ scrambling your (or your neighbor's) TV reception. Over the last several years the Federal government has placed more stringent limits on what is allowable for devices such as computers. This is one of the exceptions to the general rule of regulation being harmful to an industry. By forcing ALL the home & business micro manufacturers to spend the extra several dollars for reduction of E(lecto)M(agnetic)I(nterference) costs, we the consumers are spared what used to be a rather annoying aspect of early home-computer ownership. On the customer support issue, I have to agree with you there rather strongly. If Apple (or any other manufacturer) can mess up so badly on the little (but badly needed) details like making cabling available, it makes you wonder what they have overlooked that is not so easily fixed. One of Apple's strengths has always been the vast amount of secondary companies filling in the holes in Apple product & accessory lines. I think in this case they really SHOULD have ensured that a source for the very non-standard connectors would be in place beforehand, instead of just assuming it would be. Oh well.

New 512K's

CHRIS SCHANZLE ON 04/14 TO ALL

Well, the anouncement has been made. The Mac 512K's are going to include the new 800K drives and the new ROMS....FOR THE SAME PRICE. (I was told Apple made this anouncement second hand; can anyone else confirm this? Speak!) I'm sure great sorrow is felt to new Fat-Mac owners that they didn't get the much-needed extra disk space. Now, the true question is: Do I REALLY need that one Meg? Should I spend the extra bucks (about $450 in my case)? My initial response is Yea! What do you think about this?

BOB MASSO ON 04/15 TO CHRIS SCHANZLE

Chris, for one I don't really NEED more than 512K, although with the caching software in the new system the extra memory would be useful even when not running Switcher or some memory-intensive application. The major arguments FOR doing the motherboard (as opposed to just ROM & 800K) upgrade seem to be: (1) You gain the SCSI port; (2) The RAM is mounted in such a way that when higher-capacity chips ARE available, it will be easy as pie to upgrade your Mac from 1 meg to 2 or 4 meg. You could even do it yourself from what I have read. Special JOBS LIVES ON note: Yea verily, the effects of S. Job's closed (architecture) mind still haunt the Mac. Theoretically, the 68000 should be able to address 16 meg, but I understand that two address bits are actually not available to the Mac's 68000. I suspect Job's heavy hand as I remember quotes from the WOZ to the effect that on the Apple, Jobs wanted to save several dollars on the design by similarly hobbling the][, under the assumption that 16K was more RAM memory than ANYONE would be able to find a use for. Fortunately Wozniak argued him out of it at the time, but imagine an alternate reality in which the Exidy Sorceror gained Apple's market share and the two Steve's ended up back working at Hewlett Packard!

Mac Schematic

CHARLES REDMOND ON 04/16 TO ALL

Don't know if anyone already has this. The current issue of IEEE Spectrum has a little piece on bottom right of page 83 giving instructions for anyone wanting the Mac (don't know which one) motherboard tracing. Apparently Beck-Tech had to reverse-engineer the board (since Apple wouldn't give them the drawing), so they produced a poster-size versions which their own engineers/designers like so much they are selling copies at $9.95 (plus $3.00 for postage/handling). Write to Beck-Tech, 41 Tunnel Road, Berkeley, CA 94705 or call 800- 772-2400. There are two posters, the first shows the Mac motherboard; the second shows the power supply, keyboard, and mouse plus timing diagrams and a block diagram (which we already have, though). The posters are 22 by 34 inches. Seven of the chips are custom LSI's from Apple.

Mac A Plus + ?

JIM RHODES ON 04/18 TO ALL

I think that only your needing a hard disk to manage a very large database justifies getting a Mac+ instead of a good RAM upgrade. Needing more speed and/or more disk space do not justify getting a Mac+. If you need more speed, you get more speed on a Mac+ than on a Mac 512K only if you switch very often among very many applications and files on a hard disk. Otherwise, you get more speed from using more RAM and a RAM disk &/or Switcher. Also, it seems that you must expect to spend an hour or two each week rebooting the hard disk after it crashes and/or also sometime making a backup for your hard disk, as it will crash about once a week. Needing more space does not justify getting a Mac+ because you could get more space by getting an 800K external drive. The 800K external plus 400K internal gets you 1200K on TWO drives. HFS can be run without the 128K ROM's (by using the newest System file, Finder, and HD20, for example). Some 800K external drives now cost only about $260. Therefore, it seems to me that if you don't need an enormous storage capacity but do want speed, you get more of what you want by getting a good RAM upgrade like my Levco MonsterMac. Also, it runs ALL old software (like Megaroids) with NO problems. (I do not work for Levco in any way).

