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Washington Apple Pi



The Journal of Washington Apple Pi, Ltd.

Volume 7

August 1985

Number 8

Highlights

From Type Slugs to Lasers: Printers History
Apple CP/M Public Domain Software
Optical Scanning: The Future Is Now
MacAdvantage: Putting Roms To Work

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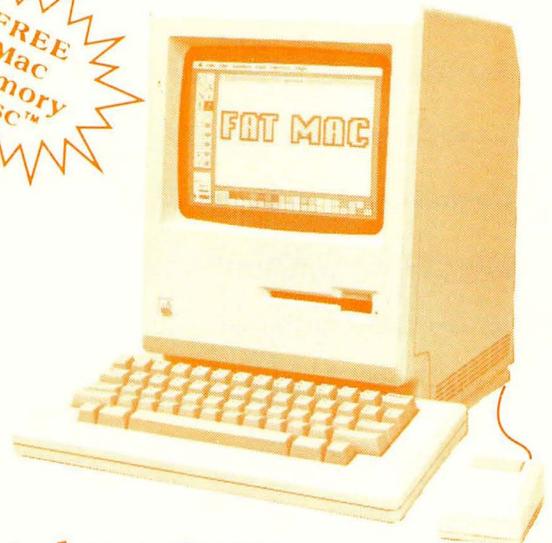
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PRESIDENT'S CORNER

By Tom Warrick

For the first time in four years, this column is not being written by David Morganstein. David has retired after four years of service as the President of Washington Apple Pi. If we were to talk about the people who have helped make WAP what it is today, David's name would be one of the two most prominently mentioned. (The other would be our Editor, Bernie Urban, but as Scheherazade might have said on the 1,002nd Arabian Night, that's another story.) To give an idea of WAP's success under David's leadership, the meeting at which he was nominated for President, in the third year of WAP's existence, welcomed member number 500. Today WAP has welcomed member number 7,100. During David's tenure, WAP has seen more than a growth in membership, it has seen a growth in the services offered to members. Perhaps most important among these is the office, which serves the needs of WAP members in many ways. David also deserves much of the credit for WAP's tutorials program. Many people may not know it (although a few more will now), but WAP has one of the finest collection of microcomputer books and magazines outside of the Library of Congress. Other club services have been expanded and improved under David's leadership. The Journal has grown in both quality and quantity. The bulletin board system has been expanded to three (soon to be four or more) different computers offering a variety of forum for members to exchange information.

But even more than his accomplishments, many of us will always remember David's good humor even under adverse circumstances. At general meetings, board meetings and every other time, he always seemed to have the right words and right ideas to make everything go smoothly. Gena Urban, writing in last month's Journal, quoted someone as saying, "I like his style." An apt statement.

Another person who deserves special mention at this time is Linda Morganstein. Those of you who have called or visited the Morganstein house will appreciate the demands made on Linda so that David could serve as President of WAP. She, too, deserves our thanks (and our admiration) for being so generous to Washington Apple Pi.

There must also be this year a special thank you from all of us to four people who have given WAP much service over the past several years (and will in the future, we all hope!). They are former Secretary Nancy Little, former Executive Board members Nancy Philipp and Bernie Benson, and former Disketeria -- er, uh, what do you call the head of a Disketeria? -- John Malcolm. Bernie and Nancy have retired from the board with many years of service between them. John Malcolm had one of the most difficult tasks given to any WAP officer, the coordination and running of the Disketeria, one of the most popular -- and most important -- services WAP offers. His successor, Jim Little, Nancy's husband, will continue the service of the Little family to WAP. Thank you, Nancy, not only for your work as Secretary but also for the loan of your husband!

With only a few of the thank-yous behind us, we should

now welcome several new faces to the WAP board. You have elected as Vice President for Programs Adrien Youell, whose British charm and wit have already made him well known to people who have attended WAP meetings where he has presided as Program Co-ordinator. Adrien is a pathologist on loan to WAP from Her Majesty's armed forces. While we are welcoming Adrien, we should also say hello to his wife Slew, who we have been fortunate enough to add to the WAP office staff.

Another new member of the WAP board is Ray Hobbs, chairman of Program Interface SIG and the deliverer of WAP Journals to area computer stores in faraway places we mortals dare not tread. Lee Raesly is one of the most recognizable members in the entire organization. Even if you couldn't recognize his trademark red plume, you could certainly recognize his enthusiasm anywhere he went. Lee is on the Hot Line for more things than anyone else in this club, and what's more -- he knows this stuff! Lee also runs the WAP Classifieds bulletin board system out of his own home. John Voglewede is the relative newcomer to WAP on the Board, being member number 4893. He has a graduate degree in computer science and is one of the most active members on the bulletin board systems.

And on the subject of the WAP Executive Board, it bears repeating that WAP is run in a very open way. Essentially, everyone who shows up at the Board meetings (the second Wednesday of each month at 7:30 p.m.) is entitled to participate fully in everything that goes on. This includes eating the cake and cookies that are available as refreshments. This also includes voting on everything. There is a provision in the bylaws that permits votes to be limited to formally elected Board members only, but in my recollection such a procedure has been invoked only four times in the more than three years since I started attending Board meetings. Everyone is invited to come, participate and enjoy the fellowship of some of the most interesting people in the Washington area.

You saw in the last issue our first LaserWriter pages. The Urbans hope to expand the use of the LaserWriter to cover more of the Journal, and to that end they would welcome contributions on 3 1/2-inch Macintosh media. Of course, contributions are still welcome on 5 1/4-inch disks for those of us who use Apple IIs. We are going to use Aldus' "Page Maker" program for page layout, as it appears to be the best such program available.

Tutorials: Although many of us haven't yet taken our vacations, the tutorials group took early leave so as to begin planning for the fall. Check the several bulletins carried in this issue of the WAP Journal and the tutorial registration form on page 64 to see what they have lined up for September. If there is a special subject you would like to have explored in a future tutorial, all you have to do is call George Sall at 768-0212. He'll put the wheels in motion.

Also with regard to tutorials, Marty Milrod has started

a regular program of Macintosh tutorials. These will be offered once a month as a two-part program on two Monday nights. Contact the office if you are interested.

We are in the process of making big changes to the WAP Apple Bulletin Board System (ABBS). We have ordered a Sunol hard disk and will soon be converting to the UBBS software principally so that we can handle more file downloads and can allow longer messages. We ultimately hope to have several numbers that access one shared message base with multiple conferences of messages on particular subjects. We will, of course, continue to operate the WAP Classifieds BBS at 871-7978. And in the next few weeks, we will begin offering the WAP Journal on-line for those members who cannot wait for mail delivery or who want to maintain machine-readable copies of their favorite articles. Alice Allen has graciously donated the use of her Apple when she is not using it. The startup date and phone number will be announced on the club's other BBS's.

While we're on the subject, I want to announce the retirement of the previous SYSOP (System Operator), a fellow whose name I never could remember. He must not have been important, anyway. He is being replaced by an able committee of volunteers, headed by Lee Raesly. Also on the committee are Alice Allen, =Alexander-, Joe Chelena, Dave Harvey, Regina Litman, Marty Milrod and Jack Mortimer.

WAP member Brook Powers has undertaken a project that we Apple II owners can appreciate. Brook is collecting printer command codes so that we can come up with a universal translation table. Thus, if a program in the Journal gives the printer codes for an Okidata 92 when you have an ImageWriter, you would be able to look up the code for ESC-6, determine that it is the code for six lines of text per inch, and substitute the ImageWriter code ESC-A. Currently, Brook has the codes for these dot matrix printers: ImageWriter, Okidata 92, Apple DMP, Data South 180, Prism 80, Prism 132, Integral P80 and Integral P132. He has information on these letter-quality printers: Qume Sprint 9/45, 9/55 and 11, NEC Spinwriter 3550 and Anderson Jacobson 833. If you have some other kind of printer, send a message to Brook on the ABBS (he's WP5973) or write to him at the WAP office, 8227 Woodmont Avenue, Suite 201, Bethesda, Maryland 20814.

Finally, we are coming to the time of the year when we need to start thinking about renewing our lease on 8227 Woodmont Avenue. This space is less than ideal, although it has served our needs quite well for the last several years. Before we renew, however, we want to think about whether there might be space elsewhere that would suit us better. If you know of any available office space that is low-cost, has free parking nearby, is near public transportation, and is accessible to the disabled, please drop me a line on the bulletin board system (I'm WAP538) or through the office. ☞

EDITORIAL

With much trepidation we dove into the world of Apple // to Mac transfers, Microsoft Word, MacWrite 4.5, Laserwriter Installation, System 4.1 Update, Ramdisk and PageMaker .995 (more on our experiences here later) to prepare this issue. Not all done in Laserwriter and not all done by PageMaker, but next time a little closer. Bear with us during this renovation.

We have been getting comments and complaints about too many Mac articles from the Apple // and /// owners and the reverse from Lisa and Mac members. Folks, we try to print what comes in. Presently we are getting what you see published here from approximately 4,000 WAP Apple members and 1300 Mac and Lisa members. Either the Apple folks are well on their way and don't have too much to report, or feel less inspired to contribute. If the latter is true in your case, please reconsider. Remember, this is your Journal. It is what you make it. How about some inputs from the old-time regulars, e.g. John Love, Dianne Lorenz, Arsen Darnay, Nancy Strange, and all the myriad others out there? And how about some of newer members, and especially you //c folks, writing up your experiences and creating a better balance of articles to satisfy all? ☞



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* August 1985 *

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 SigMac 7:30PM-Lady of Lourdes; GAMESIG 7:30-Off.->	<-Thursday 1st contd. DisabledSIG 7PM CCCC	3
4	5 Deadline for Journal Articles	6	7	8STOCKSIG 8PM Office; Apple /// 7:30PM-Conv Center Inn	9	10 SigMac 9AM-Geotown University; LISA/MacXL GU
11	12	13	14 Executive Board 7:30 PM Office	15 Pascal SIG 8:00 PM Office	16 Urbans Return	17 Forth SIG 10:00 AM Office
18	19 PI-SIG 8:00PM Off; Mac Begin. Tutorial #1 7-10PM Off.	20	21	22 No EDSIG meeting in August	23	24 WAP Meeting 9AM-USUHS GAMESIG Program
25	26 Mac Begin. Tutorial #2 7-10PM Office	27	28	29	30	31

Note: Office closed on Tuesday evenings in August.
Thurs. evening hours are 7-9PM.

* September 1985 *

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3 Beginning Tutorial #1 7:30-9:00PM Office	4	5 SigMac 7:30PM-Lady of Lourdes; DisabledSIG 7PM CCCC	<-Thursday 5th contd. GAMESIG 7:30PM-Off.	7 SigMac 9AM-Loctn. TBA; LISA/MacXL
8	9 Deadline for Journal Articles	10 Beginning Tutorial #2 7:30-9:00PM Office	11 Executive Board 7:30 PM Office	12STOCKSIG 8PM Office; Apple /// 7:30PM-Conv Center Inn	13	14
15	16 PI-SIG 8:00 PM Office	17 Beginning Tutorial #3 7:30-9:00PM Office	18	19 Pascal SIG 8:00 PM Office	20	21 "Future of the Pi" meeting USUHS
22	23 Mac Begin. Tutorial #1 7-10PM Office	24 Beginning Tutorial #4 7:30-9:00PM Office	25	26 EDSIG 7:30 PM Office	27	28 WAP Meeting 9AM-USUHS DisabledSIG Program
29	30 Mac Begin. Tutorial #2 7-10PM Office					

EVENT QUEUE

Washington Apple Pi meets on the 4th Saturday (usually) of each month at the Uniformed Services University of the Health Sciences (USUHS), Building B, 4301 Jones Bridge Road, Bethesda, MD on the campus of the National Naval Medical Center. Library transactions, Journal pickup, memberships, etc. are from 8:45 - 10:00 AM. From 9:00 to 10:00 AM there is an informal "Help" session in the auditorium. The main meeting starts promptly at 10:00, at which time all sales and services close so that volunteers can attend the meeting.

A sign interpreter and reserved seating can be provided for the hearing impaired, but we need 3 or 4 business days notice. Call the office.

Following are dates and topics for upcoming months:

August 24 - GAMESIG

September 28 -

Dates for SigMac are:

August 10

September 7

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

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

Membership dues for Washington Apple Pi are \$27.00 for the first year and \$20.00 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.

Current office hours are:

Monday - Friday - 10 AM to 2:30 PM

Thursday - 7 to 9:00 PM *

Saturday - 12 to 3:00 PM

* Note that the office will be closed on Tuesday evenings during the months of July and August, and will close at 9:00 PM on Thursday evenings.

QUESTION: Do you know the Most Underrated Program Disk in the world?

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MINUTES

SUMMARY OF JUNE EXECUTIVE BOARD MEETING

The Executive Board of WAP, Ltd. met on June 12, 1985 at the WAP office. A "Future of the Pi" meeting will be held in September. John Malcolm is resigning his position as Chairman of the Disketeria. Bulletins from an on-line price shopping service will be available to members at the WAP office.

JUNE GENERAL MEETING

WAP, Ltd. met at the USUHS on June 22, 1985 at 10:00AM, with Tom Warrick presiding. There will be a meeting on the "Future of the Pi" in September. Ed Myerson presented the budget for the next fiscal year. The complete proposed budget is available to the membership at the WAP office. The motion was made, seconded, and passed to adopt the budget as presented. The election results were announced. Members were asked to help find suitable Virginia meeting locations.

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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.

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	Dave Harvey	(703) 527-2704	Sider	Barry Fox	(703) 820-5206
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			A,I,M	John Love	(703) 559-2294
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	Shirley Weaver	(301) 761-2479	Forth	Bruce Field	(301) 340-7038
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	Jay Jones (Balt.)	(301) 969-1990	Math/ O.R. Applns.	Mark Pankin	(703) 524-0937
	Barry Fox	(703) 820-5206	Monitor, RGB Color	John Day	(301) 672-1721
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Apple //c	John Day	(301) 672-1721	IDS 460	Joan B. Dunham *	(301) 585-0989
	Jorge Osterling	(703) 671-5797	Imagewriter	Bill Etue	(703) 620-2103
	Scott Rullman	(301) 779-5714	MX-80	Henry Greene	(202) 363-1797
LISA/Mac XL	John Day	(301) 672-1721	NEC 8023	Jeff Stetekluh	(703) 521-4882
Macintosh:	Don Kornreich	(301) 292-9225	Okidata	John Day	(301) 672-1721
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	Donald Schmitt	(717) 334-3265	Spreadsheets	Fred Feer	(703) 978-7724
	Rob Clark	(804) 850-2016	Lotus 1-2-3	Michael Proffitt	(301) 874-2270
Chart	Terry Monks	(703) 471-4610	Multiplan	Dan Robrish	(301) 530-4202
Comm. & Modems	Steve Hunt	(301) 262-9080	VisiCalc	Phil Leber	(703) 378-4391
Digitizers	JoAnn Stewart	(703) 527-4072	Spreadsheet 2.0	Bruce Field	(301) 340-7038
File Vision	Steve Hunt	(301) 262-9080	(MagiCalc)		
Hard Disk	David Jamison(day)	(301) 589-8841	SuperCalc Ver. 2.0	Leon Raesly *	(301) 460-0754
Helix	Harvey Levine	(301) 299-9380	Statistical Packages	Leon Raesly *	(301) 460-0754
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MacIion (DBMS)	Mark Miani	(202) 362-8123	Stock Market	Terry Prudden	(301) 933-3065
MacProject	Jay Lucas	(703) 751-3332	Time-Sharing	Walt Francis	(202) 966-5742
MacWrite	Mary Hockmeyer	(301) 897-5495	Word Processors	Leon Raesly *	(301) 460-0754
MacTerminal	Jon Hardis	(301) 330-1422	Apple Writer II	Leon Raesly *	(301) 460-0754
	Mary Hockmeyer	(301) 897-5495	Format II	Henry Donahoe	(202) 298-9107
Multiplan	John Boblitz	(301) 356-9384	Gutenberg	Neil Muncy Can.	(416) 298-3964
	Don Landing	(703) 690-1010	& Jr.	Harris Silverstone	(301) 435-3582
	Steve Hunt	(301) 262-9080	Letter Perfect	Cara Cira	(301) 468-6118
	Walt Francis	(202) 966-5742	Magic Window and II	Leon Raesly *	(301) 460-0754
Multiplan/Chart	Bob Pulgino	(703) 379-0512	Peach Text	Joyce C. Little	(301) 321-2989
MusicWorks	Skip Horvath	(703) 536-4091	PIE Writer/Apple PIE	Carl Eisen	(703) 354-4837
Word	Marty Milrod	(301) 464-2154	ScreenWriter II	Jim Graham	(703) 643-1848
			Supertext II	Peter Combes	(301) 251-6369
Data Bases			Word Handler	E. E. Carter	(202) 363-2342
dBase II	Paul Bublitz	(301) 261-4124	Word Juggler //e	Peter Rosden	(301) 229-2288
	John Staples	(703) 759-3461	Word Star	Jon Vaupel	(301) 977-3054
	Leon Raesly *	(301) 460-0754		Carl Eisen	(703) 354-4837
DB Master	Dave Einhorn	(301) 593-8420		Barry Fox	(703) 820-5206
Data Perfect	Leon Raesly *	(301) 460-0754		Leon Raesly *	(301) 460-0754
Data Factory	Bob Schmidt	(301) 736-4698		Dana Reil	(301) 350-3283
General Manager	Normand Bernache	(301) 935-5617			
List Handler	Leon Raesly *	(301) 460-0754			
PFS	Jon Vaupel	(301) 977-3054			
	Bill Etue	(703) 620-2103			
	Ben Ryan	(301) 469-6457			
Profile	Ginny Spevak	(202) 362-3887			
QuickFile II	Barry Fox	(703) 820-5206			
	J.J. Finkelstein	(301) 652-9375			
Graphics	Bill Schultheis	(703) 538-4575			
VisiPlot	Lee Raesly *	(301) 460-0754			

* Calls up until midnight are ok.

CLASSIFIEDS

FOR SALE: Daisy wheel printer, Starwriter F10-40, 40 cps, 2 serial RS-232 cables, tractor, Microbuffer print buffer. All for \$950, or sold separately. Also Apple /// Pascal, \$100. Business Basic ///, \$25. Call Steve at 448-9426.

FOR SALE: Apple 512 KB memory board for Lisa/Mac XL. Original cost, \$995; will sell for \$600 or best offer. Used only for 6 months; all packaging and instructions included. Also, Strobe Model 100 Digital Graphics Plotter. Wired for parallel interface with Apple][+//e (and others with proper drivers). \$100 or best offer. Call Marvin at (202) 745-8489 or 745-8331, days, or 543-2898 eve. and wknds.

FOR SALE: Dow Jones Market Manager, originally \$300: two versions available; one won't work in Canada, but works fine here and comes with Xeroxed manual, \$40; other works in Canada as well as here, and comes with lovely printed manual, \$100. Also, ScreenWriter II, latest update, complete with The Dictionary, \$50. Call Newt Steers at (301) 320-5820 9AM-9PM.

FOR SALE: Apple][+, 48K plus 16K card, two disk drives, Smarterm 80-column card, Zenith monitor, stand and fan, Silentype printer and interface card, paddles and joystick. Must sell, \$800. Call Dennis at 340-2138 before 9PM.

FOR SALE: Disk Notcher, \$10; Z-80 Card, \$65; //e 80-column/64K card, \$75. Call Arnie at 460-8093 evenings.

FOR SALE: Apple][+ with 64K, two disk drives, 12" monitor, Videx 80-column card, CCS serial card, Pascal, VisiCalc, Fortran, DOS Took Kit. Best offer. Call Harry at (202) 393-5910.

FOR SALE: Z-80 card for Apple //e (\$60), adjustable tractor feed for doing address labels for Epson FX-80 printer (\$20). Call Lynn in Frederick MD at (301) 845-2651 between 5:00 and 10:00 PM.

FOR SALE: Apple //e extended 80-column card - provides extra 64K of memory and hi-res graphics, \$75. Call Tom O'Hagan after 7PM at (301) 593-9683.

FOR SALE: Rana Elite Three, 652K disk drive, new with warranty, reads disks encoded on Apple drives, fully compatible with Apple's controller card, cost \$489, current discount price \$375, a true bargain for \$325. Rana Controller Card (control 4 drives from one slot), supports above and any other Apple compatible drives, new with warranty, current discount price \$79, another bargain for \$65. Maxell 96 tpi disks for above drive, new, box of ten, discount price \$50, take for \$40. Videx Videoterm 80-column board, used but perfect, current discount price \$175, a steal at \$110. Videx Keyboard Enhancer, \$50. Call Jim on (301) 587-3850. ☞

COMPUTER EQUIPMENT NEEDED

Are you upgrading your computer system? Would you like to help others at the same time?

A local Social Services Agency is seeking computers and/or financial contributions to purchase equipment to be

used by visually handicapped individuals for employment purposes.

All contributions are welcome, equipment or otherwise, and are tax-deductible. Call Michael Esserman at 277-6582 or Bobbie Gottschalk at 881-3700. ☞

COMMERCIAL CLASSIFIEDS

STOCKMARKET SYSTEMS offers a new stock market timing service, Cycle Analysis and Forecasts. A weekly service, valuable for timing stocks, options, mutual funds and index futures. Includes charts and comment with specific forecasts based on computerized models and artificial intelligence methods. 3 months, 12 issues for \$28; 6 months, 24 issues \$50; 12 months, 48 issues, \$96. Robert Wood, 7616 Burford Drive, McLean, VA 22101, (703) 893-9591.

Looking to Rent or Purchase Apple /// computer, monitor and external disk drive. Needed for 2-month time frame. Please call Greg Sullivan at (703) 527-3827.

FOR SALE: VisiCalc for Apple //e users. Solve your business problems - cash flow, inventory, estimates, budgets, forecasts, nearly anything numerical. \$125 (list price is \$250). Call Helen, (301) 294-0515.

FOR SALE: Gemini 10X printer with interface, \$180. Mirage Prof. WP software, \$50. Call Debra Tate, 299-6155 (home).

FOR SALE: Apple][+ 64K System. Includes NEC display, Epson MX 80 F/T printer, 2 Disk II drives, Kensington System Saver, Videx 80-column card, Apple Language card, Pascal, 2 game paddles. Asking \$1000 or best offer by 7/31. Call Russ at (703) 938-2602, leave msg. ☞

JOB MART

HELP WANTED

Parttime typist needed by author of educational programs. Access to Apple][+ or //e, and/or background in education helpful. Call Judy Priven, (301) 320-2829.

POSITION WANTED

Apple Macintosh computer instruction in the general Frederick, MD area. Instruction on the Mac and assorted software. Help with pre-buy decisions. Personalized service and reasonable rates. Call Lynn R. Trusal, (301) 845-2651 (evenings, with no calls after 10PM). ☞

QUESTION: Ever wonder what day of the week Christmas will fall on in 1997, or how fast your disk drive is spinning?

Your New Member Disk makes it easy to find out!

Come to the September 14 Apple tutorial to learn how from Tom Demay.

EDSIG NEWS

by Peter Combes

EDSIG Calendar

No meetings in July or August.

Tuesday, September 27 at 7.30 p.m.

"Education and the Mac"

All EDSIG meetings are held in the Washington Apple Pi offices at 8227 Woodmont Ave., Bethesda, MD.

Meeting Report

Carol Thomas brought to the meeting an impressive selection of microcomputer magazines. Here is her overview of the magazines she showed:

A +

12 issues, \$24.97

P.O. Box 2965, Boulder, Colo. 80322

- news section
- major feature articles
- monthly Macintosh section
- topic-specific glossary page
- Pipeline section: product news with reader service card
- indexes to both products and ads.

Rating: very useful for average user

Byte

12 issues, \$21.00

70 Main St., Peterboro, N.H. 03458

- extensive coverage of the entire computer field
- product reviews

Rating: best for technically oriented user.

Computer Teacher (Journal of the International Council for Computers in Education)

9 issues, \$21.50

University of Oregon,

1787 Agate St., Eugene, Ore. 97403

- articles entirely devoted to classroom use of computers by teachers.

Rating: for educators

Electronic Learning (Scholastic)

8 issues (Sept-Apr), \$19.00

730 Broadway, New York NY 10003

- covers use of computers in education
- one curricular area featured each month
- reviews software of one type in chart format for easy comparison.
- reviews software in article format
- covers new products.

Rating: helpful for general use as well as educators.

InCider

12 issues, \$24.97

P.O. Box 911, Farmingdale NY 11737

- news page
- programs
- reviews of hardware and software
- new software summaries with reader response card
- game section

Rating: very useful for average person

Infoworld

52 issues, \$31.00

P.O. Box 1019, Southeastern, Penna. 19398

- covers the computer business world with capsules, short articles; similar to Time magazine.
 - "Trends" section
 - opinion columns
 - reviews of hardware and software, including capsules of reviews in previous issues.
- Rating: the only weekly -- very timely.

Microcomputers in Education

12 issues, \$38.00

2539 Post Road, Darien, Conn. 06820

- pot-pourri covering awards, special uses, business news, new products.
- comprehensive product reviews
- "intelligence" page
- company profiles

Rating: spotty, but worth looking at

Nibble

12 issues, \$26.95

45 Winthrop St., Concord, Mass. 07142

- programs to type in with explanatory articles
- programs to order on disk

Rating: for those wishing to modify or enhance their Apples with original programs.

Popular Computing

12 issues, \$15.00

70 Main Street, Peterboro, N.H. 03458

- news section
 - Technoklutz column by Stephen Banker
 - feature articles
 - reviews of hardware and software
 - reader response card keyed to products covered
- Rating: very useful for the general user

Small Computers in Libraries

11 issues, \$29.50

Meckler Publishing

11 Ferry Lane West, Westport, Conn. 06880

- news summaries

contd. on pg 9

MEETING REPORT: JUNE 22

by Adrien Youell

"Garage Sale, Budget, Elections and Gift Ideas" - a title for serious consideration!

To the rustle of bucks and shuffle of checks, and general clamour, about 425 members and their families acquired hardware, software and books they always wanted but could not afford, or that might come in handy one day! The Garage Sale was a great success, thanks to Joe Fuchs's inimitable organization. Whether the punters were parted from their dollars wisely or foolishly, the sellers reaped a handsome harvest. Vendors remaining with stacked tables were pleasantly philosophical but most made something. I bought a 1981 version of VisiCalc (!) for \$15 from Kevin ('of the office'), just for fun, as I have never seen columns of figures on my //e; my wife prohibited any expensive dalliances.

The old and new were there, referring to humans and products. Kids traded Hayes Smartmodems for \$150 and a (? wise) older man trundled out an ancient printer. The subsequent weekend must have been an orgy of experimentation. The][+ may have had its day, judging by the many on sale, but hopefully they will, like The Phoenix, rise again another day in another home. Even Apple clones changed hands. A 128K Mac complete system did not sell at \$1900 but was snapped-up the following Monday privately, testifying to the value of hand-outs.

Joe persuasively conducted the release auction about noon, and disposed of many more items, (with amusing audience participation), including games ("Rubbish, even my Dad thought that was easy"), serial cards ("We do need a spare, maybe") and disk mailing boxes ("Handy in my briefcase even if I don't mail disks"). The ethos of the bi-annual Garage Sale seems to be a mixture of Club neighborliness, opportunities to buy and sell particular items or hunt for bargains, disks, cards, drives and computers. Be warned, prices are realistic, although I am convinced my buy was a bargain? Do ask if the unit works! I overheard one seller confess that the drive needed a service job. Joe Fuchs is pleased to thank the GAMESIG for providing the 'door prizes'.

The pre-Christmas sale usually attracts more people, and we may arrange to have it at a different date from the main monthly meeting, say December 7th, and at a Virginia location, so that all may participate and not miss the monthly meeting. Feed-back, please! Your correspondent is your new Vice Pres (Programs), so who better to whom to complain? That's REAL grammar!

This is THE Meeting Report, which would be incomplete without mentioning meeting news, so I will. Tom Warrick chaired the business section, standing up, and got the annual budget approved in 'short order'. Ed Myerson did a great job and kept us 'in the black'. (Congrats, Ed and Mrs M. on Alexandra, born during the week.). Tom thanked the year's officers for their magnificent, unstinting work and reserved comment about David Morganstein until next month when he will be presented with a surprise gift in acknowledgement of

his outstanding, seminal presidency over the last four years. (Has he had a baby too? Well yes, he nurtured The Pi to our present awesome stature.)

The annual ballot was confirmed by acclaim after Sue Roth presented the results of the voting returns, prepared in most part with her son, and finally with other volunteers, in 'public', in the Pi office, June 20. Of a membership of some 4,800 paid-up members round the globe (at the time of ballot), 1,046 voting papers were received; the 'signal' officers achieved over 1,000 votes each, in their respective appointments. The candidates for the seven Directors, who were elected by a clear majority and are noted in this issue of The Journal, clearly outstripped the runners-up, who lay over 200 votes behind, but nevertheless 'performed' surprisingly well. The Club owes you a dept of gratitude, Sue and Son, for your dedicated hard work. Is 'scrutineuse extraordinaire' appropriate?

Clearly, the approximately 25% vote is unacceptable and should be improved upon, but it is The Vote. Sue detailed some extra remarks from the ballot papers, most notably, that "females are not represented". Well ladies, nominate yourselves, or be nominated. Or, question; could we have done this ballot better? Write in. Tom, impressed by excellent showings of the also-rans, invited these folks to attend the Board Meetings. Do come to Board meetings. We need your 'good sense' and expertise. Volunteers are the life blood of The Pi.

Gift ideas for Christmas! Give a subscription to The Pi? [Dear Editor, may I request we have a form by which members may nominate, and pay for gift subscriptions, for friends and relatives?]. Siew, my wife, thought out this one! Seems like a good idea to me. Siew is a volunteer at the office so she may take your calls. Call! I'm not jealous. ☞

EDSIG contd. from pg 8

-- feature articles, e.g. databases, bulletin boards.

Rating: informative even for non-library users.

T.H.E. Journal (Technical Horizons in Education)

10 issues -- "free on a limited basis"

Information Synergy, Inc.

2922 S. Daimler St., Santa Ana, Calif. 92705

-- 6 major feature articles

-- thumbnail summaries for software, books, and hardware with reader inquiry card.

Rating: most extensive coverage of new products.

Washington Apple Pi Journal

12 issues -- free to members of Washington Apple Pi.

Washington Apple Pi,

8227 Woodmont Avenue, Bethesda MD 20814

Rating: the best -- especially for EDSIG News. ☞

Q & A

by Bruce F. Field



Last month I printed some information on intermittent problems with AppleWorks and the Apple extended 80-column card. I got a call from Diane Dresbach, a very nice lady at Apple Computer, who confirmed my published information. The problem is with the MMU chips in the Apple. Apple is replacing these so if you are having problems with AppleWorks and an extended 80-column card, AND have an MMU chip with a date code of 8314, 8424, 8425, or 8426 you should contact the nearest Apple Service Center. (The Apple Service Centers are the regional centers set up by Apple, your local dealer may not be able to help you with this problem.) Diane also told me that they have found no problems with AppleWorks.

Ken Kashmarek wrote to say he also had a problem with Appleworks and the extended 80-column card and the problem was fixed by Appleworks version 1.2. Ken says:

"AppleWorks uses the AUXMOV routine to move data to and from the memory on the extended 80-column card. According to the documentation (//e Reference Manual), the soft switches must be set correctly or else this routine will not function properly. In particular, \$C056 (hi-res mode off) must be hit before going to Appleworks. AppleWorks does not set this switch before using AUXMOV. AppleWorks assumes that \$C01D is less than 128 (\$C01D is used to read the hi-res switch state). Bad assumption! Test it for yourself by using HGR, the TEXT, followed by '-APPLEWORKS' and try to load a file. Even small files use the extended memory."

I guess the bottom line is to make sure you have at least version 1.2 of Appleworks if you are using the extended 80-column card.

Marilyn Emerson wrote to remind me how sequential files work on the Apple. A few months ago I had a program to save the date to disk and read it back later from another program. The critical line in the program to write the date was PRINT MO,DA,YR. Marilyn points out that the INPUT MO,DA,YR statement in the second program requires that the 3 items be written to disk separated by commas or carriage returns. However, the PRINT MO,DA,YR command does not supply the separators required by the input statement and thus the program will not work as intended. Instead the print statement should be modified to be PRINT MO;"",;DA;"",;YR (or equivalently PRINT MO"","DA","YR since semicolons are not required between literals and variables) or PRINT MO : PRINT DA : PRINT YR. The first form prints commas between the entries, the second prints carriage returns. Either is acceptable. I deserve 20 lashes with a wet noodle for that oversight.

A number of people have written asking how to imbed control characters in word processing documents using Applewriter. The manual explains how to do this for most control characters except the null (ASCII 0) character. Unfortunately this character is needed to access special features of some printers (notably the Okidata printers). R. A. Royall

has sent the following patch for the DOS 3.3 version of Applewriter //e to allow entering a null.

Patch for entering NUL (Control-@) in Control-V mode, the only side effect being the DELETE key doesn't work for correcting keyboard input while entering a filename in the DOS COMMANDS or ADDITIONAL FUNCTIONS menu (use the left arrow key instead).

Boot the DOS System Master disk. Remove the System Master disk and insert the Applewriter //e disk and type the following comands:

```
BLOAD OBJ.APWRT][E
CALL -151
1CE1:EA EA EA EA
3EBA:EA EA EA EA
3D0G
UNLOCK OBJ.APWRT][E
BSAVE OBJ.APWRT][E,A,$1900,L,$2F58
LOCK OBJ.APWRT][E
BLOAD OBJ.APWRT][F
CALL -151
1D81:EA EA EA EA
4033:EA EA EA EA
3D0G
UNLOCK OBJ.APWRT][F
```

```
BSAVE OBJ.APWRT][F,A,$1900,L,$30D1
LOCK OBJ.APWRT][F
```

I would strongly suggest that before doing this you copy both APWRT][E and APWRT][F to another disk using the FID file copy program. That way if you accidentally mess up the file you can always copy the original version back again.

Bob Delaney was interested in a recent question an answer on making data file backups from within an Applesoft program.

"I recently uploaded files (June 85, BFF) to Compuserve which describe and implement a COPY command. COPY, which works only under ProDOS, can copy a text file, or any other type file, from anywhere to anywhere. When installed for a given session, it works from the Applesoft prompt or from within a BASIC program like any DOS command.

"You can find the files in the Apple 2/3 section of MAUG in data library 3 (DL3). COPY.HEX should be downloaded. When EXECed it BSAVES the machine language file COPY. BRUNing COPY installs the command.

"COPY.DES contains the description of the command. COPY.ASM contains the assembly language file.

"COPY is my work, which I have released with no

restrictions on its use. Hope you find it useful."

Thanks Bob, I am sure we all appreciate your efforts.

John Willis dropped me a note to update an answer I had on using Atari joysticks with the Apple. "Wico sells an adaptor at less than \$20 that converts the Apple joystick port to two Atari joysticks. This works well for 2 player games (with about an 80% success rate). A good example is One-On-One. It puts one axis to one joystick and the other to a second joystick. It is more practical for young children where the expensive Apple joystick does not have to be placed at risk."

Q. I have an Apple //e and have not been able to find out how to program using either of the Apple keys by themselves or in conjunction with other keys. Also, I would like programming information on using the Delete key. My knowledge of machine language is severely limited, so I am most interested in Applesoft applications.

A. All the keys on the keyboard with the exception of the Apple keys, caps lock, control, shift, and reset keys can be "read" from Applesoft with a GET (or INPUT) command. Each key is represented by a code number (an ASCII value). For example, in an Applesoft program if you type "A" in response to a GET T\$ command, T\$ will contain the letter A. If you then PRINT ASC(T\$) you will get the number 65. The ASC function returns the ASCII code value of the first character of the string. There are 128 code values from 0 to 127. Of these, the first 32 are called control characters and do not print any character on the screen. The Delete key has a code of 127 and will print an checkboard block on the screen. This key does nothing by itself but you can test for a Delete key press and use it any way you please in your program. The program below echoes all printable key presses to the screen and clears the screen whenever Delete is pressed.

```
100 GET A$: A = ASC(A$)
110 IF A = 127 THEN HOME : GOTO 100
120 IF A = 13 THEN PRINT
130 IF A > 31 THEN PRINT A$;
140 IF A = 27 THEN STOP
150 GOTO 100
160 END
```

Line 100 gets a single character and puts the ASCII value in variable A. Then we check if A represents the Delete key in which case we clear the screen. Line 120 checks for a return key and if it is we do a PRINT which does a carriage return and linefeed to the next line. If A is not a control character (line 130) then we print the character in A\$ on the screen. Remember A\$ is the character and A is a number, the ASCII value of the character. Line 140 checks to see if we pressed the ESC (escape) key and stops the program. If we left this line out the only way to stop the program would be to press control-RESET or turn the machine off. Pages 14 through 16 in the Apple //e Reference Manual contain the ASCII codes for the different characters and the key presses required to generate them.

The open-Apple and solid-Apple keys on the keyboard are different from the rest of the keys on the keyboard, these keys are not connected to the normal keyboard input but are wired to the pushbutton inputs on the game-I/O port. You can test whether these two keys are pressed by PEEKing at the two memory locations corresponding to pushbutton 0 for the open-Apple key, and pushbutton 1 for the solid-Apple key. If the value returned by the PEEK command is 128 or greater the key is being pressed. The actual value is not important, only if it is 128 or greater. For example.

```
100 OA = PEEK(49249) : REM GET OPEN-APPLE
110 SA = PEEK(49250) : REM GET SOLID-APPLE
120 IF OA >= 128 THEN PRINT CHR$(7)
130 IF SA >= 128 THEN PRINT "BEEP"
140 GOTO 100
150 END
```

Notice that there are a couple of subtle differences in the way the keys work. When you use a GET to read the keyboard you get exactly one response from the program until the auto-repeat feature of the keyboard starts sending more characters. With the Apple keys there is no repeat feature but the program above keeps looping around as long as the key is pressed down. Also with the regular keys, if you press one and sometime later execute a GET the GET will return the previously pressed key. Not so with the Apple keys, if you are not looking for a keypress when they are pressed you won't see a keypress. Some joysticks may also interfere with the operation of the Apple keys.

Q. I am the owner of an Apple //c computer with the new 65C02 processor. According to everything I have heard or read, the 65C02 has some additional new instructions. I am currently beginning to learn machine language on my computer and would appreciate it if you could list the mnemonics and opcodes for those new instructions and possibly a short explanation of each.

A. The best source of information on the new instructions is a data sheet from one of the manufacturers of the chip. They are commonly available, for little or no cost, either directly from the manufacturer or a local manufacturer's representative. Another good source is a book by Gary Little, "Inside the Apple //c", published by Brady (Prentice-Hall) and it should be available at your local bookstore for \$19.95. This book describes the 65C02, the ProDOS operating system, the Apple mouse port, and the built in serial ports. If you are serious about assembly language you will probably want a book like this. There is also a monthly newsletter "Apple Assembly Line" that is devoted to assembly language programming on the Apple. It is published by S-C Software, P.O. Box 280300, Dallas, TX 75228, (214) 324-2050. They also have a good assembler that (if memory serves me correctly) supports the additional instructions and addressing modes of the 65C02.

The new instructions with their opcodes and addressing modes are:

Hex Opcode	Mnemonic	Description
80	BRA	Branch relative always [Relative]
3A	DEA	Decrement accumulator [Accum]
1A	INA	Increment accumulator [Accum]
DA	PHX	Push X on stack [Implied]
5A	PHY	Push Y on stack [Implied]
FA	PLX	Pull X from stack [Implied]
7A	PLY	Pull Y from stack [Implied]
9C	STZ	Store zero [Absolute]
9E	STZ	Store zero [ABS,X] - [Absolute, indexed]
64	STZ	Store zero [Zero page]
74	STZ	Store zero [ZPG,X] - [Zero page, indexed]
1C	TRB	Test and reset memory bits with accumulator [Absolute]
14	TRB	Test and reset memory bits with accumulator [Zero page]
0C	TSB	Test and set memory bits with accumulator [Absolute]
04	TSB	Test and set memory bits with accumulator [Zero page]

The new instruction addressing modes are:

Hex Opcode	Mnemonic	Description
72	ADC	Add memory to accumulator with carry [(ZPG)] [Zero page indirect]
32	AND	"AND" memory with accumulator [(ZPG)]
3C	BIT	Test memory bits with accumulator [ABS,X]
34	BIT	Test memory bits with accumulator [ZPG,X]
D2	CMP	Compare memory and accumulator [(ZPG)]
52	EOR	"Exclusive Or" memory with accumulator [(ZPG)]
7C	JMP	Jump (New addressing mode) [ABS(IND,X)]
B2	LDA	Load accumulator with memory [(ZPG)]
12	ORA	"OR" memory with accumulator [(ZPG)]
F2	SBC	Subtract memory from accumulator with borrow [(ZPG)]
92	STA	Store accumulator in memory [(ZPG)]

The jump instruction is the only instruction that has an absolute, indexed, indirect addressing mode. For example suppose the X-register contains the value \$56, then the instruction JMP (\$55AA,X) calculates an intermediate address by adding the contents of the X register to \$55AA to obtain \$5600 and then uses the contents of the two bytes at \$5600 and \$5601 as the effective (jump) address.

- Q. I have a quick question. I have an Apple IIe with an extended 80-column card. What I want to know, can I put 256K memory chips on it and have the capability to use it like a Ramworks type card.
- A. The 256K chips have a different pin-out than the 16K chips so they are not a direct replacement for the 16K chips.

Q. Quite by accident I found that POKE 33,33 will get BASIC to LIST in 80 columns to the printer. I am using a C. Itoh Prowriter with a Grappler interface but it may work with other interface cards as well. While writing this letter I tried the following program.

```

10 TEXT : HOME : DS=CHR$(4) : PRINT DS;"PR#1" :
  REM THIS IS JUST TO GET AN 80 COL LISTING
20 FOR I = 40 TO 33 STEP -1 : POKE 33,I : PRINT "I
  = ";I : LIST : NEXT I
40 PRINT DS;"PR#0" : TEXT : END

```

If I change the length of the REM statement in line 10 it changes the length of the first line for all but POKE 33,33. Can you explain this? In any event POKE 33,33 is quite convenient for me since I'm normally editing code when I need a listing and I also use it to keep from splitting up strings while recopying over an edited line.

A. The problem is an interaction between screen width and the way BASIC wants to list programs. When the width is greater than 33 BASIC checks to see if there is enough room on line for a command, if not it puts it on the next line. The magic number is 33, once the screen width is set to 33 or less BASIC stops checking for room on each line and outputs the program listing without any carriage returns. After 33 characters the screen printing routine does of course issue a carriage return and line feed for the screen, but since it doesn't come from BASIC it doesn't get sent to the printer if one is on. Your solution should work for most interface cards.

REVIEW: WHERE IN THE WORLD IS CARMEN SANDIEGO?

by Robert C. Platt

If you already know the location of Lake Mistassini, then this game is not for your family. This menu driven detective/adventure game from Børderbund Software will take you or your kids on a hi-res world-wide chase in pursuit of thieves from V.I.L.E., an international crime gang.

As an Interpol agent, you must use clues to select your next destination in a globe-trotting chase. You also enter clues about the thief's description into the computer until you eliminate all but one suspect. Armed with a warrant, you can track the suspect down using local police who resemble the Keystone Cops.

This game is a well-designed educational tool suitable for both grade school age users as well as adult trivia buffs. It is quite challenging at the advanced levels and includes a free copy of the World Almanac for your reference.

GAMESIG

by Ronald Wartow

AUGUST MEETING

GAMESIG will be sponsoring the August WAP meeting. All of the new and a few of the classic Apple // series games and some Macintosh games will be demo'ed or available for examining.

SOFTWARE DONATIONS

The following software has been donated to our growing gaming library. Our thanks go to the companies involved. All software has been or will be fully reviewed in the Journal. After the GAMESIG reviewers have finished with the software, it will be kept at the office. NOTE WELL: Because of the constant use of the office club computers, anyone wishing to examine any of these packages must make advance arrangements.

REACH FOR THE STARS (Second Edition) (Apple // series), personally by the author, Roger Keating of SSG. See article in this issue on his visit to WAP, and a review in next month's Journal.

GATO by Spectrum Holobyte (Apple // series).

CHIPWITS by me (Macintosh).

SQUIRE (Apple // series) and BARON (Macintosh) by Blue Chip--Demo disks which the company urges us to copy. They are offering 30% off to WAP members if you order by September 30, by calling 800-BLUE-CHIP. You must mention the club discount number they've given us (30).

PYRAMID OF PERIL by Aegis Development (Macintosh). See Ray Hobbs' review in July Journal.

GATEWAY by Priority Software (Macintosh). See Ray Hakim's review in July WAP Journal.

GHOST MANSION by Crystalware (Apple // series).

LORD BRITISH DEMOS ULTIMA IV

While attending the National Adventure Gaming Show (Origins XI) to pass out some WAP literature and speak with some people I'd only communicated with by phone, I stopped by the Origin Systems booth and had the pleasure of meeting Richard Garriott (aka Lord British). He is the developer and programmer of the immensely popular Ultima fantasy role-playing game series, the first of which was released in 1981. Ultima III (released in the fall of 1983) has been as high as #5 on the "charts", and has just been released for the Macintosh. Many of us have been waiting patiently (or is that impatiently) for the long-awaited Ultima IV, subtitled Quest of the Avatar, which was originally supposed to be released by the end of last year.