Upgrades and Such

BILL BALDRIDGE ON 04/29 TO ALL

Up and running 1078K!? Have been enjoying the benefits of

contd.

the Beck-Tech 1M upgrade kit for about 1 month now and find no problems. I'm still wondering about the 1078K when I use "About the Finder" from the Apple menu though. Previously, I was running 512K thanks to the upgrade article in Dr. Dobbs (Jan '85) for over 6 months. By the way, I have five spare 74F253 chips needed for the Dr. Dobbs upgrade and a hand-wired satellite board with socket and 74F253 chip installed. (All that's needed is a stout heart and steady hand and the right tools). Just got my ADC1200 in the post today...hooked up and here I am! Practiced a bit with Red Ryder hooked up to the Imagewriter beforehand - still $175 from DAK! Great zot!

Mac Software

MacDraw

MARK BALLOW ON 03/30 TO ALL

Using MacDraw on the LaserWriter and a pic imported from Paint, it takes 10 or more minutes before printing out. If I construct a figure using MacDraw and the laser fonts, it only takes a few minutes to print out. I'm using v1.7 of MacDraw. Does anyone have an explanation and a solution for the impossibly slow printout when using an imported pic from Paint in MacDraw?

TOM WARRICK ON 04/08 TO MARK BALLOW

MacPaint pictures are bitmaps, rather than QuickDraw calls as are normally used by MacDraw. The difference in memory required is considerable if the MacPaint picture is anything more than trivial. The LaserWriter uses PostScript, which uses things similar to QuickDraw calls—it likes lines, areas, curves, etc., but doesn't like bitmaps. Hence the time to convert and/or process a bitmap. Also, smoothing takes incredibly long with a bitmap, particularly a detailed one. Turn smoothing off if you can.

Mac Word Processing

MITCHELL ALLAND ON 04/05 TO ALL

There is a real lack of a good heavy-duty word processing program for the Macintosh—one that includes dictionary, thesaurus, column capability, along the lines of WordPerfect 4.1 for the IBM. I understand that SSI is developing WordPerfect for the Mac. I hope it comes soon and that it will be a full-featured version. Perhaps this will finally give Microsoft an incentive to issue a WORD upgrade. Does anyone have any news either on WordPerfect or a new WORD?

JOE CHELENA ON 04/05 TO MITCHELL ALLAND

SSI has said that WordPerfect will be out around the end of the year.

System Versions?

BAILEY WALKER ON 04/06 TO ALL

Could someone please tell me how to find out what version of the System File I'm using? I recently received the new MacBottom version 2.6A software. Finder 5.2 is there, but I can't figure out how to find out whether or not System "3.1.1" is here.

JIM RHODES ON 04/13 TO ALL

I just did this yesterday, so I'm an expert now. You can use FEdit to find System versions. Use the 'search for ASCII string' and search for the string 'Version', and you can usually find the version very quickly. FEdit is a user-supported utility program, and a version of it is on one of the SigMac disks.

Big Databases

BART GELLMAN ON 04/16 TO ALL

Help! I need a database program which can (1) handle tens of thousands, maybe 100,000+ records, (2) create a shell for search & retrieval & analysis (including Boolean conditionality) that even a very timid MacNovice can understand, (3) exchange tab-delimited ASCII files with, e.g., MS File, and (4) do flexible reports and especially mailing labels. OverVUE sounds terrific EXCEPT that it is entirely RAM based, and so I can't imagine it will handle the size database I have in mind. Does anyone have a suggestion on (1) what software to use, and (2) who can help me work up templates?

MICHAEL HARTMAN ON 04/26 TO BART GELLMAN

I'd strongly recommend looking at Omnis 3. It doesn't take tab-delimited fields but does take DIF, SYLK, comma-delimited, and fields per line. A database which is very Mac-like in interface can be programmed in it (menu com- mands, buttons). The database accomodates at least 12 "files" per database, 120 fields per relation, and thousands of records. You are limited in the sorting you can do with more than 60,000 records (at least in 512K). Are you looking for sources of volunteer or paid help with DB creation?