In one of those wonderful moments of "pure luck", he asked if I'd like to see his (the only) copy of Ultima IV. He then booted it up and I got an over-an-hour advance look at what looks like a spectacular program, many times larger than any prior Ultima. (To put this in perspective, it took most of us between 50 and 75 hours to complete Ultima III.) The program will probably not be released before the middle of September. When it comes out, it will be reviewed post haste, but until then, I'll just say that the program concentrates on positive virtues and the goal is not to wipe

out yet another descendant of the evil Mondain from Ultima I, but to achieve the status of an avatar.

MOEBIUS I

At the same booth, Origin's Dave Albert demo'ed for me yet another program that has been whetting people's appetites from advertisements - Moebius I, a different type of fantasy role-playing game. In case his name sounds familiar, he co-wrote Xyphus, a popular role-playing adventure for Penguin before joining Origin. Xyphus has just been released for the Macintosh. Moebius combines graphics reminiscent of hi-res graphics games with almost arcade karate and sword fighting combat (about 25 percent of the program). However, this is a thinking person's game, and probably will involve a time investment of upwards of 100 hours. This game should be released by the end of August.

SOFTWARE POLL

All club members are urged to vote in the club's software poll. The ballot appears on the last page of July's Journal. Drop it off at the office, mail it in, vote on any of our BBS's in the Opinion Poll section, or leave me a message on any of the BBS's, or just phone. The results should be invaluable for club members for holiday buying.

SQUIRE: MiniReview by Don Smith

This is a "game" from the same people that brought us Millionaire, Tycoon, and Baron. Basically, it takes elements from all three (stocks and bonds, commodities, and real estate, respectively) to create a financial planning simulation. You start out at age 35 with \$70,500 and you have 20 years of one-month turns to invest your money, in the hope that when you retire at age 55 you will have 1 million dollars. The 72-page documentation is quite detailed and gives some information on the purpose behind financial planning, as well as simply showing how to play the game. ☼

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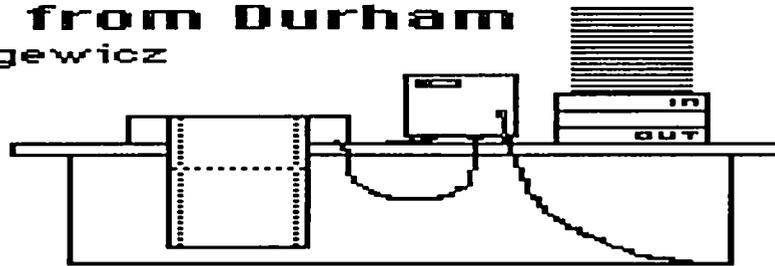
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The View from Durham

by Chris Klugewicz



My name, as you can see from the logo above, is Chris Klugewicz. I'm a student at Duke University in Durham, North Carolina, and I will be writing this column each month (I can hear Bernie Urban cheering even now)--hopefully with a lot of help from all of you--about events and rumors in the computer, and especially the Apple Computer, world.

I want this column to be a forum for disseminating information about things of interest to all of us Apple owners, ranging from views on software to experiences with a mail-order house to opinions about the folks in Cupertino. I don't mean for this to be a review column, and I don't mean to do reviews of any sort. Rather, I plan on voicing my own, very biased views on whatever it is I'm talking about. (And I do mean my own ideas, not those of Washington Apple Pi, the Editor of the Journal, or anybody else.) That doesn't mean I won't be argued with. I want feedback on these columns; if you disagree with me, write me and tell me so! If you agree, write! If you have no opinion on what I've talked about, but feel rather strongly about something else, by all means let me know! (In case you haven't noticed, I'm trying to get you involved.)

At any rate, that's enough for now; if I don't get any mail, you'll hear from me on this subject again next month.

I recently got my hands on an advance copy (marked "Company Confidential--Do Not Distribute"; obviously, somebody wasn't paying attention) of Macintosh BASIC by Apple. I don't want to say much about it (after all, it isn't the real thing--just a beta-test version), but I will say this: it isn't like any BASIC I've ever run across; and believe me, I've run across quite a few! It's extremely structured, and it includes a lot of very powerful commands. However, it seems to lack a method of utilizing the Mac user interface directly from BASIC. To me, that seems a pretty serious flaw. But more on that when (maybe I should say "if," as those of you who have been waiting as long as I have for MacBASIC to be released) it shows up on the market.

While I'm on the subject of Macintosh, I have a few things to say about the software upgrade that was released in April. First, thanks for telling everybody, Apple. I heard about it through the WAP Journal, but I've talked to several people who hadn't heard of it at all. Certainly none of the dealers I've visited have mentioned it, and I didn't see any signs in the stores. Another in the latest series of marketing blunders by our favorite computer company. Second, two of the applications in the update have bugs: MacWrite and Font/DA Mover. MacWrite sometimes (it only happens on occasion, and I haven't figured out exactly when just yet) gives you a "Memory almost full" dialog box when you choose anything from the Style menu. The options still

work, but the darn dialog box is amazingly annoying--especially since it interrupts your typing and ignores the type-ahead buffer. Font/DA Mover is something else entirely. Whereas MacWrite's bug is just annoying, the one in Font/DA Mover is plain infuriating. According to Jonathan Hardis (of "Mac Q & A"), there is a problem with using Font/DA Mover on 128K Macs; you often get a "serious error" box when you try to move large fonts. It doesn't happen all the time, but it happens often enough to make me use the old Font Mover most of the time. It seems unconscionable that Apple would distribute as an official release software so obviously flawed. My advice is to keep a copy of the old MacWrite (2.2)--just in case. (By the way: if you have a Fat Mac, you may not want to even bother to use the new MacWrite; since it's disk-based, it runs more slowly, and the Fat Mac can easily handle long documents with the old MacWrite 2.2.) The one good thing I have to say about the update is that Apple did a super job on the ImageWriter printer driver. They halved print times by getting rid of that pause in hi-res mode, and the Choose Printer desk accessory is a godsend if you have more than one printer. Now if they could just get the Finder to quit asking for the blasted startup disk every time you inhale . . .

Now seems as good a time as any to give my opinions on software copy-protection: it stinks. Copy-protection schemes hurt no one but the honest user. The dishonest user (call him a pirate, if you like) is not stopped long by these schemes; all he has to do is reach for his copy of Locksmith or Nibbles Away, and presto! An exact duplicate. True, most people now buy a program like Locksmith so that they can make archival copies of their expensive, copy-protected programs. But some people don't; they just don't make backups. Most of us have learned the importance of backup copies of EVERYTHING (some, like me, learned the hard way), and I fear that a lot of people are going to learn too late that they should have kept a spare copy of their important work. Copy-protection schemes discourage this archiving.

Obnoxious copy-protection schemes are another of my pet peeves. Microsoft's Mac products (not MS BASIC--thank goodness!) are a good example of this type: you can make all the backups you like, but you have to insert the original "Master" disk each time you start the program. A real pain, and you're still up a creek if your master gets zapped.

The copy-protection I hate most is that offered by Prolok (Vault Corporation). That's the one where each disk is marked and coded by Prolok; the program on the disk looks for the Prolok "fingerprint" each time it's run. The net effect is somewhat like the scheme used by Microsoft and described above. Vault Corp. contends that Prolok's nearly impossible

to defeat, but of course that's silly; it's actually very easy to do, but you have to know a bit more about your system than the average user--meaning, for all practical purposes, that only pirates will be able to make copies. Lately, Vault has been threatening a new type of Prolok, very aptly described by Jerry Pournelle as "killer Prolok." What this beast does is similar to regular Prolok--until you make a duplicate of the disk. Then, a small program called a "worm" is written on the duplicate disk. The worm is not necessarily activated at once. (That, of course, is the really nasty part of this scheme; it waits until you've created important files and such.) But when it is, look out: the worm seizes control of the system and starts writing itself all over your disk. Bye bye, data! I can imagine a few lawsuits over that one.

Before anyone gets on my case, I want to make it clear that I'm not advocating software piracy. Far from it! I just want to be able to make backups of my important (and expensive) programs without the hassle of a bit copier. Out in the CP/M and MS-DOS world, copy-protection is, if not dying, at least faltering, thanks in large part to the campaigning of Byte 's Jerry Pournelle. Most Apple programs, however, are still protected. I hope that the people who write software for Apple][s, ///s, and Macs will come to their senses soon. Until then, get yourself Locksmith or Copy II Mac or whatever and BACK UP YOUR SOFTWARE!

Finally, I want to fume about MCI Mail. Not the service itself, mind you, but about MCI's policy on billing. Most people nowadays have credit cards, but by no means does everyone. I, for one, don't happen to have any but oil company cards (in case I need to repair or refuel my poor Chevette in an emergency). MCI will only bill you against your credit card account, and the only accounts they accept are VISA, MasterCard, and American Express. To me, this seems grossly unfair. Yes, I realize that MCI Mail is primarily interested in the business user and that no self-respecting businessman goes out without his American Express Gold Card, but they have to realize that there are lots of personal computer owners who want the convenience of electronic mail, and that some of them--like myself--don't have major credit cards. (It's also notoriously difficult for college students to get credit cards.) MCI should offer the option of paying by check after having been billed by them, even if they have to charge a slightly higher price for such a service.

Next month, I'll have my new modem up and running, and I'm expecting some software from a mail-order place in Connecticut; expect comments on both. My address is below; remember, I want mail!

Chris Klugewicz
P.O. Box 22171
Duke Station
Durham, NC 27706

ROGER KEATING VISITS WAP by Ronald Wartow

On his way to ORIGINS XI (National Adventure Gaming Show) in Baltimore, Roger Keating, one of the premier Apple wargame spacegame programmers, stopped by the club, accompanied by his associate, Eric Baker. For those of you unfamiliar with Roger's work, just look at the best-seller lists over the years, or in any software store, or read any definitive work or article on computer gaming. Roger, a New Zealander and former school teacher, is now a Vice-President of Strategic Studies Group, based in Australia, which he founded with Ian Trout, whom I met the next day at the Origins convention in Baltimore. Roger has programmed for his company the critically acclaimed "Reach for the Stars" and "Carriers at War," distributed in this country by Electronic Arts.

He graciously donated the just-released second edition of "Reach for the Stars" to the club's gaming library. Eric participated on game development and Ian on game design. (A review of this game will appear in next month's Journal, and it will be demo'ed at the August meeting which GAMESIG is sponsoring.) Previously, Roger did "Southern Command," "Germany 1985," "RDF (Rapid Deployment Force) 1985," and "Baltic 1985" for Strategic Simulations. He sneak-previewed his own company's "Europe Ablaze," and another installment of the "1985" series, entitled "Norway 1985." His next effort will cover the Battle of Gettysburg, and he is "tied up" on specific projects until the fall of 1986.

Roger, Eric, Bernie Urban (a friend of Roger's from his International Apple Core days), Chris Hancock (GAMESIG's resident expert on wargames), and I engaged in a lively discussion over lunch. Roger informed us that it takes about 8 months to complete a game, and we could see why when he held his hand about 4 inches off the table to show us the size of his program printouts. Giving us a first-hand insight into his methods, he programs entirely in machine code, concentrates on ease of playability (No double-sided programs), and is somewhat less finicky on historical accuracy. After getting his description of what's involved in developing and programming a major commercial effort, computer owners should think twice before complaining about "Why isn't 'name any program you've been waiting for' out yet?"

Because of the press of business, he was unable to arrange to speak to any other club members on this trip, but, as he frequently visits the U.S., he has promised to return in the future. What he has to say, I'm sure, would be valuable for all club members, no matter what your special computer interests.



FREDERICK APPLE CORE

A SLICE OF THE WASHINGTON APPLE PI



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- Newsletter Chairman - Lynn R. Trusal
- Newsletter Editor - Kathy Kenyon
- SIG MAC Chairman - Lynn R. Trusal

HOTLINE MEMBERS

- Lynn R. Trusal - (301) 845-2651
- Randy Pasley - (301) 695-9416
- Kurt Holter - (301) 663-4199
- Bruce Taylor - (301) 371-8181

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 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.

The SIG MAC of the Frederick Apple Core meets 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 for details.

Upcoming Programs

- September 12, 1985 - Modem Demonstration
- October 10, 1985 - Home Control

SIG MAC Upcoming Programs

- August 27, 1985 - Demonstration of Lotus JAZZ
- September 24, 1985 - Copy and spelling programs

FROM TYPE SLUGS TO LASERS: PRINTER HISTORY

by John S. Lee

For the average man, printing started with the advent of the typewriter. It was from the typewriter and its fully formed letters that printers, as we know them today, developed. So let us follow the first typewriter and see how it starts to lead us down the path to the printer technology that we see today.

First invented in 1868 by Christopher Latham Sholes and Carlos Glidden of Milwaukee, this amazing little machine didn't even have lower case letters or a carriage return. But that's okay, because in 1873, the infamous E. Remington and Sons, most noted for their expertise in, of all things, guns and sewing machines, decided to acquire the machine and use their leading edge technologies on typewriters as well. And yes indeed, by 1878 Remington came out with the new improved Remington Standard, featuring a shift key modification (I don't know if it was the one wire shift key mod or not.)

Other modifications followed that made typing slightly easier, such as printing that was visible to the user while he typed. Until this time, the typist had to raise the carriage to see the printing.

Mark Twain paid the amazingly low price of \$124.95 for one of these beauties and was the first author to submit a typewritten manuscript to a publisher. The typewriter continued to be refined but, somehow, the human element needed to be removed.

FULLY FORMED CHARACTER PRINTERS

The first printers were nothing more than converted electric typewriters that had electric solenoids above the keys on the keyboard. Although data could now be sent to and typed by a typewriter, it still could not print any faster than a good typist - approximately 8 cps.

All this changed when IBM came out with their Selectric "ball-type" typewriter in the early 1960's. Now typewriters (printers) could achieve speeds that were faster than those achievable by a typist. Computers could now produce printouts at speeds averaging 11 cps. But this was still a far cry from the speeds needed in business use.

In the late 1960's, demand for faster electro-mechanical printer systems led to the creation of specialized "page" printers. Favorite technical approaches relied upon desk size systems that moved the entire print character set past paper at blindingly fast speeds approaching thousands of lines per minute.

Drum printers featured (and still feature) a staggered layout of the ASCII character set over the periphery of what resembles a rolling pin design. As the drum rotates at high speeds, a hammer strikes the paper's rear surface. This causes the paper to impact against the ribbon and the desired character. While this "on the fly" printing is somewhat sloppier than other fully formed letter designs, it is an economical method for printing at speeds in the 200 to 1000 line per minute range. Unfortunately, these mechanical beasts and their brute force approach produce high noise levels.

Now printers had the speed if you didn't mind the sloppier printout and had an extra padded room somewhere in your business.

In the early 1970's, Qume Corporation offered letter quality OEM and office automation users their first true alternative to the IBM selectric printer design. Qume placed a formed character set on the petals of a daisywheel. The system rotated the daisywheel, allowing each character to come into the proper vertical alignment over the paper where a solenoid hammer would strike it on the fly.

Soon Japan's NEC corporation came up with another letter quality alternative, this time relying upon a spinning cup of character petals - a thimble - for on the fly printing. These Spinwriter systems are still widely used today.

In both these designs, the printing speed was limited to about 55 cps, with the majority of this type printer running at speeds between 25 and 35 cps. But over the last few years, two new faster petal printer technologies have come unto the market. They increased text throughputs to the range of 50 to 100 cps. These technologies use two daisywheel mechanism sets to print different portions of a page simultaneously, thereby doubling throughput.

The advantage of the fully formed, letter quality type printer is exactly that: its characters are fully formed, sharp and clear, and very pleasing to the eye, by our present standard. Fonts of the fully formed character printer can be changed by simply, or not so simply, replacing the print element (daisywheel or thimble), but this requires stopping the printer. Switching between several different fonts on one given document may infringe on one's right to life, liberty, and the pursuit of happiness. The choice of fonts are also somewhat limited in both type and size.

Disadvantages of the fully formed printer are weight, bulkiness - especially with business quality printers, and noise. Now the noise can be overcome by using special Star Wars-type photon shields. But then, getting the paper into and out of the printer may be a problem.

DOT MATRIX PRINTING

The first dot matrix impact (DMI) printer was developed by the Epson Division of Seiko in Japan for scoring events at the 1964 Tokyo Winter Olympics. But if there had been a race between the runners and the print head, the runners would have, most assuredly, won.

The earliest systems required a series of solenoids and needle drivers which made the printing head very bulky. Because of this, the speeds were as low as 3 cps. The first market place for the DMI printers was for use in electronic cash registers and ticket printers where the printer head distance was minimal.

There have been many improvements made to the dot matrix printer from the early days of cash register tapes to the letter quality printing of today's models. Some Japanese designers produced better printer heads with lower solenoid friction which raised their efficiency. Eventually, these printers became the ballistic print heads that are widely used today.

Seven-wire DMI print heads that produced upper and lower case text printing without true descenders gave way to nine-wire systems that produced lower case letters with true descenders. By using closer spacings and more wires for each vertical line, DMI printers have also been able to achieve dot densities between 150 to 300 dots per inch (dpi) at speeds between 40 and 300 cps. However, printing at higher graphic and text resolutions diminishes one very sought after DMI printer quality - rapid printer speed.

The technique used to produce characters on paper with a dot matrix printer, in its simplest form, is similar to that used with a daisywheel printer - an element strikes a ribbon that transfers its image to the paper surface. The element in dot matrix printers just happens to be a row (or rows) of vertically aligned pins, where one or any other combination can be "fired" as the print head moves horizontally across the page to form a character from a pattern of dots.

This impact type printing - like that of a daisywheel - allows multiple forms, like invoices and shipping papers, to be used with little fear of the "I can read my copy, why can't you read your copy" syndrome. This definitely has been an advantage of the dot matrix printer in a time when more and more printer designs have turned to non-impact technologies.

But by far the biggest advantages of the DMI printer is its versatility or flexibility. A DMI printer with a 24-pin head can adequately supply both high resolution graphics capabilities, a variety of text fonts including elite, proportional spacing, italics - just about anything else you can imagine - plus supply boldface, underlining, subscript and superscript, draft quality, near letter quality, and letter quality, all without requiring the swapping of a daisywheel or print element. And if you don't believe the letter quality characters are sharp enough for you now, just wait until next year.

The major disadvantages of a dot matrix printer is that they cannot print directly on transparencies and are noisy in a quiet office environment.

THERMAL PAPER PRINTING

During the late 1960's, yet another printer was launched into the high seas of printer sales against a market that was then dominated by impact-formed characters. This printer was the thermal printer and was an offshoot of waveform recorder technology that used a heated stylus on a heat-sensitive paper.

Designers found that if a dot matrix thermal element came in contact with the thermal paper it would leave a dot. They then used the same row-column character generator ROM's

that had been developed for dot matrix impact (DMI) and video display of ASCII text, with their horizontally-moving thermal element head, to produce text on thermal paper. The thermal printer became, in effect, an "impactless" dot matrix printer. Printing speeds were at rates between 20 to 80 cps with 'hey mom look no ribbon printing' (never mind that the paper cost was so expensive).

The major advantages of thermal printing are simplicity and its low power requirements. Because of this the printer was an instant success in portable printing devices such as the portable telephone-link data terminals.

Other advantages to the thermal printer design are its low cost, quietness, and high dot density capability. These advantages however have been more than offset by the cost of the paper and the problem of the text fading on the paper with time.

THERMAL TRANSFER PRINTING

Thermal transfer printing is a relatively new printer technology that was first introduced by several Japanese manufacturers in 1980. The key to this new technology is a recently developed thermal ribbon that contains a waxy carrier material. The printing on a thermal transfer printer takes place in much the same way as it does with thermal printer design: the ink is transferred to the smooth paper surface when the heat of the dot pattern developed on the thermal head behind the ribbon melts the waxy carrier.

Did you say smooth paper surface? Yes, a smooth paper surface is required. Due to the precise dimensioning between the thermal transfer ribbon and the print head, if the paper is not smooth - like in flat - only the parts of the letters on the higher areas of the paper surface will be printed. Consequently, the print, at times, may not be very legible.

Advantages of thermal transfer printing are much the same as those of thermal printing, with the added advantage of longevity of the printed page, less expensive paper, and color printing that is a lot more convenient and versatile.

The disadvantage is that the printer ribbon is much like the carbon print ribbons used on fully formed character printers. Once the ribbon has completed one pass, they need to be discarded. This really increases the price of the printed page, and, when you bring in colored ribbons, the price of the printed page really soars. And if you were considering printing that favorite graphic of Mickey Rat you've got, you can easily see that this type ribbon, and inexpensive graphics, don't walk hand-in-hand.

Couple the above with the increased price of the special smooth paper, and you can see why the price of printing is the major disadvantage to this type printer at this time.

INK JET PRINTING

In the mid 1970's, some of the biggest talk in the computer community was the news of ink jet printing. It was predicted that ink jet printing would revolutionize the printing industry. It appeared to be the greatest thing since low price memory chips. Just think - no more noisy, bulky, formed character printers to lug around. And all this talk about dot matrix printers. Who cared? It was "their" idea and it wouldn't work here. Yes indeed, with ink jet technology, its

quietness, fast printing speed, and high resolution graphics, it had a guaranteed future. Its only disadvantage was that it was incapable of making carbon copies.

Most printers of this type require special paper. The paper is of such texture and consistency that the ink is equally absorbed into the surface. This gives the text and graphics a sharp uniform appearance. However, on normal textured paper, the ink globule that was expelled from the print head may just remain a tiny speck on an impermeable section of the paper or may bleed (wick) into a section of the paper that is very absorbent. ¶

LETTER TO THE EDITOR

Dear Editor,

Would you like your readers to know of my contact with "Icon Review"? I picked up a copy of the Summer 1985 edition in the Pi office and see that they review Macintosh products, assess their value and offer 'mail order', listed by categories: Integrated Packages, Database Software, Business, Education, Utilities and Hardware. For instance, "Macbottom is our choice as the best buy in hard drives for the Mac", considered as value for money, including the Hyperdrive in their equation; "Retail \$1595; Icon Review \$1400". Page 27 lists products of which to BEWARE.