Mac-IBM Mainframe

FRED WAMBOLDT ON 04/17 TO ALL

Is it possible to get the Mac to fully emulate an IBM 3270 terminal? I have tried my standard terminal repertory (Red Ryder, FreeTerm, Pretty Good Terminal) without being able to really use the CMS editor. I have been told that MacTerminal has an IBM emulator. Is that true, and how well does it work? Suggestions welcome!

STEVE GOODMAN ON 04/27 TO FRED WAMBOLDT

It is indeed true that MacTerminal has an excellent IBM 3270 or VT100 emulation mode. I have used CMS with full screen editor extensively with no problem except for a somewhat annoying tendency to have a "line of death", a blank space between the line number and program statement that causes a freeze-out of the keyboard if you are unlucky enough to have your cursor stop there. That may not be in MacTerminal though. Anyway, I use it, and it works fine. You should get a "cheat sheet" for all of the IBM 3270 "equivalent" PF key commands from the computer center that you are trying to hook up to. If you don't know what your escape key is (probably the tilde) you won't get very far. Good luck!! - P.S. - The mouse acts as a super cursor which is nicer than using the actual IBM terminal.

Copy Protected Programs

MARTIN MILROD ON 04/25 TO ALL

To move copy protected programs to 800K disks, you have two generic choices: (1) copying invisible or "null" files to the 800K disk (Microsoft uses this protection scheme in Excel, WORD, Chart, Multiplan, etc.), or (2) bust the copy protection scheme by applying the appropriate "patch" to the application program. Copy II Mac 5.2 and a host of newly evolving copying software will be able to handle 800K disk capacity, increasing from the 80 sector 0-79 to the 160 sector 0-159 format. To "patch" the application program itself, use MacZAP or - even better, Hard Disk Utilities 1.2, both of which permanently change the program so that the application is Finder moveable without any problem. The problem with all this is that this stuff is also the pirate's haven. Using them to back up your purchased stuff is absolutely kosher however.

WORD Helpers

DOUGLAS E CANTON JR ON 04/30 TO ALL

My thanks to all who offered their help with MS Word copy protection. I used the Hard Disk Utility on Copy II Mac, and it worked fine. It is unfortunate that Microsoft as well as dealers (including where I bought Word) could not or just plain did not respond in a more helpful manner. So, in the end, that's what Pi friends are for!

contd.

Red Ryder 9.0
JIM RHODES ON 04/27 TO ALL
The following is quoted from GEnie, Freesoft Rountable: "(Red Ryder 9.0) XMODEM FILE TRANSFERS ARE, AT BEST, ERRATIC!! OTHER BUGS HAVE BEEN REPORTED IN THE FREESOFT R(ound)T(able) B(ulletin) B(oard)!! WE SUGGEST THAT YOU WAIT FOR THE NEXT VERSION, COMING TO A ROUNDTABLE NEAR YOU (Rockville) (real) SOON (now)!" Not to worry, it seems to me that even if you could get a download started on GEnie, it would be declared complete before it is complete. My suggestion would be to just save your time, energy, and money for something else. What a farce! How much is "Microphone"?

Mac Misc. & Gossip

PageMaker
JAMES DONNELLY ON 04/07 TO LEE RAESLY
This is my first time on the boards; the question should probably go to Board 3, but they don't seem to recognize my ID. Can someone please tell me how to persuade PageMaker to print with the LaserWriter Plus fonts? I've tried it with and without the Apple printer installation, with and without the Laser Prep file, with and without the Aldus Prep file; Word and MacWrite have no trouble with the newer fonts—even MacDraw can handle them. But the higher-priced spread (so to speak) cannot cut the mustard.

BERNIE URBAN ON 04/07 TO JAMES DONNELLY
Having same problem. I think it is due to improper installation of new LaserWriter and LaserWriter Prep applications by the Printer Installer. Also Aldus Prep may be out of synch with new versions Finder 5.2, System3.1 (or 3.1.1), Laserwriter 3.0, Laserwriter Prep 3.0. I intend to check with Aldus at FOSE or in Wash. The hooks have probably not been correctly made. I went back to the earlier version to get a printout this A.M. Let me know if you succeed.

JAMES DONNELLY ON 04/09 TO BERNIE URBAN/ALL
I called Aldus in Seattle and was assured that PMaker's shortcomings are not our fault. The limitations were built in, it seems, to strengthen our characters in every sense. But all will be well with v1.2, mailing this week. When I went back to original System and Aldus Prep, PMaker always went looking for a printer named Plain Jane and would settle for no other. I have no idea where that came from - certainly not from me.

Telecommunications

Apple Modem
CHARLES REDMOND ON 04/14 TO FRED SEELIG
I had problems with the modem but believe it was something funny in the PRAM set (since after I pulled the battery and let it sit overnight—just to be sure—and then reset default telecom to phone and printer to printer, it worked fine). I have used the Apple and Mac+ with FreeTerm 1.8, RR 8.0, Jazz telecom (release 1.0), Pretty Good Term, Mock Term, MackTerm (on SideKick), FreeTerm 1.7, and RR 7.0 and have had no problems. VT100 on RR 8.0 is quite effective; VT100 on Jazz (R1.0) sometimes causes the Jazz software to lapse into its alternate character set (a language I call URDU). But I believe that is a Jazz-related problem. Mac+ with MacTerm 1.0 just doesn't work—but I hear 2.0 works fine. MacTerm had the best VT100 emulator, its only real feature. I think the Apple modem is fine.

Break Key
CHARLES REDMOND ON 04/14 TO LEE RAESLY
At least on a Mac 512 with FreeTerm 1.7 and a Mac+ with FreeTerm 1.7 or 1.8 the Enter key on the keypad is "Break", but it sends garbage characters as well (the tilde and ampersand I think). But Break works—on Jazz you pull down menu and request "long" or "short" break (don't know how long or short they really are; long works though).

Mac Modem
RICHARD BROSNAHAN ON 04/22 TO ALL
I have a Mac enhanced (512,128K ROM, 800K internal drive) and need a modem. I have been seeing a lot of chat about the DAK Duck and have their catalog. Is there a way to hook this "Duck" up to my Mac? Where can I find the proper cable? Will Red Ryder 7.0 work, and do I need other software?

MARTY MILROD ON 04/25 TO RICHARD BROSNAHAN
Richard, let me urge you to await Red Ryder 9.0 which will be in full release May 25, 1986. This should solve many problems for all of us. Further, while I've heard nothing but good about the DAK SmartDuck, let me suggest that you consider geting a good 2400 baud modem, particularly if you intend doing downloads. The best of these is, in my opinion, US Robotics Courier, which you can get for $385 through 800 MAC ONLY. I recognize that the cost is much more that that of the Duck, but the US Robotics is a solid machine which is the "standard" in my opinion for 2400 baud modems, although the high-priced Hayes remains the standard for 1200 baud modems. (The 2400 Baud Hayes is flakey.) Hope this helps.

Games & Gamesig

Mac Flight Simulator
THOMAS JOHNSTON ON 04/18 TO ALL
I just saw Flight Simulator for the Mac in Crown Books. It looks fantastic. The control panel makes the IBM version look crude. It appears to have a new viewing option that shows you what the plane looks like from the control tower's point of view. You can see yourself in the air! I notice that it has three plane options: a simple single engine, the World War flying ace, and a fast business jet. They also had Orbiter, the shuttle simulation we saw at GameSIG and we all know is fantastic. It makes me want to go out and buy a Mac.

Enchanted Scepters
BILL AMON ON 04/28 TO ALL
Problem: With new ROMS Enchanted Scepters' pull down menus will not work. To fix this problem, use Finder 5.2 and init. a new disk (I did double-sided), drag the Ench. Scepters disk icon over to the inited disk (note that the new Finder will copy the invisible files!), drag a new System v3.1.1 over to the new disk, and set Ench. Scep. as the start-up application. That's all you need. Now if I can just figure out how to fix GATO!