They recommend MacTracks (at \$23), which I had already decided to buy after reading Don Shepherd's review in JWAP July, page 45. So, after a 'gruelling day in the office' I called 1-800-228-8910 (California) and Carl said "an excellent product" and "you will get the next 4 issues free. That will be \$23 and \$4 shipping; anything else, box of disks at \$29?" He knows of WAP, and wanted to know more, chatting like a long-lost friend. I asked if OMNIS 3 was available and he put me onto Brett, product manager. Brett waxed eloquently about Omnis 3, "best relational DBMS we have seen"; \$285 through Icon Review. (References to Omnis 2: A+ March page 50, JWAP March and June, (pages 42, Ann Adams and 48, John F. Day respectively) are exstatic reviews, briefly mentioning "3".).

Omnis 3 is not in their Summer Review, but you see they have it for sale, had studied its features and are apparently going to use it for Brett's files. Brett had not seen "Laserbase", another British DBMS. In my view, there is more reading value in Icon Review's 28 pages than the weightier tomes. (Ed. Note: Better than the Pi????) And, for an '800' call you get advice and discount! Group Purchase people - your problems may be solved - see Volume Purchase Program, (408) 484-2159.

Adrien Youell ¶

PRINTERS FOR THE APPLE

by Walton Francis

At the May meeting a panel of members presented advice on buying printers and related accessories and a series of "mini-reviews" of selected printers. In addition, we took a survey of members present to determine how successful members were with various printers. This article summarizes the results of the meeting.

Turning first to the survey results, I have a simple conclusion to report: most WAP members are exceedingly practical, though unimaginative, in their choice of printers. Of the members using dot matrix printers, 71% use just 4 brands: Epson, ImageWriter, Okidata, and C. Itoh ProWriter. These four brands are almost uniformly well liked by their users, compatible with virtually all software, and solid though not spectacular performers. (Had such a survey been taken 4 years ago, the dominant printers would have been IDS Paper Tigers and Apple Silentypes--brands accounting for only a handful of users at the meeting). And these figures overstate the diversity involved, since virtually all Macintosh owners use ImageWriters, with 55% of Apple II dot matrix owners concentrating on Epsoms, Okidatas, and ProWriters.

About 15% of the members reported using daisy wheel printers. Here the choice of brands was much more eclectic, with no one brand accounting for more than a few owners. And three brave souls reported exotic printers: two Hewlett Packard inkjets and one LaserJet.

As for interface cards, //c and Macintosh owners have their serial interfaces built in. Among //, //+, //e and /// owners parallel interfaces dominate overwhelmingly. Four brands account for almost all of these: Apple, Epson, Grappler plus, and Pkaso, with Grappler leading by a wide margin. Apple Super Serial is the most common serial card.

As it happens, there are probably some 200 brands of printers available. The meeting participants concentrated on a particularly interesting handful of these, including "near letter quality" and laser printers.

General Advice. I won't repeat here in any detail the general advice on where, how, and what kind of printer to buy (as discussed below, we have a tape of the meeting which I recommend if you are interested). A couple of points stand out, however. Try before you buy! See the printer in action with the word processing software you will use before you plunk down cold cash. Don't believe everything you read in a magazine review or hear from a salesman! Errors abound. If you need both high speed for some documents and letter quality for others consider buying two printers, one a good dot matrix and the other a low-speed daisy wheel. A combination such as this can be put together for well under \$1,000, or rather less than the price of a top notch daisy wheel printer. And even a slow 10-15 cps daisy wheel is about as fast as most dot matrix printers making 2 or 4 passes over the paper. Another thing to consider is buying a used printer--last year's models can often be had for a fourth or a third of original list price.

Printer Buffers. Our survey showed that well under 10% of members use printer buffers, in most cases Quadram Microfazers. A lot more should get buffers. The printer is

the slowest link by far in your computer system, and a buffer can speed up your work immensely. For example, a 64K buffer will hold about 30 pages of text and free up your computer for other work while it is printing. Some buffers have special control features which are particularly important in some applications. As one example, the Angel can be told to print multiple copies, thereby saving both money and the time consuming step of copying. Anyone who spends a lot of time printing should use a buffer. It can even be useful on a Macintosh, though only for draft documents or very short documents (bit mapped graphics are memory hogs which swamp buffers very quickly).

Re-inking Ribbons. Though not on our original agenda, we discussed reinking. Reusing ribbons can save a lot of money. There are basically two approaches: using WD-40 penetrating lubricant (see my article in WAP of June, 1984) or buying a special reinking machine. The former is cheap and somewhat less effective, the latter very effective. One good brand is MacInker from Computer Friends.

Panasonic 1090 Series. Only a few members as yet own Panasonics. This will change. The Panasonic is one of the least expensive printers around that has a "near letter quality" print face (that is, almost but not quite indistinguishable from daisy wheel output, at least at first glance). It was rated first among the printers reviewed in the June, 1985 Consumer Reports (a good article which I recommend). The only real problem with the Panasonics is that 20 lb. paper has a tendency to jam and lighter paper is recommended. The 1092 model is the current top of the line, faster and in other ways better than the 1091. These printers are nearly but not totally Epson compatible, and some graphics software may not work well. This printer actually has an internal reinker on its ribbons!

ImageWriter. The ImageWriter is a solid, durable, quiet piece of equipment. It is compatible with almost all Apple // software, and is exceptionally good for graphics. It has very good print quality (though not as high as the latest 24-pin printers) and numerous fonts. The documentation is good. The wide carriage version is particularly good for spreadsheet use--about 230 characters across.

Epson Series. Little need be said. This is the standard--the Chevrolet of printers. The documentation has gotten very good. The RX is slower and less versatile than the FX. The new LX series has a near letter quality mode, and the new LQ series is not fully Epson compatible.

Toshiba P1351. This is very nearly top of the line for home and small business dot matrix printers in both capability and price. It is rated at 200 CPS, and 100 CPS in near letter quality mode. It emulates the Qume sprint daisy-wheel. To date, the graphics interface with Apple computers is not very good.

Anderson Jacobson. The AJ is the daisy wheel printer advertised on the back cover of WAP every month. At 30 cps and about \$350 it is an excellent speed for dollar value, which should not be surprising considering that the AJ is reconditioned rather than new. One drawback is its size and weight -

contd. on pg 22

COMMUNICATIONS BETWEEN A NEC PC-8201A AND AN APPLE][+

by Joan Bixby Dunham

I connect a NEC laptop and an Apple][+ with a null modem to transfer drafts of papers from the NEC to the Apple, and to use the NEC as a caller to test an Apple bulletin board system. The NEC 8201 is a laptop quite similar to the Radio Shack 100 with nearly identical operations. It lacks the internal modem that the RS-100 has and the NEC manual is not as good as the one supplied by Radio Shack.

The hardware I have consists of the Apple][+, a NEC PC-8201A, a Practical Peripherals SeriALL communications card, and an Inmac EIA Line-Link. For transferring text files, I use the ASCII-Express Pro communications program. The word processor I use is the Hayden PIE Writer.

The NEC computer includes an RS-232 serial port, and a communications program in ROM. The SeriALL card is used to give the Apple the RS-232 port. Communications are done by connecting the two ports with the Line-Link, a null modem built from a kit sold by Inmac.

I put together the null modem connecting the lines as follows: 2-3, 3-2, 4-5, 5-4, 6 and 8 to 20, 20 to 6 and 8, 7-7. Line 2 on both the NEC and the Apple is the line which transmits data (TXD), line 3 is the line which receives data (RXD). Crossing the lines, so that line 2 of one connects to line 3 of the other, and vice versa, means that transmitted data are sent to receive ports. Line 4 is the request to send (RTS), line 5 the clear to send (CTS), line 6 the data set ready (DSR), line 8 the data carrier detect (DCD), and line 20 the data terminal ready (DTR). Line 7 is the logic ground (LGND). Figuring out how to tie these lines together provides some of the excitement in RS-232 communications. Most of the time the worst that can happen is that the data transmitted are garbled, or one of the computers locks up.

The Inmac EIA Line-Link comes with 10 wires, some of which are "Y" jumpers to allow one line to connect to two, a plastic snap-together case, and a pin insertion/extraction tool. It doesn't take much skill to put a null modem together with this kit.

It is intended for permanent or semi-permanent connection configurations. I couldn't remember how I had connected the lines and found the snap-together case hard to unsnap. (In fact, I broke it.) George Kinal's quick-and-dirty null modem also works. The Q&D null modem only connects lines 1, 2, 3, and 7 from one computer to the other. Lines 4, 5, 6, 8, and 20 are tied together on each side. I suspect that the NEC only needs lines 2, 3, and 7, but the SeriALL communications card needs lines 5, 6, and 8.

Both the NEC and the SeriALL are configurable to have 5, 6, 7, or 8 bit words, various baud rates, 1 or 2 stop bits, even, odd, or no parity. The SeriALL is the more annoying to change, since that involves taking the top off the Apple and changing DIP switches. It also can be reconfigured with software. We have set the SeriALL for 8 bit words, with 1 stop

bit, and to use the auto-baud rate, responding in either 300 or 1200 baud depending on what the modem reports on the caller's line speed. The NEC is easily configured with the STAT command (function key 4) of the TELCOM program. Entering 5N81XS sets the NEC for 1200 baud, 8-bit words, parity ignored, 1 stop bit, X-on/X-off control, and control by shift in/shift out (which I don't think is needed).

Since we have a smartmodem, I have configured ASCII Express to be in the terminal mode (also called the on-line mode). As soon as ASCII Express is booted, it is ready to receive data. I use the direct memory transfer mode, rather than having ASCII Express write data to disk as it is receiving. This does limit the size of the file I can send, but I haven't found that to be much of a problem. The ASCII Express, when used with a RAM card, has 28K available for the data buffer, and the NEC memory banks are, at most, 32K.

The ASCII Express files are written in TEXT format, which PIE Writer will accept as input. I usually use the "slice" command after loading the file into PIE, but before entering it, to cut the lines to fit on the PIE Writer screen.

I use the NEC to write drafts, and use the Apple for the final editing. When I write drafts that I know I will be revising further, I include in them the PIE Writer formatting commands, the infamous "dot" commands. I do not include control characters in the text. For one thing, I have not learned how to make control characters a part of the text in the NEC editor program. For another, I would expect problems with the NEC terminal program in trying to send files that have embedded control characters.

The steps to transfer from the NEC to the Apple are as follows:

1. Write the draft using the NEC TEXT program. This is the hardest step.
2. With the computer turned off, connect the NEC and Apple RS-232 ports with a null modem. Occasionally, I found that connecting the ports after the Apple is on can cause the Apple to lock up.
3. Turn on the Apple and bring up ASCII Express.
4. Turn on the NEC and get into the TERM mode of TELCOM. Type in a few characters on each computer to make sure they are connected correctly. If they are not (and it will be obvious), take the NEC back to the TELCOM mode and look at the communications format with the STAT command (function key 4). Check it against the ASCII Express format, looking at ASCII Express menu 2. They should both be set for the same

baud rate, and for the same duplex mode. If they are, then check the number of bits in the word. My most frequent mistake is to type a "6" instead of an "8" for the NEC word length.

5. Once the two computers are communicating, turn on the ASCII Express buffer.
6. In the TERM mode of TELCOM, select the ULoad command (function key 4) and answer the question the NEC will ask "File to Upload?" It needs the full file name, with the extension, and it distinguishes between upper and lower case in the name. It is OK to exit TERM and TELCOM to look at the file names in the main menu. ASCII Express and the Apple will wait.
7. When the NEC data transfer has finished, turn off the ASCII Express buffer and save the file to disk. If there are more files to transfer, repeat steps 5 and 6.
8. Once the data files are transferred, disconnect the NEC and the Apple, exit ASCII Express, and bring up PIE Writer.

For the most part, I have had little trouble in transferring files between the NEC and the Apple. While testing software and communications, however, I did discover a few unexpected quirks of the SeriALL. I find that if the SeriALL is set for 8-bit words, then, in its dumb terminal mode, it will transmit the ASCII screen characters (8th bit set) of the Apple, instead of the standard 7-bit ASCII. These are not recognized as characters by the NEC. The two will communicate just fine if the NEC is set to expect 7-bit words, no parity, 1 stop bit. This problem will not occur when using ASCII Express, as well as many other software packages, because it strips off the high bit before sending data out the serial port.

We want our bulletin board to detect whether or not a caller is still on line (the modem still detects the telephone carrier). Using the null modem I described earlier, the NEC will simulate a data carrier detect signal so that going in and out of the TERM mode of the TELCOM program of the NEC makes the SeriALL think it is attached to a modem that has connected and then disconnected. I was slightly disconcerted to find that if I turn the NEC off, the SeriALL then reports a carrier detect. If I disconnect the null modem, and have the SeriALL not connected to anything, it still reports a carrier detect.

Information on connecting two computers is frequently published in popular magazines and books. The following is a sample of what is offered:

The Complete Handbook of Personal Computer Communications, Alfred Glossbrenner, 1983. Chapter 12 has a section on "How to Connect Two Computers".

The June 1985 issue of the WAP Journal has an article by Steve Hunt on connecting a Mac to a TRS 100 or 200.

The November, 1983 Call-A.P.P.L.E. includes an article by Art Ude on "The TRS Connection" on connecting a TRS 100 or 200 to an Apple][. ⌘

Printers contd. from pg 20

- 90 pounds.

Apple Letter Quality. This is an excellent business printer--heavy duty and high quality. It is based on the Qume Sprint 11 model, but optimized for Apple equipment. It will print graphics. It is rated at 40 cps but unlike most seems to run faster than it is rated. This printer is very durable and "bullet proof". It is also expensive--over \$2000.

Qume Letterpro 20. This is a good example of a much less expensive alternative to the Apple printer for office use.

C. Itoh StarWriter. This is another good heavy duty daisy wheel printer.

Hewlett Packard Laser Jet. This xerographic printer lists for \$3500. It is very fast, 8 pages a minute or probably over 300 cps. It is also whisper quiet. Paper feed is far simpler than on tractor feeds and similar devices, since a paper tray is used. It has an auxiliary feed for envelopes. Fonts are changed via ROM cartridges. The biggest negative is a complex printer command language.

Apple Color Plotter. This printer is used for graphics. It will plot up to 11 by 17 inches in 8 colors. It costs about \$800 and runs from a number of common graphics packages. It compares favorably with the Hewlett Packard plotters.

Obviously, these printers merely scratch the surface of what is available. If you want to read about these and others, a few recent articles of interest include the PC issue of November 27, 1984, which covers 120 printers, "Stalking the Low-Cost Daisywheel Printer" in the June 1984 InCider, "Affordable Color" in the October 1, 1984 InfoWorld, "The Epson LQ-1500" in the December 1984 Byte, "Apple Scribe Printer" in the December 17, 1984 InfoWorld, "The 24-Pin Toshiba P1340" in the April 8, 1985 InfoWorld, "Buying an Anderson Jacobson 831 Terminal Printer" in the April 1985 WAP, "Meet the Ink Jets" in the July 1985 A+, "Three High Quality Printers" in the July 1985 Creative Computing, and the June 1985 Consumer Reports article. All of these articles, and others, are at the club office.

We have more information from the printer survey than is have covered here, notably information on software compatibility. Unfortunately, we have relatively few (or no) responses from users of the following hardware and software: any daisywheel printers with the Macintosh or Apple II series, any non-ImageWriter dot matrix printer with the Macintosh, color printers and plotters, ink jet printers, the Apple Scribe, and portable printers generally. Survey forms are at the office and as soon as we get enough more responses we will give you additional results.

A copy of a tape recording of the meeting is available at the office, and contains far more detail than I can cover here. I recommend it more highly, by far, than any printer article.

Many thanks to Lee Raesly, Dave Harvey, John Day, Jim Cumber, Gene Cartier, Jaxon Brown, Will Francis, and Abel Merrill (in order of appearance) for sharing their printer wisdom. And special thanks to Adrien Youell for doing most of the organizing for the meeting. ⌘

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APPLE CP/M PUBLIC DOMAIN SOFTWARE

By J. England

CP/M

Every six months or every year or so some 'ultimate revolutionary new leap in computer technology' comes out. Thousands of people immediately toss the old computer in the closet, buy the latest in computer fashion, and wait impatiently for next year's model. I'm just as happy cruising along with my 'classic'][+ a la CP/M. Don't confuse me with the facts; dollar for dollar I wouldn't trade it for anything I've seen.

The CP/M operating system seems as ancient and weathered as the venerable tortoise, yet its users are widespread and numerous even today. The 'new and improved' operating systems which have come and gone during its tenure bear witness to its enduring design. It's difficult to improve upon such a plain old mousetrap. There's a good quantity of commercial software available for it, and much of it still compares quite favorably with software for other operating systems. Faithful old friends like WordStar and dBaseII remain more than adequate for most needs.

Like Apple DOS and PC-DOS, CP/M is attended by a loose network of devotees whose enthusiasm for computerdom is refreshing and inspiring. Before micros became big business or status symbols or dull office machines, perhaps more people were interested in micros just for the joy of discovery. Could the first few people who tinkered with Model T's or who built radio kits have felt the same? The huge quantity of CP/M public domain software is a monument to the group mindedness and unselfish attitude of some of these CP/M hobbyists. Much of it is certainly worth more than the few minutes it takes to download from local RCP/M systems.

SOURCES OF PUBLIC DOMAIN CP/M SOFTWARE

The best way to get good public domain Apple CP/M software is to find a friend who already has some and copy it. Another way is to mail-order it, but this does cost money. Eight-inch disks are the standard in the CP/M public domain world, but several places offer software in 5 1/4" Apple CP/M format. (Be sure to specify APPLE 5 1/4" format). Even then, not all CP/M software works correctly on all CP/M computers. Luckily, much of it does work OK on the various Apple CP/M system configurations.

A little digging through the pile of books and magazines on my floor revealed the following alleged sources of CP/M public domain software:

SIG/M User's Group of ACG-NJ, P.O. Box 97, Iselin, NJ 08830 (201)272-1793 has a gargantuan library available on eight-inch disks for \$6 per disk. I don't know whether they offer Apple CP/M disk format or not. Send SASE for information. Catalogs can be ordered from the New York Amateur Computer Club, P.O. Box 106, Church St. Station,

NY, NY 10008 (212) 864-4595. SIG/M is a non-profit project of the Amateur Computer Group of New Jersey, and is one of the major national coordinating organizations for CP/M users.

CP/M User's Group, 1651 Third Ave., NY, NY 10028 has a huge library available on single density eight-inch disks for \$13 per disk or on Apple CP/M format disks for \$18 (!) per disk. CP/MUG is operated through Lifeboat Associates, a profit oriented software distributor, and is a national organization for CP/M users.

Apple][CP/M Library, P.O. Box 477, Kulpsville, PA 19443 has the entire 216 volume SIG/M CP/M library available in Apple CP/M disk format. Send \$3 for full printed catalog or \$10 for full catalog on Apple CP/M format disk. Or send self addressed stamped number 10 envelope (8 1/2") for price list and abbreviated (volume names only) catalog.

Softhaus, Box 4150-D, Vero Beach, FL 32964-4150 (305) 231-0912 advertises a free list of Apple CP/M public domain software but doesn't specify whether SASE is needed.

National Public Domain, 1533 Avohill Drive, Vista, CA 92083, (619)941-0925, will RENT its library long enough to copy and return. They have the entire SIG/M and CP/MUG libraries as well as others, and they do handle Apple CP/M format. Send SASE.

RCP/M SYSTEMS

RCP/M systems were the original 'BBS' systems, though they were first used for file transfers only, not message handling. They are a further source of software, but they require that you have: a modem (preferably 1200 baud - some RCP/M's don't allow 300 baud sign-ons), terminal software capable of transferring files using 'xmodem' error checking protocol (such as MDM740 or Z-Term Pro), a phone line that you can tie up for a while, and knowledge of the necessary commands to start the transfer process.

Following are listed the phone numbers of several RCP/M's local to the Washington metropolitan area. Please bear in mind that these systems are not intended to be used for general chit chat, but are primarily set up for file transfers and messages of CP/M related content. Downloaders are expected to reciprocate and upload new public domain software as it becomes available.

IRS (evenings only)	(703) 633-0804
Micro C	(703) 321-8070
Marginal	(301) 244-8798
Disk Connection	(703) 644-2299
Computer Connections ..	(703) 547-2008

RCP/M systems usually have two major functions; an RBBS system where public messages can be read and written, and a file transfer area where files can be uploaded and downloaded. Upon login the user is normally in the RBBS

Operant Systems

HARDWARE

PRINTERS—

Epson FX-85 (160 cps, upgrade of FX-80).....	359
FX-185 (wide carriage version of the above).....	549
LX-80 (replaces RX-80—call for specs).....	275
LQ-1500 (200 cps, fantastic letter-quality model).....	949
Okidata 192 (replaces Oki 92—call for specs).....	369
193 (132 column version of above).....	519
Toshiba 1340 (144 cps draft, BEST letter-quality matrix).....	359
351 (288 cps, wide carriage version of above).....	1249
Texas Instruments TI-855 (150 cps draft, 35 cps MLQ).....	675
NEC P2/P3 Pinwriter (180 cps, high quality matrix).....	519/725
Citizen MSP 20 (200 cps matrix, 18 month warranty).....	435
Panasonic 1091 (120 cps, Epson compatible).....	255
Gemini 50-10 (120 cps, same features as Epson MX).....	249
Powertype (18 cps daisywheel).....	335
Quadra QuadLaser (8 pages/min, based on Canon tech).....	2495
C. Itoh F-10 Starwriter (40 cps, office quality).....	849
F-10 Printaster (55 cps, same as above).....	1049
Silver-Reed 550 (18 cps daisywheel, BEST at this speed).....	439
NEC El7 (16 cps, par & ser interface, NEC/Diablo emul).....	439
8830 (55 cps daisywheel, built like a tank).....	1399
Diablo 630 API (40 cps daisywheel).....	1549
Queue LetterPro 20 (20 cps daisywheel).....	419

MODEMS—

Hayes Micromodem J1c (tone dialing/speaker/Smartcom II).....	145
Smartmodem 2400 (2400/1200/300 baud, RS-232).....	595
Smartmodem 1200 (1200 baud, RS-232, auto-dial).....	379
Smartmodem 300 (300 baud, as above).....	145
Novation Apple-Cat II (w/ Comware; 1200 baud capable).....	199
Smart-Cat 300 (RS-232, direct-connect).....	159
Smart-Cat 300/1200 (as above).....	389
Prometheus Promodem 1200 (300/1200 baud, RS-232).....	309
Promodem 1200A (300/1200 card w/ software).....	299
Microcom ERA 2 (300/1200 baud card with software).....	345
Zoomodem J1c (300 baud Microcomodem compat w/software).....	125
US Robotics Password (300/1200 baud, auto-dial/answer).....	239
Anchor Automation Express (300/1200 loaded w/ features).....	289
Volkmodem 12 (300/1200 baud, RS-232).....	199

DISK DRIVES—

MicroSci A2 drive (100% Apple-compatible).....	169
A.5 (half-height, 100% Apple compatible).....(call)	
A.5c (half-height for Apple J1c).....(call)	
Corvus Winchester drives.....	(call)

CP/M & 6502C SYSTEMS—

Applicard 16 Mhz Z-80, 64K to 192K RAM, 70-col video).....	249
Microsoft Softcard J1c (Z-80, 80 col & 64K on one card).....	265
Softcard II (includes CP/M 2.2 and MBASIC).....	239
Titan Accelerator J1c (3.6 Mhz 6502C coprocessor).....	209
Speed Deacon (6502C high-speed coprocessor).....	229
Applied Engineering Z-Ras (256K, CP/M, ramdisk for J1c).....	365

MONITORS—

Amdak 300C/300A (12" green/amber anti-glare, 18Khz).....	125/139
NEC JB-1201/1205 (green/amber anti-glare screen, 20Khz).....	145
JB-1260 (12" green, 15Khz, best value for money).....	99
USI PI-2 (12" green anti-glare screen, 20 KHz).....	125
PI-3 (12" amber anti-glare screen, 20 KHz).....	125

INTERFACES & BUFFERS & CLOCKS—

Phaso/U printer interface (superior graphics & more !!).....	99
ShuffleBuffer (32K—128K w/cut & paste/ser and par).....	269
Grapplort printer interface (parallel w/ graphics).....	85
Buffered Grapplort (16K to 64K buffer plus graphics).....	149
CCS 7711 Super Serial (for printers & modems).....	99
Practical Peripherals Graphicard (parallel w/ graphics).....	79
ProClock (PRODOS compatible).....	109

VIDEO BOARDS—

Videx Ultraterm (160 column/48 row display !!).....(call)	
Videterm (80-column w/ softswitch & inverse).....	215
MicroSci 80-col card (w/64K RAM, AppleWorks-compatible).....	95
Applied Engineering Viewmaster (Videterm on a budget).....	119
Rasworks (64K to 1 meg w/80-col).....	139

MEMORY EXPANSION—

Microtek 16K RAM card.....	79
Titan Technologies 128K RAM card.....	199

SOFTWARE

WORD PROCESSING—

Wordstar 9.3.....	199
ScreenWriter II (40/70/80 col display w/speller).....	85
Bank Street Writer or Speller.....	45
pfs: Write J1c.....	79
Pie Writer 2.2.....	99
HomeWord / HomeWord Speller.....	49/35
Sensible Speller IV (DOS or PRODOS versions).....	79
The Word Plus (super spelling checker for CP/M).....	95

SPREADSHEETS—

Multiplan (state-of-the-art spreadsheet).....	70
SuperCalc 3a (powerful spreadsheet for the J1c).....	135

INFORMATION MANAGEMENT—

dBASE II (w/ ZIP screen generator).....	289
pfs: File, Report, or Graph.....	79
The General Manager 2.0.....	149
Thinktank (electronic thought organizer).....	95
DB Master 4+ (latest version).....	185

BUSINESS & ACCOUNTING—

Dollars & Sense (accounting w/graphics).....	69 & 79
Peachtree Peachpak (GL/AR/AP).....	all three: 229
Back to Basics Accounting (GL/AR/AP) each	59
BPI Accounting (GL/AR/AP/PAY/INVENTORY).....	245

COMMUNICATIONS—

Ascii Express Professional (for DOS 3.3).....	80
Z-term Professional (for CP/M).....	90
CompuServe Starter Kit (password & 5 free hours).....	29

LANGUAGES—

Microsoft TASC Applesoft compiler.....	119
Fortran-80.....	125
Terrapin Logo.....	65

0005 & END5—

Kensington System Saver Fan (w/surge protector).....	66
Kraft Joystick / TG Joystick / Hayes Mach III.....	85/35/39
KoalaPad Graphics Tablet (with graphics software).....	85
Flight Simulator II.....	36
Print Shop.....	96

Filevision (graphics database system).....	119
Odesta Helix (database for the serious user).....	249
Dollars & Sense (accounting w/graphics).....	95
Microsoft Word (what MacWrite should have been).....	125
Chart (presentation business graphics).....	85
File.....	125
Basic (new version).....	99
Multiplan.....	125
MacEnhancer (has the ports Apple forgot).....	175
Lotus Jazz (word proc, database, graphics, more) (call)	
Assimilation Process Mac Memory Dist.....	24
Ioega Bernoulli Drive (5 MEG removable cartridge).....	1349
MacLion (programmable database for Mac).....	239
MacForth Level II.....	169
Hippo C.....	99
Kensington MacModem (300 baud).....	99
Surge Protector (replaces power cord).....	39

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program. An 'h' or '?' will often get a menu of possible commands. A 'c' is the usual command to exit to the file transfer area. Once there, you'll see a drive prompt similar to 'A:'. Enter 'B:' to change to drive B:. Then enter 'dir' to see a disk directory. To download one of the files using xmodem error checking, enter 'xmodem s filename' where "filename" is the name of the file you want. Then tell your own system to receive the file. In MDM740 the commands would be: '^E' (control-E) to go to command mode, and 'R filename' to begin receiving the file. (Again, "filename" stands for the name of the file.) To upload, tell the RCP/M 'xmodem r filename', and tell MDM740 'S filename'. Note that the 's' and the 'r' in both commands mean 'send' and 'receive'. Type 'bye' when done.

LIBRARIES AND SQUEEZED FILES

Most of the CP/M public domain programs available from various sources have been squeezed; reduced in size by a utility such as SQ.COM. Related files have usually been joined into special files called library files. This is done to save disk space and to keep related files together. A file can be identified as squeezed if the second character of its filename extension (the part of the filename after the period) is 'Q', as in 'PIP.CQM'. Library files have the filename extension '.LBR', as in 'MYFILES.LBR'. To be used conveniently, a file should be extracted from its library and unsqueezed. NULU12.COM will perform both of these functions simultaneously. For that reason it's probably the first utility that should be obtained. NSWP207.COM is good for unsqueezing files which are not in libraries (among other things), but tiny USQ120.COM, weighing in at 1K, is still tops at its specialty.

SOME DESCRIPTIONS OF AVAILABLE SOFTWARE

MDM740.COM is a very good terminal program capable of transferring files with either checksum or CRC error checking protocol, in addition to plain ASCII capture. With modifications, it can be used on a wide variety of serial card & modem combinations and plug-in modems. It can autodial Hayes compatible modems from a phone library.

VDO25.COM is a useful screen oriented text editor with a command set similar to that of WordStar. Videx Videoterm users should note that this program requires the use of the ^K (control-K) and ^A (control-A) characters. The Videoterm 'eats' these characters, but it's simple to get around this problem by using CONFIGIO.BAS to assign these characters to a couple of other keystrokes.

PATCH18A.COM is a full screen disk and memory editor of good quality. One nice feature of PATCH is the ability to find and edit the consecutive sectors of any given file. One minor bug: after using the 'STAT' function from the main menu, the 'DIR' function ceases to work. Enter 'F' <return> to restore it.

MFT50.COM allows single drive CP/M users to do disk to disk file copies - something that is normally maddening to attempt.

SD98.COM is a sorted-directory program. It displays filenames (in alphabetical order), file sizes, and free space left

on the disk. Optionally, it can show members of library files, and it has the ability to do rudimentary disk cataloging, among other things.

UNERA30.COM is a program which can un-erase an erased file as long as none of the sectors have been overwritten subsequently.

FBAD60.COM scans a diskette's surface and locks out any bad sectors. This allows the use of marginal diskettes with much less chance of data loss or the dread 'BDOS ERROR' message.

SAP43.COM will re-write your disk directory in alphabetical order with deleted filenames removed.

LASM3.COM, MLOAD24.COM, and UNLOAD20.COM are a reliable set of assembly programming tools. LASM3 is an 8080 link assembler, MLOAD24 is an improved LOAD, and UNLOAD20 will turn a .COM file back into a .HEX file. VDO25.COM, listed above, can be used to write source code. All in all, somewhat better than the stuff you get on the CP/M 2.2x master. There are also a number of Z80 assembly tools such as ZASM.COM, a Z80 assembler with some macro capability; ZDASM.COM, a Z80 disassembler; and ZDT.COM, a Z80 version of the DDT debugger.

BISHOW31.COM is a good utility for reading text files whether they are squeezed, in libraries, both, or neither. It lets you move backwards or forward in the file instead of only having a single one-way pass through it.

YANC23.COM and MCAT45.COM are two good disk cataloging programs which can generate sorted reports showing the names and disk locations of your CP/M files.

COMP11.COM compares two files and reports any dissimilarities.

ROS32.LBR contains a complete RCPM system written in Turbo Pascal. Turbo Toolbox is also required to compile it. As with most communication programs, some modification needs to be done to make the program work on specific hardware, but this has been kept to a minimum.

CHALK.LBR is a small spreadsheet program (but it works).

Z2APPLE.LBR is a relatively painless way to install ZCPR2, an enhancement to CP/M, on the Apple.

ADVENTURE.LBR contains one of my favorites - Original Adventure. It's composed of '.COM' files, so it runs pretty quickly. There are many other games available, including: CASTLE.BAS, ALIENSII.COM, etc., and several text pictures for the printer.

The list goes on and on. There are many WordStar utilities, dBaseII utilities, and language interpreters and compilers including XLISP, COBOL, and SMALL-C. The number of disk utilities is enormous.

LOCAL CP/M USER GROUP

CP/M Users of Washington, P.O. Box 11011, Arlington, VA 22210, is a well established local organization that meets on the third Wednesday of each month at 7:30 pm. Locations alternate between Long Branch Library in Montgomery County, MD and Madison Community Center in N. Arlington, VA. To obtain SIG/M or CP/MUG library disks

contd. on pg 27

June 22, 1985

Washington Apple Pi, Ltd.
Cash Budget
June 1, 1985 - May 31, 1986

	(Actual 11 Mos. ending 4/30/85)	Pro- forma Year End 5/31/85 (12/11xE)	Proposed Budget Year End 5/31/86	Percent Change (+:fav., -:unfav.)
1 REVENUES:				
2 Membership	99868	108947	123900	13.73
3 Other Publications	22336	24367	19416	-20.32
4 Group Sales	103608	113027	113027	0.00
5 Disketeria	52323	57080	72000	26.14
6 Tutorials, Interest, Postage 7 Fees, Miscellaneous	16693	18211	19057	4.65
8				
9 TOTAL REVENUES	294828	321631	347400	8.01
10				
11 COST OF SALES:				
12 CS-Membership	69629	75959	88647	-16.70
13 CS-Publications Sold	4290	4680	5980	-27.78
14 CS-Group Sales	97220	106058	101784	4.03
15 CS-Disketeria Sales	36750	40091	18686	53.39
16 CS-Other	1781	1943	2760	-42.06
17				
18 TOTAL COST OF SALES	209670	228731	217856	4.75
19				
20 GROSS MARGIN:	85158	92900	129544	39.44
21				
22 EXPENSES:				
23 Office Expenses				
24 Office Salaries & Related Ex.	48442	52846	58545	-10.78
25 Other Office Expense	26783	29218	33775	-15.60
26				
27 Subtotal Office Expense	75225	82064	92320	-12.50
28				
29 Meeting Expense	2352	2566	5045	-96.62
30 SIG Expense	1078	1176	4859	-313.18
31 Print Library	2288	2496	2900	-16.19
32 Accounting and Legal	3904	4259	8800	-106.63
33 Repairs-Computers and Other	565	616	850	-37.91
34 Insurance	1062	1159	2500	-115.79
35 Taxes and Licenses	1321	1441	1602	-11.13
36 Shows, Sales & Promotion	947	1033	1750	-69.39
37 Miscellaneous	246	268	300	-11.79
38				
39 TOTAL EXPENSES	88988	97078	120926	-24.57
40				
41 CASH SURPLUS (+), DEFICIENCY (-)	-3830	-4178	8618	

¢

Above is the Cash Operating Budget for fiscal year June 1985 - May 1986, as approved by the WAP membership on June 22. Please note that it reflects cash expenses only and does not include either non-cash expenses (depreciation and amortization) or any capital expenditures the membership may approve for the coming year.

CP/M Software contd. from pg 26

from them (in about any disk format except Apple) contact Stan Levine at (703) 522-1192 before 9 pm. Membership costs only \$6 per year. For further information, call John or Laura Wise at (703) 484-5176.

WAP CP/M SIG

The Washington Apple Pi CP/M SIG usually meets after the main WAP meeting in the cafeteria. We want to invite all Apple CP/M user's, novices and advanced users alike, to take part.

Hopefully, the Washington Apple Pi CP/M disk library will begin to blossom soon. If you have a disk or two of tried and true public domain CP/M software you'd like to contribute, feel free to contact me, Joe England (WP2136), at (301) 953-1949 (evenings and weekends until 9 pm EST). Telephone transfers and mail-ins are fine, but if you take the trouble to drive out to Laurel, you're welcome to copy whatever you like from my own humble library. Whatever the case, I hope you enjoy using CP/M public domain software as much as I do.

¢

OPTICAL SCANNING - THE FUTURE IS NOW!

by Leon H. Raesly, LCSW

A colorful box is the first introduction to Oberon International's optical character reader (OCR) - or optical scanner - called the OMNI-READER. The box contains the legend, "The revolution in taking words from page to computer." And it is. But, (you knew there was going to be a but, didn't you!) you MUST stay within the parameters they specify to achieve continuously reliable results.

First, let's look at the unit and how it functions. I used both an IBM PC and an Apple //c for this evaluation.

The unit, after unpacking, is a small 12" x 17" device, standing about 3" tall at its highest. It sits on a table and all of its mio-chips and circuitry are INSIDE the Tablet (scanning table). On top is the read head and a scanning rule. The current rule is 9" wide, and a longer rule is promised in the future. (They state that it is included in the current price, but stranger things have happened than a change of mind in the future if/when it becomes available.) The power is supplied by a separate, large power pack that sits beside it.

The unit comes with a rather typical manual (read incomplete and poor), as well as an additional pamphlet titled, "OMNI- READER INTERFACE GUIDE" (which is even more incomplete and poorer). It is also sometimes inaccurate! The manual itself is a small (5 1/2 x 8/1/2) spiralbound booklet of 54 pages - and that count includes both covers!

There are two sets of switches in the rear to set a number of parameters. These are easy to access (just pick up the 2.6 lb. unit and turn it around!). The first set on the left, as you face the rear panel, controls the Baud (bits per second) rate. It is switch-selectable (on 6 switches) from 300 to 9600 Baud. The manual is clear on how to set these. What to set them at depends on your computer's settings.

The second set on your right controls Pitch (10 or 12); Handshake (Modem-straight serial input/output, or Xon/Xoff); Audible beeper (on or off); and pound selection (English pound symbol or American pound (#) symbol).

The alignment of the page on the Tablet needs to be precise. Even so, we had no trouble getting a good alignment. The scanning works in both directions, thus speeding the process.

When the scanner reads "backwards", the internal program to the OMNI-READER reverses the text and outputs it to the computer "frontwards"!! Intellectually "jarring" when you first see it!

There are four "modes" to the unit which can be set by simply "scanning" the code on the top/front of the Tablet. These are:

1. Typeface: There are currently four typefaces available with the OMNI-READER. The 10-pitch typeface is Courier, and there are three 12-pitch typefaces: Courier 12; Letter Gothic 12; and Prestige Elite 12. Printed samples of the complete typefaces are given in the manual. While talking with the Oberon engineer from England at the Atlanta

Comdex last month, he stated that there were three new typefaces under development and these would probably be released in the next 90 days. They are: OCR A; OCR B; and a special typeface they use only in Britain. For good, reliable reading, it is very important that you identify the typeface that you have and set the OMNI-READER to that typeface! The Tablet has four LED type lights at the top to indicate whether you are set for typeface 1, 2, 3, 4, or "X" (Extra).

2. Numeric: If you have all numeric data, you will get more accurate reads (for spreadsheets, etc.) with the numeric mode. The character set is (if I can reproduce it all on this Apple //c!): 0123456789()\$-+*=.,%/@: and the English pound symbol (See, I couldn't reproduce everything after all!).

3. Newline: This is a toggle and will send a <CR>/<LF> after each line, or not, depending on how you set the toggle.

* 4. Learn: This will enable the OMNI-READER to learn new typefaces, independant of the typefaces in memory. Unfortunately, this has yet to be "implemented" (meaning they haven't written it yet) but will be available Real Soon Now! The manual says, "Please contact your dealer for further information." The dealer (as usual) knows nothing!

The manual does have some useful additions to it, though. There is a page that offers Sample typefaces as well as a transparent overlay for you to lay on top of your material, and thus quickly identify the typeface closest to yours. It has two modes that you toggle to get a better chance to read your typeface. When your typeface is larger, you can scan the "LARGE" command. You can scan as well a "SMALL" command if your typeface is smaller.

There are two additional commands that you can use. The first is "POORCOPY" and the second is "NORMAL". This gives you the flexibility to read poor copy, then output with your word processor to get "good" copy.

In fact, we connected the OMNI-READER directly to an AJ 831 printer and read poor Xerox copy directly to the AJ, and it printed directly on the paper! Why you would want to read directly to printed copy (rather than maintain a disk file copy, which you would then have perpetually), I don't know. But you can do it!

Further, you can load a new typeface from your computer into the OMNI-READER. There are no details on the expected parameters in the manual, but they do provide the facility to do this once you have been able to determine the requirements of the OMNI-READER for the typeface. Currently, it would have to be devined by telepathy, or some other esoteric manner; but the assumption is that at sometime in the future (Real Soon Now!) such information will be available.

For use with the IBM PC, you should first have either Word Star, Word Perfect, or Multimate. If you do, you have a simple patch to make to the program. After that, you boot your WP program and plug a cord (supplied with the software

kit) into the PC and the OMNI-READER and set the WP program to "Non- Document" mode, then start reading. It is as simple as that! You save as normal through the WP program whenever you wish. Normal editing, etc. of the text is done as normal!

If the OMNI-READER is making mistakes with your text, most of them will be consistent (i.e. reading a small i as an exclamation point). Then you simply do a global update chang- ing all !<space> to i<space>.

The OMNI-READER is slow when compared with \$20,000 to \$50,000 OCR (Optical Character Reader) machines. After each line, the OMNI-READER pauses about 2.5 to 3.0 seconds while it digests what it scans, and then it transmits to the computer. But considering the cost differential, the time delay is insignificant.

A special feature is that the scanning head and ruler (which is the key to the OMNI-READER being able to understand what it sees) can easily be removed from the Tablet and laid flat on the page of a book (or plans, or drawings, etc.) and that material can then be scanned!

Now on to our actual experience using it. The first unit we purchased we could not make work. When we talked with the dealer (we had purchased it at the end of the week - Friday, of course - and it was still in the original box), he insisted several times that it was our wrist technique. I had gotten his home number, and I sure did use it that weekend, to his probable disgust (although he was rather patient with me).

I finally "cornered" him a few days later with the unit in hand. He said, "Here, let me show you". And then scanned once, looked up, rather startled, and said, "Your unit is defective!" Speak of exasperation, this was what I had been telling him for over a week!!!

Well, he immediately exchanged it, and the new system worked like a charm on the IBM PC. However, since most of our work is done on Apple //e's and //c's, I was anxious to see it work there.

After a bout with the reference manual for the Apple //c to determine how to reset the second serial port on the //c (the one they call the "Modem" port), I was able to reset the parameters. The default settings are: 300 Baud, 8 data bits, 1 stop bit, no LF inserted on <CR> and no echo to the screen. To translate that to English, the port sends/receives data at the rate of approximately 37 characters per second, or 2250 characters per minute. This roughly equals about 350 words per minute (WPM), which is just slightly faster than the average reading speed. However, when you add the delay time for the OMNI-READER to do whatever it does inside itself, you average speed is about 90-100 WPM, which is about the speed of a good typist. So, although it seems fast, it soon gets quite slow.

The data stuff is simple. The eight data bits simply means that the data is in a stream that requires eight "bits" to make a character (versus 7 "bits"). (However, the OMNI-READER sends at 7 data bits.) A bit is a pulse of current. The stop bit tells the receiving unit that this is the end of the character: it is used for a type of verification. A <CR> is a carriage return (the cursor returns to the beginning of the line) and an LF is a line feed (the cursor moves to the next line directly below the cursor. So as you can see, if you have a <CR> without an LF, the new line will be written directly on

top of the old and reading becomes an exercise in frustration!

On the Apple (as compared with almost any other machine, including the IBM PC) you are both "IN" DOS (Disk Operating System) AND "IN" Basic at the same time. So the commands to re-set the "Modem" port become quite simple (once you know them!). ^A (Control A) gets the attention of the port, and then a simple command produces the desired results. Thus, to convert to 9600 Baud, 7 data bits, one stop bit, echo to the screen, and insert a LF with a received carriage return, and no parity would be: ^A14B, ^A1D, ^AI, ^AL, ^A2P in that order.

We then connected the standard RS-232C cable to the Modem port on the //c (using the special cable from Apple with a 5-pin DIN on one end, and the RS-232C connector on the other). We then connected a Null-Modem (or Modem eliminator, as Apple Computer calls it) to the OMNI-READER. We plugged the RS-232C connector into the Null-Modem on the back of the OMNI-READER. (The purpose of the Null-Modem is to reverse the wiring as it comes from the OMNI-READER - or goes to the Apple //c. Basically, you can think of it as if one is sending, the other is set to receive; thus the wires must reverse between units.

We then set the OMNI-READER for the same settings and then scanned a line AND IT WORKED!!! As you can imagine, there was quite a bit of excitement among the staff.

There was only one problem. Since it was reading directly onto the screen, none of the data was being saved in any way, and thus was lost forever. We tried (rather valiantly, I believe) to get AE PRO to work as a capture program. We called them four different times during the day (and all long distance - a very long distance - from DC to California)! They were rather curt, even the first time, stating that of course it would work and evidencing exasperation.

The only difficulty with that was that it would not work. Even though we did all the things they said, it still would not input from the OMNI-READER into the program (AE PRO). In my own exasperation, I gave up and wrote my own Basic Modem program to set the port, capture the data into an array, and automatically save the data to disk. (See my article describ- ing the program elsewhere in this issue.)

I became so enamoured of the results (which WERE succesful in just 30 minutes) that I fancied-up the program, and we now use it regularly! The most typical current use is to read into the computer the manuscripts that are submitted to us. It even reads dotmatrix printout!

So the final evaluation is positive, within the limits that Oberon themselves state. If that is what you need, it does very nicely. I would rate the hardware (on a 10 scale) as a 7.5 to 8, and the software input on a PC as a 10. The manual rates a poor 3.5, and the future potential for software and hardware improvement as another 10. I would expect that we will see many accessories, software and improvements over the next year! &

WHATEVER HAPPENED TO RANDOLPH SCOTT?

by C. Swift, Prop.