RONALD WARTOW ON 04/29 TO BILL AMON
Thanks for the tip. I expect that the new ROMs (whatever "they" are!!) will cause problems for other games. Yours is the first message about any difficulties. Spectrum Holobyte (GATO) has excellent customer service and, I believe, has an 800 number. If you call, mention WAP, and they'll probably fall over themselves to help you since both the Mac and Apple // GATO's got favorable reviews in the Journal.

Mac Programming

HFS
TIM BUEHRER ON 04/05 TO JIM RHODES
Jim, there are several answers to your question. First, if you have not upgraded your ROM, an HFS disk will not boot your Mac. Second, if you boot the Mac with a MFS disk that has the HD20 file on it and the newer System and Finder, an HFS disk will be recognized and can be used to run the Mac. In fact, you can make that disk the startup disk by option-command-double clicking on the Finder. I hope this helps.

JIM RHODES ON 04/07 TO TIM BUEHRER
Yes, thanks for the explanation. I think this means that if someday I get an 800K external disk drive and use the new

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A BYTE OF BIX
by Hunter Alexander

"Bix is fun. Bix looks like the way to get the whole world wired and talking."--Message left on "bix learn" conference on January 27, 1986. "Byte Information Exchange, or Bix, is addicting", said columnist Jerry Pournelle recently.

Bix is a computer conferencing service offered by McGraw-Hill Inc. and Byte Magazine. I got onto Bix because I have written two book reviews and several microbytes for Byte. I've found Bix easier to learn than a Tandy bulletin board that I belong to, CompuServe, or MCI Mail which keeps sending me a message on some new official of MCI that I've read five times already. Bix sometimes reads me a message about Apple Computer that I've already seen. The repetition problem is probably in cache memory, but Bix does it less than BCI mail.

Recently I was doing some research on a communications network called the National Crime Information Center. When I left a note on "ask.bix" saying that I had read that NCIC was run on the Unix operating system and asking for comment, "bob" left me a message. The answer was no, said Bob, who used to work at NCIC. Back then NCIC was an IBM shop operating under VMS. This information helped me avoid a mistake and would have taken me hours of library research to check.

Some Bixers use the show who massachusetts command to locate people near them who can solve technical problems and then look at their resumes posted on Bix and then give them a call. The command is show who huntera , for example, to look at my resume. My Bix name is huntera. You can edit your resume by typing the command edit resume.

I am interested in the Soviet Union and have learned a lot from the "soviets" conference run by cindy in Iowa. However, the Soviets were as hard to handle in a conference on Bix as they are in the Middle East, and the conference apparently got out of hand. Many would-be cutters of the Pentagon budget argued endlessly with those who would put more bucks into defense. The conference is much less active than it was. Now "soviets" is "read only". You can't comment on comments endlessly.

Some conferences generate more traffic than others. The "msx/public domain" conference on that language has only a few messages, but I don't think that you will read any place else that the Japanese are introducing MSX computers in Canada in preparation for a U.S. debut. Neither Bix nor McGraw-Hill guarantees the accuracy of opinions left by Bix subcribers.

I enjoyed reading the "kaypro" conference. The "law" conference has people talking about mail order and how to get their money back when the product doesn't work. There is a "law.texts" conference for discussion of language of decisions on computer law. The "bbs" conference gave me the numbers of three bulletin boards that I wanted to call. Each time I called, the numbers were busy.

The Bix discussion of how to decrypt encrypted television audio signals in DES (digital encryption standard) on January 29 was abruptly terminated by the BIX managers for some reason. My guess is that McGraw-Hill lawyers did not want to aid and abet piracy of the television signals broadcast from satellites. I am not sure. This was on "home satellites" conference. I think the expert Bixer was Bill Blue who wrote ASCII Express for modem file transfers. Apparently, Blue was cut off in the middle of a message.

Bix has its frustrations for everyone, including the helpers and managers who have to show a profit at some point. McGraw-Hill recently closed down its magazine **Popular Computing** for not producing enough profits, and could close down the commercial side of Bix for the same reason. My guess is that the part of Bix that is used by editors and contributors will be around as long as Byte is around.

Bix User Manual, now 24 pages in its second edition, will soon be replaced by a third. Bix costs $25 to sign up if you are a Byte subscriber. If not, it's $39. Bix connect time is $9 an hour after 6PM. During peak hours, 7AM to 6PM weekdays, Bix costs $12 an hour. In most places Tymnet is the access to Bix. But in San Francisco, Los Angeles, Chicago and Boston, Bix has its own local number. The Bix Customer Service Line, 1-800-227-2983, is answered from 8:30AM to 4:30PM.