And the answer, of course, is that he just went "ridin' down the trail".

Such is the price of Fame, that exacting but fickle master we all seek but so seldom find. You can call me Randy, 'cause I know what's at the end of the trail.

Another trail...

Our new membership numbers are now something over 7,000 now, I am told, which means I'm not the new kid on the block anymore. But things do change. See, I decided back in late '82 that I'd better learn something about this computer business, so I rustled up all the cash I had, went broke, and got a shiny new][+ with - get this - 48K memory! Super. Two months later the //e showed up cheaper and better and ... oh never mind, I've told this story before.

Anyway, as I began learning little things like INIT and DIM and strings and all that stuff, I thought it would be fun to share some of my discoveries with other members of the club. Hence I started writing articles of a simple nature for the Journal ... neat little programs I was so proud of (well, I wrote them myself, didn't I?) that did neat little things. Hey, we all gotta start somewhere. I kept this up for about eighteen months, culminating with three articles in one issue, which somehow burned me out. "Well, Charlie," I thought, "you've had your fun - give it a rest." (Ed. note: Charlie, meet Randy; Randy, meet Charlie.) Which I did, and you haven't seen anything from me for over a year - until now.

Here's what happened: the world started passing me by again. Everybody else seemed to be getting into the Mac. ("Gotta up-grade to 512K, "mouses", "pull-down menus", Lawdy, I'm in the backwater and no way out.) I couldn't even understand 90 percent of the material in the last issue of the Journal.

And here's also what happened: in the past year "I've had at least two calls a month from readers of old issues who want to know more about those simple little programs! Can it be that there remains a tiny nucleus of us simple-minded types? (Organizers, here's your chance - start a][+ SIG! I'll join right in.)

I'm still bopping along on 48K and upper case. So what? I'm getting everything out of my little treasure that I originally wanted.

Just for old times' sake, and maybe for a few readers who like this neat and simple stuff, here's a useful little program I use frequently because I lose papers and cards but never disks.

```
1 REM ADDRESS FINDER
2 REM C. SWIFT, PROP.
3 REM PUBLIC DOMAIN
10 TEXT : HOME : INVERSE
11 PRINT " ADDRESS FINDER " : NORMAL
12 VTAB 4 : PRINT "INITIAL OF FIRST LINE ]-->"
```

```
13 PRINT "<ESC> TO EXIT"
14 VTAB 4 : HTAB 28 : GET I$
15 IF I$ = CHR$(27) THEN VTAB 23 : END
16 IF I$ < "A" OR I$ > "Z" THEN 14
17 ONERR GOTO 27
18 READ A$,B$,C$,D$,E$
19 AA$ = LEFT$(A$,1)
20 IF AA$ < > I$ THEN 18
21 VTAB 10 : HTAB 1 : CALL -958
   : PRINT A$
   : PRINT B$
   : PRINT C$
   : PRINT D$
   : PRINT E$
22 VTAB 20 : HTAB 1 : PRINT "IS THIS IT?"
23 VTAB 20 : HTAB 14 : GET Z$
24 IF Z$ = "N" THEN 18
25 IF Z$ = "Y" THEN PRINT "GOOD!" : END
26 GOTO 23
27 VTAB 20 : HTAB 14 : PRINT "NOT IN LIST"
28 VTAB 23 : HTAB 1 : PRINT SPC(2) "RUN"
29 VTAB 22 : END
```

Obviously some DATA statements must be included. Two formats come to mind:

```
101 DATA A
102 DATA IS
103 DATA THE
104 DATA FIRST
105 DATE LETTER
201 DATA ALBERT EINSTEIN
202 DATA ""
203 DATA DEPARTMENT OF PHYSICS
204 DATA ""
205 DATA "PRINCETON, NJ"
```

This lets you count carefully so that you get in five DATA statements for each entry. If you feel real sporty and don't worry about dropping a decimal point or so, you can use one line for each entry:

```
101 DATA A,IS,THE,FIRST,LETTER
201 DATA ALBERT EINSTEIN,"",DEPARTMENT OF
   PHYSICS,"","PRINCETON, NJ"
```

There is no need to alphabetize your entries. The "Q's" are found as quickly as the "A's" and "Z's". (Don't forget to SAVE your program whenever you add another entry!)

Line 28 is just for fun. When you get to that point you are out of the program, but you can continue just by tracing over the RUN with the right arrow. Neat, huh? Customi-

An Apple a Day

by Gail West, R.N.

An Apple A Day by Avante-Garde Publishing Corporation is a software package created by Edward Weinstock, PhD. The package is available for APPLE, I.B.M. & COMMODORE computers.

An Apple A Day provides you with three ways to keep you and your family healthy: organize medical records, create a specialized telephone directory, and treat common problems yourself. An Apple A Day can save you time and money, and in an emergency it might even save a life.

Features

- 1) The Medical Records section helps you write a complete medical data base for each family member. Print one to give to your doctor, insurance agent, or school nurse.
- 2) The Health Telephone Directory organizes a listing of medical authorities and services that's instantly accessible in times of emergency. Print one to give your babysitter or to post by the phone.
- 3) Health Advice helps you to identify, treat, and prevent common problems, and tells you when to see a doctor.

System Requirements

The Apple version operates on any Apple II series computer with 48K and disk drive. The IBM version operates on the IBM PC and PC jr with 128K, disk drive and MS-DOS. The Commodore version operates on the Commodore 64 with 64K and disk drive. The above is the information given by the company concerning the program.

Evaluation

The program is easy to access and is very user friendly. The documentation is rather complete and concise. The program itself does all that it claims except that it won't print out the health tips. The health tips themselves are fairly general. There is a disclaimer to the effect that they are not trying to obsolete the need to go to the doctor, but rather to decide the necessity. I think it could have been a little more explicit and still not close to practicing medicine without a license. In the section concerning medical records, it will allow you to enter lab values, hospitalizations, immunizations, allergies etc., etc. When used properly, it can contain the whole of one's medical history from birth onward.

All in all, I think that the program is very informative and beneficial especially for families and any one who may be interested in the preservation of health. ☼

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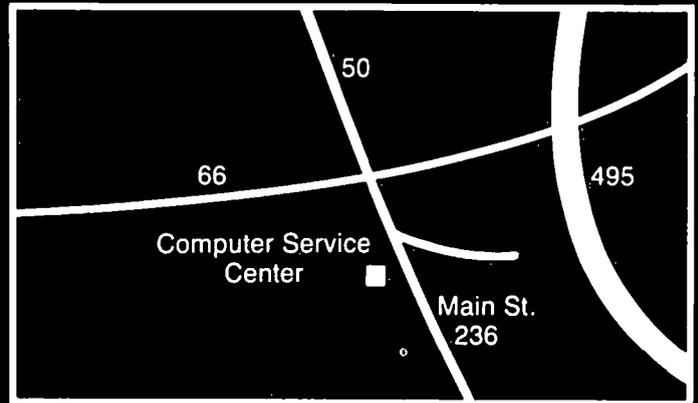
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SET-UP FOR IMAGEWRITER FOREIGN CHARACTER SETS

by Jim Kellock

This little program is for people with Imagewriter printers, to let them initialize the printer for the built-in foreign language character sets. There's documentation in the program. The keyboard characters on the //e used for the alternate sets are:

```
{ [ ] } \ | @ # ~
```

The main value of the program is that it includes the Real escape and control characters to call up each of the sets. The Imagewriter manual lists an assortment of six escape and control characters for each (an escape, 2 controls, another escape, and 2 more controls). What seems to work is the last three (the 2nd escape character and the last 2 control characters), but you have to reset the default (American) set before changing from one foreign set to another. The program is written in dBase, but it would be easy enough to redo it in BASIC, or if you have Wordstar patch the numbers into one of the print control addresses, remembering to reset to the American font each time. I just run it from the <R> (run a program) command in Wordstar. It's really quick if you rename the DBASE.COM file to DO.COM, thereby having to type only <DO PR> to run the routine.

* PR.CMD

* By Jim Kellock, June, 1985

* May be copied but not re-sold

* SET-UP FOR IMAGEWRITER FOREIGN FONTS.

* Easiest way to call program from CP/M prompt is to

* rename DBASE.COM to DO.COM and type

* DO PR from A>

* prompt (or DO B:PR if on B:, etc.)

ERASE

SET TALK OFF

SET COLON OFF

@ 10,10 SAY 'SET IMAGEWRITER <SELECT> TO

ON BEFORE ENTERING YOUR CHOICE'

@ 11,10 SAY ' HIT ANY KEY TO CONTINUE'

SET CONSOLE OFF

WAIT

SET CONSOLE ON

@ 10,0

@ 11,0

STORE T TO OPR

DO WHILE OPR

SET PRINT ON

SET CONSOLE OFF

* RE-SETS FOR DEFAULT, I.E., AMERICAN

CHARACTER SET

?? CHR(27)+CHR(90)+CHR(7)+CHR(0)

SET CONSOLE ON

SET PRINT OFF

@ 1,4 SAY '***** IMAGewriter

CHARACTER SET SET-UP *****'

@ 4,32 SAY '1. GERMAN '

@ 6,32 SAY '2. FRENCH '

@ 8,32 SAY '3. AMERICAN'

@ 10,32 SAY '4. BRITISH'

@ 12,32 SAY '5. SWEDISH'

@ 14,32 SAY '6. ITALIAN'

@ 16,32 SAY '7. SPANISH'

@ 18,32 SAY '8. RETURN TO CPM'

@ 19,32 SAY ' <DEFAULT: AMERICAN>'

STORE '' TO OPT

@ 22,28 SAY 'SELECT 'GET OPT PICTURE '9'

READ

SET PRINT ON

SET CONSOLE OFF

DO CASE

CASE OPT='1'

* SETS UP GERMAN FONT

?? CHR(27)+CHR(68)+CHR(4)+CHR(0)

CASE OPT='2'

* SETS UP FRENCH FONT

?? CHR(27)+CHR(68)+CHR(6)+CHR(0)

CASE OPT='3'

* SETS UP AMERICAN SET

?? CHR(27)+CHR(90)+CHR(7)+CHR(0)

CASE OPT='4'

* SETS UP BRITISH SET

?? CHR(27)+CHR(68)+CHR(3)+CHR(0)

CASE OPT='5'

* SETS UP SWEDISH SET

?? CHR(27)+CHR(68)+CHR(5)+CHR(0)

CASE OPT='6'

* SETS UP ITALIAN SET

?? CHR(27)+CHR(1)+CHR(0)

CASE OPT='7'

* SET UP SPANISH SET

?? CHR(27)+CHR(68)+CHR(7)+CHR(0)

CASE OPT='8'

SET PRINT OFF

ERASE

QUIT

OTHERWISE

LOOP

ENDCASE

* To test the program on your Imagewriter, key in

* without the asterisks in the three lines below, and

* the program will print each character set as you

* select it, looping back to the top of the program

* each time. Leave the current program with selection

* # 8. Otherwise, you don't need selection # 8.

//c INPUT ANYTHING & MODEM SETTING ROUTINE FOR SERIAL PORT 2

Copyright 1985 by: Leon H. Raesly, LCSW

One of the things that is nice about the Apple //c is that it has two built in Serial Ports, Port No. 1, and Port No. 2. The Port #1 is designed as a Printer Serial Port, and has a default Baud setting of 9600. Port #2 is designed as a Modem serial Port, and has a default setting of 300 Baud.

But suppose you wish to INPUT at a different rate, or DATA/STOP settings than the default? If you use the //c Utility program (which is Pro-DOS), all settings will reset to the default when you go back to DOS 3.3. So what do you do if you wish to INPUT from some other device (say the OMNI Reader, and OCR INPUT device).

Well, if you have purchased The Apple //c Reference Manual - Volumes 1 & 2, you could look up the commands on page 140-159. And then write a program to capture the data.

Or, you could just run this short little program, which will set the most common BAUD, DATA BITS, STOP BITS and PARITY settings for you, then allow you to directly INPUT your data, and save it to disk under whatever name you wish.

Lines 3-9 can be omitted; these are lines that I always enter in any program so that I can save it to disk as a text file, without any bother. Just change the GOTO 1000 in line 1 to GOSUB 60, and it will list for you.

Lines 60-69 set a small box on the 80-Column screen, and 70-79 blank it out. Thus, I can easily blank any questions from this area with a GOSUB.

Line 1000 starts the main program. Line 1010 GOSUBs to 5000, to ask Characters, line, and file name info. Then 1020 GOSUBs for Baud rate; 1030 GOSUBs for DATA/STOP bit info, and 1040 GOSUBs for PARITY info.

These are then set with a GOSUB in 1050 to set your choices in the Serial Port #2. Lines 1300-2010 DIMension the ARRAY, and create a file of whatever name you specified. In that file the first field (0 in the ARRAY) gives the total number of lines (fields) in the file. Lines 6000-7500 capture the data, and preview it to you on the screen. Finally, lines 7700-8500 save it to your file, and ask if you wish to continue.

The program speaks to you through the 80-Column screen, but when it begins to INPUT data, switches back to the 40-Column screen, since there are many CONTROL codes that you might receive while in the 80-Column mode that would do strange things.

Well, if you decide to try this program, let me know how it works for you. If you have any problems, you can call me at 460-0754. Thanks for listening.

PROGRAM LISTING

```
1   D$ = CHR$(4): HOME : PRINT D$;"PR#3":  
    GOTO 1000:REM Change to GOSUB 60 to make a  
    TEXT listing of the program.  
3   VTAB 11: HTAB 17: PRINT "Enter the number  
    you wished added to the name"; INPUT N%: VTAB  
    11: HTAB 65: PRINT "|"; GOSUB 70: VTAB 8:  
    HTAB 37: INVERSE : PRINT "WORKING";  
    NORMAL  
4   D$ = CHR$(13) + CHR$(4): PRINT D$;"OPEN  
    LISTING";N%: PRINT D$; "WRITE LISTING";  
    N%: POKE 33,30: LIST 1.: PRINT D$;"CLOSE"  
5   POKE 33,80: GOSUB 70: INVERSE : VTAB 9:  
    HTAB 38: PRINT "DONE": NORMAL  
6   NEXT I: VTAB 11: HTAB 65: PRINT "|";  
7   VTAB 11: HTAB 22: PRINT "The name of your  
    TEXT file is LISTING";N%  
9   VTAB 23: HTAB 1: END  
60  HOME : REM STARTS BUILDING BOX  
61  PRINT " "; VTAB 6: HTAB 16: PRINT  
    "  
    _____"; VTAB 7: HTAB 15: PRINT  
    "|"; HTAB 65: PRINT "| " "; VTAB 8: HTAB 15:  
    PRINT "|"; HTAB 65: PRINT "| " "; VTAB 9:  
    HTAB 15: PRINT "|"; HTAB 65:  
62  PRINT "|";  
63  VTAB 8: HTAB 15: PRINT "|"; HTAB 65: PRINT  
    "|"; VTAB 10: HTAB 15: PRINT "|"; HTAB 65:  
    PRINT "|"; VTAB 11: HTAB 15: PRINT "|";  
    HTAB 65: PRINT "|";  
66  VTAB 12: HTAB 15: PRINT "|"; HTAB 65:  
    PRINT "|"; VTAB 13: HTAB 15: PRINT "|";  
    HTAB 65: PRINT "|"; VTAB 14: HTAB 15:  
    PRINT "|"; HTAB 65: PRINT "|"; VTAB 15:  
    HTAB 15: PRINT "| _____";  
69  IF SR = 3 THEN RETURN  
70  REM STARTS BLANKING BOX  
71  FOR I = 7 TO 14: FOR J = 16 TO 64: VTAB (I):  
    HTAB (J): PRINT "<"; VTAB I: HTAB J: PRINT  
    " "; NEXT J: NEXT I  
79  RETURN  
1000 SR = 3  
1010 GOSUB 5000  
1020 GOSUB 8000  
1030 GOSUB 9000  
1040 GOSUB 10000  
1050 GOSUB 11000  
1300 DIM A$(3000)
```


APPLE /// ARTICLES: A COMPILATION

By David Ottalini

Over the past few months, I've begun a project to try to compile as complete a list as possible of all the articles written about the Apple ///. The following is the first installment of my efforts. I hope to offer you more as I am able to gather the material together.

The Apple Pi Office has on file a copy of an index to Apple and CP/M literature for 1980 to 84 from the Microcomputer Index provided by Ted Gaugler (see his article in the March 1985 WAP Journal, page 24). But it does not include all magazines and newsletters, and not many of us have a chance to actually get over to the Pi office to look up things. So as I can, I have begun spending the time to find whatever I can find. It's been a great learning experience for me (I never knew there were so many articles) and it will perhaps help you get a little more out of your ///.

Many of the articles are contained in magazines available in the Apple Pi office. So if there are any articles that interest you, make the Pi office your first stop. There is a copy machine available and the cost is nominal. At this point, I would like to thank everyone in the Pi office for their help as I work to put this project report together.

This first listing will be for the only ///-specific magazine

now being published with any regularity. On Three is its name. It is supposed to be published monthly, but essentially comes out when it comes out. In any case, there have been a total of six issues so far, all of whose articles are in the upcoming listing.

I have not included such things as "letters" columns (for obvious reasons), but have included articles that can only be called "commercials" for an On Three product (an example: "Why Don't You Have Lazarus ///?")

I have tried to double check all listings but would suggest that you get a copy of the magazine and look for the specific article you want. In some cases, titles have been condensed due to space considerations.

As you will notice, the listings are in alphabetical order by subject. Our next offering, will be Softalk magazine.

Magazine : On Three
Publisher : Bob Consorti
Address : 5550 Telegraph Rd. Ste. B-4
Ventura, Ca. 93003
Phone : (805) 644-3514
Price : \$40.00 / 12 issues

<u>SUBJECT</u>	<u>TITLE</u>	<u>AUTHOR</u>	<u>YOL</u>	<u>#</u>	<u>MON</u>	<u>YR</u>	<u>PG(S)</u>
ACCESS ///	AUTO. ACCESS ///	JOHNSON	2	1		1984	32
APPLE WRITER	APL. WRITER WHAT?	WEBB	2	1		1984	41
AUDIO	/// TO THE MAX #4	EVANS	2	2		1984	17
B. BASIC	BASIC-THE EASY WAY	CURLSON	1	1		1983	22-26
B. BASIC	BASIC-THE EASY WAY	CURLSON	1	2	2/3	1983	26-29
B. BASIC	BASIC-THE EASY WAY	CURLSON	1	4	6/7	1983	39-41
B. BASIC	BASIC PGM LISTER	OETZEL	2	2		1984	22-24
B. BASIC	SPREADSHEETING	RUSSELL	1	4	6/7	1983	21-23
DISK SPACE	DISK SPACE PLUS!	CONSORTI	1	1	1	1983	6-15
DOS LISTER	DOS FILE LIST	CONSORTI	1	3	4/5	1983	10-12
EM MODE	/// THE HARD WAY	OETZEL	1	4	6/7	1983	25
EM MODE	/// TO THE MAX #3	EVANS	2	1		1984	36-37
EM MODE	JYSTK FOR][GAMES	TAYLOR	1	4	6/7	1983	26
GRAPHICS	GRAPHICS SKETCHER	DORMAN	1	4	6/7	1983	22-24
GRAPHICS	THREE SHORTS-FINI!	COHEN	2	1		1984	48
KEYBOARD	ASSEMBLING ///	NICHOLS	1	2	2/3	1983	19-24
KEYBOARD	ASSEMBLING ///	NICHOLS	1	1	1	1983	16-21
KEYBOARD	/// TO THE MAX #2	EVANS	1	4	6/7	1983	32-33
PASCAL	ON PASCAL	HANSON	1	2	2/3	1983	30-35
PASCAL	PASCALCULATOR:MATH	EVANS	2	1		1984	21-24
PFS SERIES	HINTS	LYMAN	1	4	6/7	1983	16-19
PFS/WPL	PFS-WPL MERGE	MERRIT	2	1		1984	25-28
PR. CONTROLS	APPLE DMP CONTROLS	SMITH	1	3	4/5	1983	13-16
PR. HEADERS	HEADFIRST	GARDNER	1	4	6/7	1983	27-28
PROGRAMS	SLOTS OF FUN	MCCAW	2	1		1984	35
PROGRAMS	THREE SHORTS-FINI!		1	3	4/5	1983	32
PROGRAMS	THREE SHORTS-FINI!		1	1	1	1983	36
PROGRAMS	THREE SHORTS-FINI!	COHEN	2	2		1984	30
PROGRAMS	THREE SHORTS-FINI!		1	2	2/3	1983	40
PROGRAMS	THREE SHORTS-FINI!		1	4	6/7	1983	48
REBOOT PRVNT	ASSEMBLING ///	NICHOLS	1	3	4/5	1983	17-18

REVIEW	MICRO-SCI A3/A143	CONSORTI	2	2		1984	15-16
REVIEW	THE USER'S MICRO	FITZ'MCE	2	1		1984	29-31
REVIEW	APPLE WRITER ///	CONSORTI	1	2	2/3	1983	36-38
REVIEW	EVERYTHING	CONSORTI	1	3	4/5	1983	24-29
REVIEW	PFS:FILE/RPT	CONSORTI	1	1	1	1983	29-35
REVIEW	ART OF NEGOTIATING	CONSORTI	2	2		1984	27
REVIEW	APPLE SPELLER ///	SEXSON	2	2		1984	25-27
REVIEW	/// IS MORE...	CORTOPASSI	2	1		1984	18-20
REVIEW	THE ///S FOR ME	EVANS	1	2	2/3	1983	7
REVIEW	DRAW ON ///	CONSORTI	2	2		1984	12-14
REVIEW	LAZARUS ///	CONSORTI	2	1		1984	12-17
HORSES	/// TO THE MAX #1	EVANS	1	3	4/5	1983	22-23
SOS	SOS DIREC. STRUCT.	CONSORTI	1	2	2/3	1983	8-12
UTILITIES	ASSEMBLING ///	NICHOLS	1	4		1983	34-38
UTILITIES	DISK PAK2	CONSORTI	1	2	2/3	1983	13-18
VISICALC	DECISION SUPPORT	CUNNINGHAM	2	1		1984	38-40
VISICALC	ON VISI...OR /C	HANSON	1	1	1	1983	27-28
WPL	WORD PCSS. LNG.	CONSORTI	1	3	4/5	1983	20-21
WPL	WPL REVISITED	CONSORTI	1	4	6/7	1983	29-31
WPL	WPL SHORTS	LOMARTIRE	1	4	6/7	1983	20

"APPLE /// IS FOR ME"

By David Ottalini

As Charlene Ryan mentioned in the July WAP, the Association of Independent Microdealers (AIM) has created a pool of Apple /// software and hardware from its members and is offering the items at substantial discounts.