Bix moderators get no pay, but do get free connect time, I think. Some are better than others. Apparently the system manager, George Bond, hires and says goodbye to moderators. I became moderator of the "soviets" conference, on a very informal basis, early in 1985 but was never told how to leave a message. I'm not sure I was ever a moderator. I do remember getting a message from Mr. A. Lane who apparently had been told that I was the moderator. So I was let go and Cindy took over. I did call Mr. A. Lane on the telephone and answered his message to me.

To leave a message on Bix, you use the quit command to get the mail prompt. You use the say command and then place dot command at the beginning of a line to save your text file. Then you use the send command or add command.

I am not as enthusiastic about Bix as the new user quoted above. But I use it a lot. At least one friend is miffed at me for being on the phone too much when she wants to call. Bix still has an experimental and entreperneural personality that I like. It is evolving every day as George Bond thinks up new conferences. I've tried to download using the opt prompt but have not been able to master that move so far. The carbon copy or cc command for some reason still puzzles me. But everyday I come back for another Bix.

DISKETERIA DISPATCH
by Jim Little

A new Apple // disk this month includes utilities from Denver Apple Pi. Make your Imagewriter behave like a Mac was driving it. Two different disks to help you. In the spirit of Spring sales, we put both on the same floppy!

Imageworks - Disk /WAP807 for ProDOS is on one side, and #174 is on the other for DOS 3.3 systems. Contents include initilization routines for all combinations of Apple //c's and //c's, with both flavors of Imagewriter. Fonts and still more fonts—from APL to wicker, along with the font editor to make your own. Characters are not limited to alpha-numerics. Make disk labels with the directory printed in condensed type. Set the printer for non-standard paper sizes. When you are done restore the printer internals to the original settings.

Coming next month—the first two Apple /// disks. Sharpen your gaming skills with this first pair. More in the pipeline—make that /// hum. Send your contributions of favorite public domain /// programs to the office or bring them to the meetings.

The following two SigMac disks were available at the April general meeting but were not described in last month's Journal. The descriptions are taken from the notes of Tony Anderson.

SigMac Disk 39: Xlisp/MiniAda

You know that you are a real Macintosh "old timer" if you can remember when the only way to program it was in Microsoft Basic 1.0 or by purchasing a Lisa. Well times have changed. Both Basic 1.0 and Lisa are no longer with us and there are hundreds of ways to program the Mac. **Xlisp 1.6** is the latest update of one of the first public domain languages. **MiniAda** is a learning tool for programmers. It will take you inside a compiler and show you how a compilation is done in a way only a Macintosh can.

In the Xlisp 1.6 Folder:

Xlisp 1.6 (by David Michael Betz) Xlisp is, to quote the author, "An Experimental Object-oriented Language." This is version 1.6 of Xlisp. Xlisp is a small implementation of a Lisp like language.

Experlisp vs. Xlisp (by Peter C. Coffee) This is a comparison of Xlisp and ExperLisp, a commercial implementation of Lisp.

Xlisp Documentation (by David Michael Betz) This is the documentation for Xlisp. It is reasonable, indeed quite good as documentation for public domain software goes. You might want to purchase one of the many books on the subject of lisp to supplement this.

Examples A collection of small programs in Xlisp.

In the MiniAda Folder:

MiniAda (by Anil Bajaj, Kelly Hickman, and Thomas A. Standish) The authors sum up MiniAda well in their introduction. "MiniAda is a small educational compiler. Some have called it "The Visible Compiler" because it uses animation and pictures to show you what goes on inside a compiler while it is translating a source program into object code."

AboutMiniAda Note by the authors on MiniAda and other products not in public distribution.

minada.txt This is a miniada program for the compiler to compile.

SigMac 40: Mac Videos

MTV doesn't have anything on the Macintosh when it comes to creativity, and this disk proves it. VideoWorks is an application for the Macintosh that allows the creation of highly detailed movies with sound tracks. We have collected as many VideoWorks animations as we can squeeze on one disk together with the VW Player and set it to startup automatically. So flick on the Mac, place this disk in the drive and sit back and enjoy some Mac magic.