I just recently received my copy of their list and thought I would pass a little information along about what is available through the pool. First, if you have not sent away for your copy of the list, do so immediately. The software and hardware listed are all closeout items and orders are being taken on a first-come, first-served basis. (I can not tell you what will be available by the time you read this).

The pamphlet I received says you can order directly from AIM or through a local AIM member. The items carry a 10 day guarantee. There are no cash refunds. AIM says it will also list your wants and wishes in the pamphlet (suggesting that there will be updates of what is available in the future).

Included in my pamphlet was a product description of those items available throught the "Apple /// Is For Me" program. The listing included /// EZ Pieces, Apple /// Pascal, Business Basic, Apple /// Softcard, the BPI series, the PFS series, etc. I counted more than 40 in the list.

As for prices, /// EZ Pieces was going for \$110.00, Apple Writer /// (version 1.0) from \$30.00 to \$96.00 (there were 6 copies available; prices were apparently set by the AIM member sending the software to the pool). That Capt. Magneto game you've seen advertised for \$40.00 was going for \$7.50, Business Graphics for \$43.75 (one copy for \$50.00) and COBOL for either \$150.00, 123.75 or 125.00 depending on which copy you ordered.

Not everything described in the initial listing was in the price list. But there was enough there to make this /// user more than just interested. If you'd like to get a copy of the list, send \$1.00 to: The Association of Independent Microdealers, 3010 N. Sterling Ave., Peoria, IL 61604. ☞

//c Input contd. from pg 36

```

11220 IF X$ = "4" THEN PRINT D$;"IN#2": PRINT
      CHR$ (1);; PRINT "4D"
11230 IF X$ = "5" THEN PRINT D$;"IN#2": PRINT
      CHR$ (1);; PRINT "5D"
11300 IF Z$ = "6" THEN PRINT D$;"IN#2": PRINT
      CHR$ (1);; PRINT "6B"
11310 IF Z$ = "8" THEN PRINT D$;"IN#2": PRINT
      CHR$ (1);; PRINT "6B"
11320 IF Z$ = "10" THEN PRINT D$;"IN#2": PRINT
      CHR$ (1);; PRINT "10B"
11330 IF Z$ = "14" THEN PRINT D$;"IN#2": PRINT
      CHR$ (1);; PRINT "14B"
11400 REM
11999 VTAB 22: HTAB 30:
      PRINT "          ";; RETURN
62999 GOTO 63999
63000 PRINT D$;"PR#0": PRINT D$;"CLOSE": HOME
      : VTAB 12: HTAB 5: PRINT "YOU HAVE
      EXCEEDED 3000 LINES DIMEN- SIONED IN
      LINE 1300. PLEASE RERUN PROGRAM AND
      USE A DIFFERENT FILE NAME."
63999 VTAB 23: HTAB 1: END

```

IW Character Set contd. from pg 34

*?"{}|D@#~-"

*?

*LOOP

SET PRINT OFF

ERASE

QUIT

TEXT

If the program is accessed from the <R> (run a program) command of Wordstar, Wordstar will take control after the <QUIT> is issued. Otherwise, if you want to boot a new program after initializing the printer, change the two <QUIT> commands to <QUIT TO "command file name">, and the program will be invoked automatically.

ENDTEXT

RETURN

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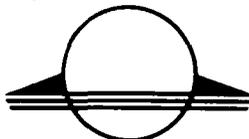
**SALE \$69.95
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COMPUTERKIDS
279-5556**

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Interfirm Systems Corporation
110 Pioneer Way, Suite H
Mountain View, CA 94041

Name _____
Address _____

Zip _____

Which computer and software do you use McBall with? _____

Comments about McBall? _____

SIGMAC MEETING NOTES

by Brooks Leffler



Mac Section

TUTORIAL SURVEY

The July 13 SigMac meeting was held in new quarters in the auditorium of the Pre-Clinical Science Building at Georgetown University Medical School. The room is more auditorium than amphitheater, with shallower slope, a balcony, and a stage. It is also possessed of an overefficient air-conditioning system which kept us all at seemingly 63° for four hours on a mid-80s, steamy day. [Bring a sweater and your mukluks next month!]

Attendance was down considerably because of summer, to maybe 250 shivering stalwarts.

Immediately apparent was the bright, sharp, natural-colored 9'x12' Mac image emanating from the Hughes Model 700 Computer Graphics Projector. Seems that Mark Brodsky from Hughes Aircraft Corporation was there to demonstrate the computer projector thought by many to be the best on the market--at a price: \$44,000. Threats to hold Mark hostage rumbled through the room as Chairman Steve Hunt got the meeting underway.

Taking advantage of the nifty projector, Steve used The Slide Show Magician to run down the agenda and upcoming calendar. **SPECIAL NOTE: In order to ease meeting the deadline for Journal articles, SIGMAC MEETINGS WILL MOVE TO THE FIRST SATURDAY OF THE MONTH BEGINNING IN SEPTEMBER.

MEETING CALENDAR

- August 10: DATABASES. A rep from ProVIEW will demo OverVIEW 2.0, followed by a panel of SigMac members who use various database systems.
- September 7: MICROSOFT EXCEL AND THE MAC OFFICE
- October 5: HARD DISKS
- November 2: DECISION SUPPORT AND ARTIFICIAL INTELLIGENCE SOFTWARE. Demo of MindSight.

MACWORLD EXPO

Many members indicated that they were planning to attend the Expo at the Bayside Exposition Center in Boston August 21-23. See ad in MacWorld and in the July WAP Journal centerfold.

Air fares run \$110-\$150, with New York Air off-peak from Dulles appearing to be the least costly. The "official" convention hotels (neither is close to the Expo) start at \$115/single. The Chandler Inn in Back Bay has bed/breakfast rooms with bath for \$50-\$60; there is also a HoJo with relatively reasonable rates.

WAP will have a booth to sell disks and recruit members; volunteers to run the booth are needed. Contact Bernie Urban at the office.

Oscar Kramer circulated a questionnaire to guide the club in the selection of topics and teachers for future tutorials. If you'd like to put in your two cents, call Oscar at (301) 384-5206. Standard participant fee is \$10 per day if you bring your Mac, no Mac \$15, non-members \$20. Teachers are unpaid.

PROJECTOR PRESENTATION

Mark Brodsky presented a short demo about the Hughes projector. Originally intended to be used in corporate teleconferencing for the presentation of computer data, it is now used in numerous military installations, university lecture halls, and sales booths at computer shows. Teleconferencing, both one-way and interactive, can make good use of the device, although that form of info exchange has not yet reached the level of popularity that its supporters had expected.

The Hughes 700 was designed strictly for computer use, and is not a video projector per se, although it uses a CRT in conjunction with a liquid crystal light valve, a 1 KW Xenon projection lamp, and a single lens. When Mark first plugged it in, it came right up with a beautiful, bright, jitter-free picture, with a minimum of diddling. While it can be used with any computer, this projector is monochrome only. Moving images have a slight lag, or comet-tail effect, not at all objectionable. The projected image has a resolution of 1000 x 1000 pixels.

Color would be possible by interlacing the output of three systems, but Hughes has felt it more important to develop a smaller/cheaper monochrome machine as the next step.

Steve Hunt announced that negotiations will get underway shortly to enter into a joint venture with other computer clubs in the area to share a place to house meetings and to acquire a Hughes projector to share among the groups. Hughes has made an offer for lease.

MAC DRAFT DEMO

Steve Hunt demonstrated new (pre-release) object-oriented graphics software called MacDraft, to be distributed by IDD Inc. at a list of \$195.

MacDraft is similar to MacDraw in behavior and overall on-screen appearance, but has several unique characteristics that improve on MacDraw. Among the more impressive are the following:

- Duplicated objects can be evenly distributed along a line with a drag of the mouse, then all can be rotated simultaneously around each object's axis on the line.
- Radius of rounded corners, circles, and arcs can be set with drag of mouse.
- Image may be zoomed to several incremental magnifications, sort of like a graduated FatBits.

- Smoothing of polygons is excellent; "handles" on such objects may be split to change the shape of the object.

- Measurement labeling can be automatic; feet and inches read out with fractional precision; inches/metric conversion can be accomplished with a mouse click.

PUBLICATIONS

IBM-oriented PC Magazine for July 23, 1985 does a comparison of Mac and IBM-PC as business machines and comes out supporting the Mac!

Mac In Touch - new Laserwritten monthly magazine, subscription \$48/year. Can be seen in the WAP library.

TELECOMMUNICATIONS

As a preamble to demos of communications hardware/software, Steve presented a summary of factors to consider if you're thinking about getting into communicating with your Mac.

Basic questions:

- what do you need to do?
- how much do you want to spend?
- how much patience do you have?

Hardware/software:

- Modem: speed of transmission will govern phone line cost. Speed rates of 300, 1200, 2400 baud (bits/second) are available, with 1200 currently the fastest practical speed due to phone line limitations. Hayes is the largest modem manufacturer, and therefore the de facto industry standard.

- Software:

Several levels of sophistication, generally related to cost:

- low cost, such as Red Ryder [SigMac Disk 17]. good for a patient novice.
- intermediate, such as MacTerminal. more flexible, but limitations.
- high power, such as InTouch/Smartcom. many features, maybe overkill.

(Steve promised a comparative article in an upcoming journal.)

Do's and Don'ts

- Think ahead to future use.
- Get 1200 baud; don't rush into 2400 until standards are set.
- If you anticipate more than casual use, get a Hayes-compatible modem capable of autodial.
- Don't use a modem on a call-waiting phone line.
- See all components work together before you buy.

Steve's summary was followed by a break so that the assemblage could retire to the hallway and thaw out. In another meeting room, demos followed of Red Ryder, InTouch, and MacTerminal.

GAMES FOR THE MAC

Ron Wartow, chairman of WAP's GameSig and the closest thing we've got to a standup comic, took over the Big Screen to demo several new games for the Mac. Ron pointed

out that while some of the current issues are adaptations of games written for other computers, the Mac makes games easier, and more fun. And the flood has just begun: Ron is now receiving 20 to 30 games each month to review. He chose three nifties to demonstrate, each available for less than \$50:

- Chipwits by Brainpower. Not new, but from the delighted reactions, not familiar to all. Program your own robots to work their way through several environmental situations. Ron's creations include such WAP namesakes as Tum Wark, StevHant, Gena Urbn, and BurnyUrbn, but Twirler #2 is Ron's smartest creature to date, with a 2100 high score in the environment known as Greedville. Ron's view of Chipwits: "This is no toy!"

- Ultima III by Sierra On-Line. This is a fantasy role-playing game, fully animated with simple but sophisticated graphics. In this one, you create each character by mouse-clicking selections from a sizable table of attributes. (One set of choices: male, female, other.) Excellent and elegant documentation includes a full color cloth map of the realm.

- Gato by Spectrum Holobyte. A submarine simulation, with attractive graphics and full mouse control. Speed, firepower, and other attributes can be set for both sub and targets. Mission situation is established by Morse code message, translated into teletype--up to Level 7, when the Morse remains untranslated! Currently the best-selling computer game on the market.

After running down a sizable list of games nearing release, Ron closed with the reminder that he is available (see Hot Line at front of Journal) for consultation on games when you're in a buying mood, and for hints if you're stuck in mid-game. ¶

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MAC Q & A

by Jonathan E. HardiS

We begin this month's column with a question about Jazz:

Q: From where does Apple get the music for the guided tour tapes?

A: Some is from Liz Storey's album "Solid Colors", Windham Hill Records (C-1023). Some is from George Winston's "Winter into Spring" and "Autumn" albums (Windham C-1019 and WH-1012).

Q: All my old Desk Accessories (DA's) are in CE Software's "Desk Accessory Mover" documents. How do I convert them to Apple's new "Font/DA Mover" format?

A: One method is to install the DAs into the System file with one program and then to remove them with the other. CE Software has also just released a bunch of new goodies, including a utility to make a direct conversion. They are releasing version 4.0 of the "Mock" series of DAs, a disk mass-duplication program, and an AppleTalk intercom program called "Chatter". Those who participated in the MacHonor system and sent in their money will be getting mail on this soon. (SIGMac disks 5, 19, and 22 contain previous releases of their software. If you use it, you are expected to honor-up.)

Q: How often should I clean the heads of my disk drives with a cleaning disk?

A: There is no definitive answer to this, but my best guess is: never. (You can expect the drive cleaner companies which sell overpriced rubbing alcohol to offer an alternative answer.) One rumor, attributed to an Apple Representative, is that the drive heads are highly polished and are intended to be self-cleaning. The cleaning disks are more abrasive than data disks and can be counter-productive. I take the view that if it isn't broken, don't fix it. And I note that while detailed instructions are given in the Mac manual for cleaning the mouse, no mention is given to cleaning the disk drives.

Q: When I put a good disk in my external disk drive, I'm told that the disk is unreadable. If I (re)initialize it, I lose my data. What do I do?

A: There is a prevalent problem with the external drive (and less so with the internal drive) which causes a variety of symptoms: unreadable disks, disks which eject as soon as you put them in, and drives which try to keep ejecting nothing. The problem is a poor electrical connection to the disk drive.

The first thing to try is to take out the disk drive plug and reconnect it, tightly. The out and in action scraps tarnish off of the pins, which provides a better connection. If that isn't enough, there is another

connector inside of the drive case which mates to the Sony drive itself. If you care to, you can open the case, remove and reinsert that end, too. Remember that the disk drive may be damaged by static electricity while it's disconnected from the Mac. If you work on it, make sure you are grounded and your work station is conductive.

At the meeting, one member attributed his disk drive troubles to the brand of disk he was using (Nashua).

Q: What has been the experience with the Haba external disk drive?

A: Of those at the meeting willing to state an experience, there were 3 satisfied customers, and one who returned 5 drives as defective. You may wish to wait until Apple announces their new double-sided drives before buying.

Q: What is meant by a "second generation" hard disk?

A: It is mostly a marketing term used by companies other than Corvus, Tecmar, and Davong, who were the first to have Mac hard disks out. The implication is that the disks will somehow have better software or integration with the Mac. "Speed" is also an issue, but the various claims based on which port the disk uses and the peak data transfer rate are misleading at best.

An upcoming SIGMac Meeting will feature the different hard disks, including those such as the MacBottom and Apple's own version.

Q: When I use the LaserWriter with Mac-Publisher, the sides of the pages are clipped off. What do I do?

A: Ask for 96% reduction. (The respondent claimed this is a LaserWriter bug. If so, note for other programs. -Ed.)

Q: Help! Mac*Spell*Right™ doesn't work with the latest MacWrite documents.

A: The latest version out now does.

Q: Are there any other recent revision releases we should know about?

A: MS Word 1.05 and File 1.01 are on the way. They are faster with the LaserWriter. (You have to run System Update on them yourself, because MS isn't entirely happy with the Finder 4.1 "build disk".) Copy II Mac is up to 4.0; the update fee is down to \$15. (One member said that the later versions fail to copy everything the earlier ones did.) Gato is now fixed to Version 1.3. Smartcom II has been fixed to work under the new XLisa Macworks. Call Hayes Tech Support (404-441-1617) for return authorization. Version 2.1B now supports MacBinary and the Tecmar hard disk. ThinkTank 512 version 1.1 is now shipping. Along with new features, it is now compatible with Switcher, the XLisa, and the

LaserWriter.

Q: When I use a modem to connect my computer to the telephone line, I lose the connection when my "Call Waiting" signals. How can I prevent this?

A: It doesn't work in all areas, but sometimes "Call Forwarding" takes precedence over "Call Waiting". If you set Call Forwarding first (say, to the BBS you are about to call yourself), you won't be interrupted. (The consensus is that this doesn't work in the District.)

If you have a Hayes Smartmodem™ or a work-alike, you can sometimes get around the problem by setting the "Carrier loss to hangup time" to 1.5 seconds. (The call waiting interruption is about 1 second.) The command is AT\$10=15, which you should enter before placing your call. Note that the Apple modem does not have this feature. Also the modem at the other end of the phone line has to have been similarly set. Of course, whatever you were doing when the Call Waiting signal came in will be disrupted. You will likely have to take remedial action. But you should still stay connected to the host computer.

The best, long-term solution will be for your local telephone company to reprogram their Call Waiting service to allow you to turn it off. Such a "Selective Call Waiting" service has been introduced in some parts of the country. You touch *70 or dial 1170 before placing your call, and you aren't interrupted during that call. My local C&P Business office tells me that this feature isn't scheduled for Maryland until late 1986.

Custom Calling (including Call Waiting) and data transmission are high profit growth areas for the telephone industry. If you want your views heard on how (and when) to make services more closely match your needs, you can write to both your local operating company (such as C & P of ...) and its parent company (such as Bell Atlantic), as well as to your public service commission.

Q: How do I get MacTerminal to answer the phone?

A: This is an oft asked question, as MacTerminal has a bug in the "Wait for Call" menu selection. If you have an Apple or a USRobotics Password modem, don't use that menu item. Your phone will answer anyway.

Q: How do I get MacTerminal to save the screens?

A: When MacTerminal says "Record Lines off the Top" it means just that. The host computer has to scroll the screen "Off the Top" in order for the text to be saved. Hosts that draw a new screen each time don't scroll. This includes the 3270 protocol converters.

(Note: You can always select the whole screen and either "Print Selection" or else Copy it to the clipboard and paste it into the scrapbook (or carry it to another application with the Switcher). Cmd-Shift-3 will save the screen to disk as a MacPaint file. Also, don't confuse saving off the top with Text file transfer.)

Q: How do I clear the screen in MacTerminal without losing all my settings?

A: Ideally, you should have a different document set up for each host computer you use, each with the settings prepared in advance. Start with a blank document, switch the settings to the way you like them, then save the document as the name of the host. When you open one of these documents, you can then choose the "Reset" command to clear the screen.

Q: In Jazz, when I add 22.739, 13.919, and 24.342, and then subtract 61, I don't get the correct answer of zero, but rather -6.939E-18. Why? And what can I do about it?

A: The answer has to do with the different ways computers deal with fractions. Jazz uses "floating point" numbers, which leads to effects of this kind as well as apparent rounding errors. I know of nothing you can do about it.

One method used for storing fractions in computers is to remember up to a certain number of decimal digits after the decimal point, just as you tend to write them. The other is to convert the decimal number to a binary number, and then to store a certain number of binary "digits". While it is usually faster for a computer to deal with binary numbers, fractions which may be expressible in a few decimal digits may turn into an infinitely long series of binary "digits". (Think of the fraction 1/3, which turns into the infinitely repeating decimal series .33333...) In practice, you can only store a finite number of these infinite digits. And so the numeral you get is slightly different than the number you wish to represent. Some software just drops off the rightmost "digits"; some round the number, in binary.

Additionally, floating point binary numbers hold different numbers of fractional "digits" depending on how large the whole number part is. When you add and subtract such numbers, you (or the software designer) have to be careful not to place too much significance on the rightmost fractional digits of the result.

While scientific computer users are well aware of these effects, it is questionable why Lotus designed Jazz this way. Multiplan apparently uses decimal numbers throughout, and Microsoft BASIC has two versions, which gives you a choice.

Q: How do I use the Thunderscan with the LaserWriter?

A: Andy Hertzfeld has finished the next revision of the Thunderscan software. It supports the LaserWriter and the 15" Imagewriter, and it has new features and bug fixes. Registered Thunderscan owners should expect mail within a month.

Q: How do I use the Thunderscan with the XLisa?

A: You can't. The XLisa is of such a different design than the Mac, the trick Andy uses to encode picture brightness can't work on the XLisa. Also, the Thunderscan gets its electric power from the Mac printer port. The XLisa has no such power connection.

Q: Can I use the Corvus Hard Disk on the Printer Port (to use the disk and modem together)?

A: Yes, but you have to patch the software first. Using the Resource Mover (SIGMac disk 13 or 22) or Resource Editor (SIGMac disk 21), extract the .OMNIDRIVER resource (DRVR 11) from the system file, and save it in a separate file. Then, using FEdit (SIGMac disks 21, 17, and 9 - it's Shareware so pay up!), make the following changes to the copy (Hex search, modify, then rewrite): 544B 5C4C to 4E71 584C, 544D 5C4E to 4E71 584E, 8009 2004 to 4009 2004, and 21F8 02CA 02C6 to 21F8 02C2 02BE. Then, replace the driver on a copy of the boot diskette with the modified version.

I realize that these instructions are rather cryptic, but there isn't the space to teach you how to use these potentially dangerous utilities. Call a hotline volunteer if you can't find an experienced user.

Note: this has not been endorsed by Corvus, and they won't be able to help you with it.

Q: How do I get the Resource Mover to work correctly (in order to install RAMDisk on SIGMac Disk 13)? The watch cursor never goes away.

A: The Resource Mover is a no-frills program. The cursor never does change after the watch appears. Also, double clicking on selections doesn't work. You have to use "Open" on the menu.

Q: What is the difference between a RAM disk and a disk cache?

A: RAM disks, such as the public domain version on SIGMac disk 13 and Mac*Memory*Disk™, reserve a portion of electronic memory and make the Mac think that there is another disk "out there". You can treat it as any other disk (read and write documents to it, and copy documents to and from it with the Finder), but as soon as you turn the Mac off, the memory gets erased. People use RAM disks as a way to store files temporarily (say, while you are moving a number of files between real disks), and to gain speed, because it takes much less time to access electronic memory than it does a real disk.

Disk cache programs, such as MacBooster and TurboCharger, also reserve a portion of RAM. But you don't fill it as you do with a RAM disk. In the course of events, as the Application calls for blocks of information (called sectors) from the disk, a copy of the sector is also stored in the cache. Then, the next time the application needs to read the same sector again, the copy is used from RAM, saving the disk access time. Over time, the cache fills to hold copies of many sectors.

Should the electricity unexpectedly fail, you lose the contents of RAM, and a RAM disk is lost forever. But the cache contained no information not already stored on the real disk.

(This is true for "write-through" disk caching. TurboCharger also has an optional "write-cache", in which the RAM copy may be updated before the real disk copy is. This makes the Application run faster, because it further reduces use of the real disk. But it is exceed-

ingly risky. A single, unexpected power glitch or bomb-out of the Application can trash the entire real disk by caching the sectors out of synchronization with each other.)

Q: How do I get the multi-font Keycaps DA to work with the new System and Finder?

A: As I said in last month's Q&A, many DAs are hurt after being renumbered by a DA Mover program. This Keycaps has other serious problems besides being number sensitive. But if you want to play with it, here goes. Again, lack of space requires brevity.

I will use as my example the way the DA appears in the New Keys file on SIGMac disk 22. However, you have to patch the thing after it's installed into the System file, because the numbers may change after installation. Of course, make a backup copy of your disk before you experiment.