On the DESKTOP:

VW Player (by MacroMind) This will allow you to play an animation created by the Hayden Software product "VideoWorks."

VWPLAY2.DOC

In the MacVideo Folder:

HELLO AMIGA	**Spinning Sphere**
Space Epic	**MAC PAINT**
IBM FUN	**Opening Logo**
Cloud #9	**1984 Movie**
Marbles	**Demo List**
JULY 4TH	

Power User contd. from pg 73

in a Std File dialog box. The up and down arrow keys allow you to scroll to a file of your choice. If you scroll to a folder, use Command and the up arrow to move you closer towards the root directory. Use of Command-Down Arrow on a folder allows you to descend deeper into the disk, that is, to open that folder.

Option Name Newly Formatted Disk [System - PACK 2]

If you wish to make a 400K HFS volume, do the following: Initialize a disk and name the disk in the proper disk init dialog. By holding down the option key when terminating the naming dialog (via Return or Enter or clicking on the okay box) a 400K disk is made a HFS volume rather than an MFS volume. Note: you must have had the chance to name the disk via the proper dialog box or else the disk will not be formatted as HFS.

Command Shift 1 & 2 [System - FKEY]

These keys will eject the internal floppy and external floppy disk drives, respectively. If a Hard Disk is attached to the External Drive Connector with a floppy daisy-chained to it, the floppy will be ejected. At no time will a Hard Disk be ejected via these keys.

WASHINGTON APPLE PI DISKETERIA MAIL ORDER FORM
Software for Creative Living

This form is only for ordering disks that you want mailed to you.
5 1/4" DISKETTES: - Members $ 5.00 each; Non-members $ 8.00 each, Plus $1.00 each postage up to a maximum of $ 5.00.
3 1/2" DISKETTES: - Members $ 6.00 each; Non-members $ 9.00 each, Plus $1.00 each postage up to a maximum of $ 5.00.
A $1.00 per disk discount on the above prices is offered for orders of 5 or more disks. Postage remains as above.

DOS 3.3 Volumes

( ) 41 IAC 25 Mach.Lang.Util.
( ) 42 One Key DOS ***
( ) 43 IAC 29 Utilities H
( ) 44 Utilities I
( ) 45 Diversi-Copy ***
( ) 46 French Vocab. Tutorial
( ) 47 Tic-Tac-Toe in French
( ) 48 Boot for I'Hote
( ) 49 I'Hote Story
( ) 50 I'Hote Quiz
( ) 51 French Poetry Tutorial
( ) 52 Apollinaire Biography
( ) 53 Albert Camus Interview
( ) 54 Tic-Tac-Toe in Spanish
( ) 55 Rafel-boot
( ) 56 Rafel
( ) 57 Rafel Quiz
( ) 58 Matute
( ) 59 Lo Fatal
( ) Audio Tape 1: French Voc.
( ) Audio Tape 2: Spanish Voc.
( ) 70 Business/Math/Statstic.
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( ) 72 Keyboard Games
( ) 73 Text Adventure Games
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( ) 75 Color Graphics for Fun
( ) 76 Education
( ) 77 Utilities
( ) 90 Spreadsheet C Gen. Bus.
( ) 91 Spreadsheet D Investmt.
( ) 92 Spreadsheet E Bus. Rec.
( ) 93 VisiPlot & VisiTrend
( ) 94 CALCULINK ***
( ) 100 Utilities A
( ) 101 Utilities B
( ) 102 Games A
( ) 104 Business A
( ) 106 Science Engineering
( ) 107 Games B
( ) 108 IAC 10(Graphics)
( ) 109 IAC 11(Applesoft Tutr)
( ) 110 Personal/Education
( ) 111 Games C
( ) 112 Utilities C
( ) 113 Business B
( ) 115 IAC 12/13 Misc.
( ) 116 IAC 14 MicromodemII
( ) 117 Picture Packer
( ) 118 Utilities D
( ) 119 IAC 15 Misc.
( ) 120 IAC 16 Misc.
( ) 121 WAPABBS 1.1 Doc.**
( ) 122 IAC 17 Misc.
( ) 123 French Vocabulary
( ) 124 Utilities E
( ) 125 IAC 18 Misc.
( ) 126 Sights and Sounds
( ) 127 Math/Science
( ) 128 Games D
( ) 129 GLAQ
( ) 130 Diversi-DOS ***
( ) 131 Personal/Educ. 2
( ) 132 IAC 19-Utilities F
( ) 133 IAC 20-Pascal&DOS 3.3
( ) 134 New Members Disk

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( ) 135 WAPABBS1.1 Disk 1**
( ) 136 WAPABBS1.1 Disk 2**
( ) 137 IAC 21 Spreadsheet A
( ) 138 IAC 23 Utilities G
( ) 139 IAC 24 Education 3
( ) 140 Education 4
( ) 141 Special Data Bases
( ) 142 IAC 28 Pinball Games
( ) 143 Sports
( ) 144 IAC 27 Applesoft Prog.
( ) 145 Apple Logo Tool Kit
( ) 146 Logo Documentation
( ) 147 App. Logo Samp.Prog.
( ) 150 EDSIG1 (Elem. Math)
( ) 151 1983 Tax Template
( ) 152 IAC 31 Miscellaneous
( ) 153 Investments A
( ) 154 Investments B
( ) 155 IAC 33 Miscellaneous
( ) 156 IAC 35 Applsft-AW//e
( ) 157 IAC 36 Arcade Games
( ) 158 Apple Logo Programs
( ) 159 Recipe Files
( ) 160 Utilities & Games
( ) 161 Wizard Worker
( ) 162 Games E
( ) 163 Graphs and Displays
( ) 164 Games F
( ) 165 Happy Holidays
( ) 166 Charts and Graphs
( ) 167 IAC 40 - Pilot Lang.
( ) 168 IAC 41&47-AW Util.
( ) 169 Hayes Term. Prog. ***
( ) 170 Love's Follies (Util.)
( ) 171 Cat-Graphix
( ) 172 Print Shop Graphics
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( ) 174 Imageworks
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( ) 180 Dungeon Designer
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( ) *182 Lair of Minotaur
( ) *183 Cave of the Mind
( ) *184 Zyphur Riverventure
( ) *185 Castle of Doom
( ) *186 Death Star
( ) *187 Devil's Tomb
( ) *188 Caves of Treas.Isl.
( ) *189 Furioso
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( ) *191 The Tomb of Molinar
( ) *192 Lost Isl. of Apple
( ) *193 Abductor's Quarters
( ) *194 Quest for Trezore
( ) *195 Underground City
( ) *196 Merlin's Castle
( ) *197 Horgrath Castle
( ) *198 Deathtrap
( ) *199 The Black Death
( ) *200 The Temple of Ngurct
( ) *201 Black Mountain
( ) *202 Nuclear Nightmare
( ) *203 Feast of Carroll
( ) *204 The Master's Dungeon
( ) *205 The Crystal Mountain
( ) *206 The Lost Adventure

Eamon contd.

( ) *207 The Manxome Foe
( ) *208 The Gauntlet
( ) *209 Caverns of Langst
( ) *210 Future Quest
( ) *211 House of Secrets
( ) *212 Sewers of Chicago
( ) *213 Slave Pits of Kzorland
( ) *214 Alternate Begin. Cave
( ) *215 Lifequest
( ) *216 Swordquest
( ) *217 Priest of Xim!
( ) *218 Heros Castle
( ) *220 Utility II
( ) *221 Utility III
( ) *223 Temple of the Undead
( ) *224 Quest for Holy Grail
( ) *225 Caves of Mondamen
( ) *226 Orb of Polaris
( ) *227 Death's Gateway
( ) *228 Escape from Orc's Lair
( ) *229 City in the Clouds

ProDOS Volumes

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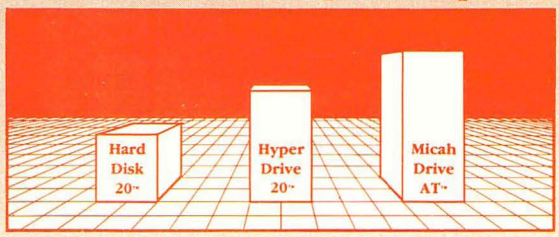

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