Using the Resource Editor (ResEdit, SIGMac disk 21), open the file New Keys. You will see resource type DRVR, the DA program code, and private resources of type MENU, DITL, and DLOG. Each type comes with only one numbered resource. The DRVR has number 12, while the private resources are each numbered -16000. The formula to associate them together is:

$$[-16000] = 32*[12] - 16384$$

Now, double click on the MENU type to open it, and then double click on number -16000 to open it. See the first number in the dialog box, labeled Menu ID, equalling -15936? That is the number which isn't getting backpatched by the DA mover. You will have to change it to agree with the resource ID number. (Not now; after it's installed.)

One more thing. After you select the MENU resource down to its number, you can do a "Get Info" on it (via the File menu or Command-I). See the box checked "Purgeable"? Uncheck it. (This you can do now.)

Q: Can you generalize this for all Desk Accessories?

A: Yes, in general, all MENU resources should have their first number equal to their ID number. And yes, this is the most common situation that the new Font/DA Mover doesn't back-patch correctly.

However, it is certainly not the only reason why DAs fail after renumbering, and it would be unwise to claim this fix is a cure-all.

Hackers Corner:

Boot your Mac with Macsbug installed. Eject all disks. Interrupt into the debugger. Set PC to 40AD26. And GO.

Acknowledgments:

The following people contributed information to this month's column (via CIS/MAUG™): Loftus Becker, Steve Brecher, Drew Commins (Hayes), Andy Hertzfeld, Steve Jasik, Kurt Jaeger, David Lounsbury, Bill McGee (Microsoft), David Ramsey (Corvus), Bill Taylor, Dave Winer (Living Video-text). Ⓔ

A MAC TO SUPERPHONE LINK

by Ellen L. Bouwkamp

In order for hearing and deaf people to communicate with each other by telephone in the past, there were basically two choices: (a) use a service in which a hearing person with a TTY to telecommunications device for the deaf (TTD) serves as the intermediary, or (b) buy a TTY or TTD and communicate directly. The first option has distinct disadvantages: it lacks privacy; it is often very difficult to get the service (either because of limited hours or busy signals); and it is slow, since first the person calling must communicate, then the service person must communicate etc. The second lacks appeal for people who are not in frequent communication with the deaf because of the uniqueness of the TDD's which make them unable to be used for multiple purposes. Among the uniquenesses in most TDD's is a 5-bit character (Baudot). Since computers use 7 or 8 bits per character, the 5-bit architecture prevents most computer-to-TDD connections.

A third option might be a TDD which is capable of communicating with more traditional devices, but which is also designed to communicate with microcomputers. I have recently benefitted from such technology.

Two of my deaf friends own a Superphone, a type of TDD manufactured by Ultratec, Inc., P.O. Box 4062, Madison, WI 53713, (voice and TDD) (608) 273-0707. The Superphone supports ASCII, an 8 bit per character system. When I learned about the ASCII feature, I attempted to communicate with the Superphone using MacTerminal. Despite repeated attempts, however, the connection was unsuccessful. Various problems occurred during our trials, but the most frequent one was the Superphone's inability to realize that MacTerminal was in contact with it.

After soliciting information from Ultratec and from knowledgeable users on various BBS's, I was finally able to have a successful conversation with a deaf friend in Brooklyn. There continued to be a few transmission errors on the MacTerminal end, most often characters in place of spaces, but we found that these errors did not impede our thoughts.

Since the MacTerminal/Superphone connection was not easy to successfully accomplish, I am providing the MacTerminal and Superphone settings with hope that readers who can will enjoy a third option for telecommunicating between the hearing and the deaf: Macintosh/Superphone.

Macterminal Settings:

Terminal Settings:

Terminal: TTY

Line Width: 80 Columns

Protocol Conv: Put checks in boxes for On Line,
Local Echo, Auto Wraparound, and New Line.

Compatibility Settings:

Baud Rate: 300

Bits per Character: 8 Bits

Parity: None

Handshake: None
Connection: Modem

File Transfer Settings:

Transfer Method: Text

Remote System: Other

Delay Between Chars: 1/60th Second

Delay Between Lines: 0/60th Second

Check in Box: Retain Line Breaks

Word Wrap Outgoing Text

Phone Settings:

Assuming the Superphone is the initiator, pull down the menu and click on the "Waiting for Call" feature. If you call the Superphone, cancel the "Waiting for Call" feature.

Superphone Settings:

Assuming the Superphone is the initiator, on" originate.
Otherwise "off" originate.

HD: On

300: On

ASCII: On

Anyone wishing to communicate with me about this may write to me at P.O. Box 19142, Washington, DC 20036. 



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MACADVANTAGE: PUTTING THE ROMS TO WORK IN YOUR PASCAL PROGRAMS

by Robert C. Platt

The strength of the Mac is its user interface, and even the most casual programmer on the Mac wants to access that interface to create user friendly programs. Some Mac language implementations, such as Creative Solutions' MacForth, Microsoft BASIC 2.1, or Apple's MacBasic and MacPascal, create special commands that automatically incorporate the Mac's user interface. But in other languages, the programmer must master the ROM routines that build the user interface into every Mac.

This article illustrates this problem by reference to the "Open Files" window that most programs use to select an existing file from a disk. (Some people have mistakenly called this special window the "minifinder.") In Microsoft Basic 2.1, a call to the FILES\$ function will produce this window. In MacPascal, function OldFileName will access this window. This article will illustrate invoking this window by use of the Mac's ROMs from MacAdvantage, a p-System based Pascal compiler published by SofTech Microsystems.

The best guide to the Mac's ROMs is Inside Macintosh. Unfortunately, Inside Macintosh is also the most incomprehensible documentation ever written. (One of the few manuals to equal it is the MacAdvantage Manual.) Because IM does not have a good index, you are expected to figure out that the Open Files window is a part of the "Packages" ROM routines. (One shortcut to this discovery is Appendix A.2 of the MacAdvantage Manual which lists all of the ROM routines and identifiers alphabetically with a cross reference to the various units.) Our window routine is a part of the standard file package whose calling sequence is listed on page A-49 of the MacAdvantage Manual. The sample program that accompanies this article will call SFGetFile, a ROM routine that begins at address A9EA. The trick is to send the correct information to this routine so that the ROMs can function correctly.

The attached sample program is worth studying in detail. By mastering it, you will have mastered the technique of calling ROM routines from UCSD Pascal. The heart of the program is procedure OldFileName which functions much like the procedure of the same name in MacPascal. The main difference between the two is that UCSD Pascal will not permit a function to return a string value. As a result, the name of the file selected is returned through the parameter *result*. Thus, if you were translating a MacPascal line that reads `s:=OldFileName;` you would write:

```
OldFileName(s); in UCSD Pascal.
```

The sample program could have been much shorter had I used the include compiler directive (\$I) to incorporate the Mac interface units that are included on the MacAdvantage disks. However, such incorporation by reference greatly slows down the compiler. If you are only going to use one or two ROM routines, you are better off avoiding the use of the library interface units.

Procedure OldFileName merely defines the data structures that the ROM routine expects, defines the parameters to be passed to the ROM routine, and then describes the steps to be performed each time OldFileName is invoked from your program. Let's look at each line of the procedure as illustrations of important Pascal programming principles.

First, about a dozen new data types must be defined. I derived this list from Appendices A.9 and A.16 of the MacAdvantage Manual. The ROM routines expect certain data structures to be present on the stack when any particular ROM routine is activated. All of these items are to satisfy these expectations. The first new type is called *LongInt*. This is defined as being a 32 bit long integer that the ROMs use for most parameters. UCSD Pascal call such integers *integer2*. Every mention of *LongInt*, *FPoint*, *StringPtr*, *ProcPtr* or *MacPtr* could have been replaced with *integer2*. These terms are synonyms, but using four different names makes the program more readable and conforms to Inside Macintosh.

Next, I've used the definition of a *point* from the QuickDraw unit. The Mac ROMs expect the x and y coordinates of a point to be stored in two side-by-side 16 bit integers. By using a record to define *point*, I am telling the Pascal compiler to think of this data structure in three alternative ways: either two separate integer variables called *v* and *h*; as an array with two elements: *vh[0]* holding the x coordinate and *vh[1]* holding the y coordinate; or a single 32 bit word called *param*. Similarly, *OStype* is also defined as a variant record to allow the compiler to consider a data structure as being either a 4 character array or a 32 bit integer. (Each character occupies 8 bits.) Note that *OStype* could not be defined as a string, because a string stores its current length in its first memory position.

Finally, the program needs a way to receive information from the ROM routine after the user selects a file from the window. To achieve this purpose, every time procedure OldFileName is called, memory is allocated for the variable *r*. *R* is defined to be a record of type *SFReply*. When the ROM routine is called, it will receive the address of *r* and will then store the name of the file and other information in that memory area. As an example of this extra information, the byte designated as *good* in the *r* record will be set to a non-zero value by the ROM routine if the user clicks on the window's Open button rather than the Cancel button.

Having defined all of the necessary data structures, the procedure that represents calling the ROM must be defined. Procedure SFGetFile is copied from the MacAdvantage Manual. It looks like any other Pascal procedure except that instead of a body of instructions surrounded by begin and end, the procedure contains a single statement:

```
external(-22038);
```

This tells the Pascal compiler that when SFGetFile is called, the items listed as parameters to the procedure should be placed on the Mac's stack and then the ROM routine at

address A9EA (which equals decimal -22038) should be executed. This is exactly like External procedures in Apple II Pascal.

Initializing values. The body of `OldFileName` will be executed each time that the program will invoke the Open File window. First, the screen location for the upper left corner of Open File window must be defined. I chose $x=100$ and $y=100$ as the spot, but you can experiment with moving the window to other locations. Next, I set a variable `NilPtr` to 0. This indicates a pointer which does not point anywhere. Because I want to list only TEXT files (ie MacWrite type files rather than MacPaint files) in my window, I set variable `types` to equal TEXT. Finally, `good` is set to zero to allow for valid cancel button checks.

Calling the ROM. The statement that begins "SFGGetFile" actually calls the ROM. Note how the parameters used here differ from those used to define SFGGetFile above. Using the correct parameters is the trickiest aspect of MacAdvantage. Recall that MacAdvantage uses a fictional machine (the p-Machine) to implement Pascal; it does not generate 68000 machine language programs. However, the Mac ROMs are written in 68000 machine language and expect all parameters to conform to that architecture. The many differences between the fictional machine and the 68000 are significant. For example, the p-Machine uses 16 bit long addresses to refer to memory locations, while the 68000 ROMs use 32 bit addresses.

Hence the hieroglyphics. The value of `corner`, the variable that has the coordinates for the window's location must be passed as a single 32 bit word on the stack. Hence, the need to say `corner.param`. Next, two zeros are passed to indicate the absence of a prompt string (none is allowed) and the absence of a file filter procedure. The constant 1 indicates that only one type of file, TEXT, is allowed. If all files on a disk were to be displayed in the Open File window, this number should be changed to -1. The function `locate` takes the p-Machine address of a variable and converts it into an absolute 68000 32 bit address. `Locate(types)` will place the address of the four letters T E X and T on the stack for the ROM routine. This allows only TEXT files to be displayed in the window.

The ROM routines are ease to customize. If you want to write your own dialog procedure to modify the behavior of the Open File window, the address would be inserted as the next parameter `digHook`. However, such customization is beyond this article, and a zero was passed to the ROM. Next, `locate(r)` places the 32 bit address of your reply area on the stack. The ROM will return all necessary data in this area which you have allocated as a variable.

The final parameter is the secret code number 2. A single ROM routine displays both the Open File and Save File windows, and this code number indicates that you want an Open File type of dialog window.

Going back to the calling program. After the ROM interacts with the user and either a file is selected by clicking the Open button or no file is selected by clicking the Cancel button, your program continues to execute. The if

statement tests the boolean variable `good` in your reply area. If it is non-zero, then the file name that was stored in the reply area should be returned through parameter variable `result`. Otherwise, `result` is set to the null string. Note that this procedure only returns the name of the file. Other valuable information about which disk drive has the file is not forwarded from SFGGetFile to your calling program.

The main program which calls `OldFileName` is a short tester. First, the `InitCursor` ROM routine must be called. Otherwise, the arrow cursor will not be visible when trying to use the Open File window. MacAdvantage automatically hides the cursor at the start of each program's execution. The `WriteLn` merely sends a message to signal the start of the test. `OldFileName` is called and the returned file name value is displayed by the last `WriteLn`.

After carefully typing in the sample program, compile it using the UCSD Pascal compiler. Before trying to run the program, you will probably have to run the set options program to specify the disk name for the location of the p-System and runtime files. Once the program compiles successfully and these options are set correctly, run the program a number of times to test your new tool. To add this feature to your own Pascal programs, just copy the lines representing the definition of `str255` and Procedure `OldFileName` into the start of your program. (Or you could set up a library unit, but that is another article....)

contd.

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Program Listing

(* MacAdvantage version of OldFileName - RC Platt June 3, 1985 *)
(* See page 9-26 of MacPascal Manual, page 13 of Packages section of
Inside Macintosh, page A-49 of MacAdvantage Manual. *)
Program test;

```
type str255 = string[255];
```

```
var s: str255;
```

```
Procedure InitCursor; external(-22448); {A850}
```

```
Procedure OldFileName(VAR result:str255); {dialog box for existing files}
```

```
type
```

```
  LongInt = integer2;
```

```
  Point = Record
```

```
    case integer of
```

```
      0: (v: integer;
```

```
         h: integer);
```

```
      1: (vh: array[0..1] of integer);
```

```
      2: (param: LongInt);
```

```
    end;
```

```
  FPoint = LongInt;
```

```
  StringPtr = integer2;
```

```
  ProcPtr = integer2;
```

```
  MacPtr = integer2;
```

```
  PtrSFReply = MacPtr;
```

```
  SmallBool = 0..255;
```

```
  OSType = Record
```

```
    case boolean of
```

```
      True: (c: packed array [1..4] of char);
```

```
      False: (p: integer2);
```

```
  end;
```

```
  PtrSFTypeList = MacPtr;
```

```
  SFReply = Packed Record
```

```
    copy: SmallBool;
```

```
    good: SmallBool;
```

```
    ftype: OSType;
```

```
    vRefNum: integer;
```

```
    version: integer;
```

```
    fname: String[63];
```

```
  end;
```

```
var
```

```
  r: SFReply;
```

```
  types : OSType;
```

```
  corner :point;
```

```
  NilPtr : ProcPtr;
```

```
Procedure SFGGetFile(where: FPoint;prmp: StringPtr;fileFilter: ProcPtr;
```

```
  numTypes: integer;typeList: PtrSFTypeList;digHook: ProcPtr;
```

```
  reply: PtrSFReply;RSFGGetFile: integer); external(-22038); {A9EA}
```

```
begin {OldFileName}
```

```
  corner.v:=100; (* set upper corner of dialog box *)
```

```
  corner.h:=100;
```

```
  NilPtr:=0; (* dummy of type ProcPtr *)
```

```
  types.c:=TEXT; {supress non-Text files }
```

```
  r.good:=0;
```

```
SFGGetFile(corner.param,NilPtr,NilPtr,1,locate(types),NilPtr,locate(r),2);  
if r.good<>0 then  
  result:=r.fname  
else  
  result:= "";  
end; {OldFileName}  
  
begin {test}  
  InitCursor;  
  WriteLn('This is a test of OldFileName');  
  OldFileName(s); {Will return filename in string s}  
  writeln(s)  
end.
```

⌘



MacNovice Column

by Ralph J. Begleiter

Among the most fascinating aspects of the Macintosh you're using is its ability to make your written work reflect your own style and personality through the use of a wide range of different "fonts," or typestyles.

It requires some mental dexterity to take advantage of the flexibility of changing fonts, because changing fonts is one of the most complicated Macintosh functions. That's a price you pay for flexibility...and for making your computer-written work look quite different from work produced on other machines.

But if you ignore the fun and flexibility of varying your fonts, just because it's a bit complex, you're missing out on a great experience and the reward of having your compositions look distinguished. So, in this MacNovice column and the next, I'll try to help you wade through the complexity of using Mac's fonts.

First, a couple of ideas, to whet your appetite! How about addressing your holiday cards with the Macintosh "London" font, so they appear to be calligraphed. Your envelopes will draw attention to themselves, and show you've caught the holiday spirit!

Return Address
Goes Here
In Plain Font

Address
Goes Here
In Fancy Font

Or, when you're writing a personal note to a friend, how about using "Venice," which conveys some of the romance of its name through its appearance?

Your Loving
Grandson

Dear Agnes,
You're a real
prize! You can't
imagine how
much I enjoyed
your party.

When you're writing to your lawyer or a business client, try using "New York," for that down-to-business look. And for headlines in a business letter or bid proposal, use "Athens" to make your material truly stand out:

Use an "Athens" Font Headline to Spice Up a Memo

Write an informal memo in 12-point "Toronto."

Or, choose 10-point New York for that "serious business" look.

You can even write a personal note, in a cursive font, if you like the idea.

There's plenty of variety available in just the fonts that Apple provides with your Macintosh System Disk, but "you ain't seen nothin' yet!" Imagine the flexibility you could achieve by using some of the commercially-available fonts, or the ones available through Macintosh users' groups [WAP already has two inexpensive disks full of beautiful and varied fonts!] With these, your writing can take on as much personality as you'd like, and display materials you create can soar high above the merely functional fonts available on most other computers.

Here's the News

Use Large Sizes of
Standard Fonts
Like New York

...Or Fancy Fonts for Effect.

OR TO CREATE MOODS
IN YOUR WORK

But, to get started on this magic carpet ride of font fantasy, you must master basic understanding of manipulating fonts, so here goes...

For reasons you don't really need to understand, the software required to make Mac's fonts is very "fat." In other words, fonts take up a lot of disk space. Fonts like "Geneva" or "Monaco" don't. But fonts like "New York," "Venice" and "Athens" are very fat. This means that although it would be desirable to have the entire font selection at your fingertips at all times, that isn't practical yet. You have to decide which of the literally dozens of fonts you like best, and which you'll use most often. This is an important decision to make before you even start setting up your work disks. It pays to think ahead.

I've got my own disks arranged something like this:

For most routine writing tasks, I have a disk containing MacWrite plus seven fonts. The disk also contains a spreadsheet program (Multiplan), so I can switch between those two "applications." Because I want to have MacWrite and Multiplan on the same disk, I simply don't have room for any more fonts than seven.

MacWrite

Font	Style
Chicago	Plain ☞ P
Geneva	Bold ☞ B
New York	<i>Italic</i> ☞ I
Monaco	<u>Underline</u> ☞ U
Venice	Outline ☞ O
London	Shadow ☞ S
Athens	
	9 point
	10 point
	12 point
	18 point
	20 point
	24 point

This disk allows me to write almost anything "normal" and even add some flourishes with Athens headlines, London envelopes, or Venice text. (Chicago and Monaco are required by the Mac for its own system use, so you must leave them on every disk, but I rarely, if ever, use them for writing.)

For special, fancy writing and unusual tasks which require display writing, I've created another MacWrite disk which I call "Allfont" (though, of course, it doesn't really contain all the available fonts.) My "Allfont" disk contains plenty of the unusual fonts I use to dress up almost any special project. This disk gives me greater flexibility with fonts than I can achieve with my ordinary "MacWrite" work disk.

"Allfont MacWrite"

Font
Chicago
Geneva
New York
Monaco
Venice
London
Athens
Toronto
Philly
Florence
Broadway
Manhattan

Finally, for creating pictures, charts, diagrams, etc., I have a separate disk called "MacPaint" on which I've placed some of the larger font sizes, and some fancy display fonts for headlines.

The screenshot shows the MacPaint application window with the 'Font' menu open. The menu items are: Icon, Tefelin, Manhattan, Carmel, Camelot, Fellingwater, Calro (checked), Broadway, Bolse, Chicago, Geneva, New York, Monaco, Venice, London, Athens. To the right, the 'Style' menu is visible with options: Plain ☞ P, Bold ☞ B, *Italic* ☞ I, Underline ☞ U, Outline ☞ O, Shadow ☞ S. Below the style menu, font sizes are listed: 9 point, 10 point, 12 point, 18 point, 20 point, 24 point, 48 point, 36 point, 72 point.

Something important to notice here, is the selection of font sizes. On my "MacWrite" disk, I write routinely in "Geneva" or "New York." So, in those two fonts, I've got a good selection of sizes (9, 10, 12, 18, 20 and 24 point). Remember that when you want Mac to print in "high" quality on the Imagewriter, it needs both the font size you've chosen to write in plus the font size twice-as-big. So, on my MacWrite disk, I can write in "high" quality using 9-point, 10-point and 12-point type (Mac will use the 18, 20 and 24-point files to print them).

On my "Allfont" disk, I've got a broader range of font sizes as well as styles, so I've got more flexibility than with the smaller selection on the "MacWrite" disk.

On the MacPaint disk, I've eliminated some of the very small sizes in some type styles, because I won't need them in pictures or charts. But I've included a lot more large size fonts for headlines.

It should be obvious to you that your own font philosophy may be different from mine, but the point is that it's a good idea to give some thought in advance to the kinds of Macintosh projects you'll be doing. Then you can set up your work disks with the fonts you'll find useful, eliminating the

need to move fonts around each time you undertake a new project.

Once you've settled on the scheme of font placement on your work disks, you'll need to understand a couple of things about where Mac keeps your fonts, and how you can change those files.

As your owner's manual tells you, Mac's fonts are stored inside the icon "System File" on your disks. There are other things in the System File, but fonts are among the biggest space-hogs there. (That's why some System Files are bigger than others!)

You can't OPEN your System Files, as you may have already discovered. But, with the "Font Mover" application on your System Disk, you can move fonts in-and-out of the System File. (If you have the latest version of Apple's Font Mover, it's called the "Font/DA Mover" because it can also move "Desk Accessories" in and out of your System Files. Both utility programs accomplish the same job with fonts, though in slightly different ways.)

One efficient way of handling fonts is to establish several different System Files, one for each set of fonts you wish to use. You can duplicate several System Files onto one disk if you give them different names.



System



SmallFont



FancyFont



PaintFont

The Font Mover will only open the file named "System". It won't touch the one labelled "SmallFont," "PaintFont," or "FancyFont." When you want to enter any of those files to change fonts in them, simply rename the one you want to work with "System," and name the others something else.

Once you've set up your various System Files with the fonts you want, you can then copy those System files onto disks with MacPaint, MacWrite or other programs to work with them. The System files will already come "prepackaged" with the fonts you've selected! You won't have to fiddle with fonts very often again!

Next time, I'll walk through the process of actually moving fonts around to set up your files. Meantime, make your plans for which fonts you'd like to use with which Macintosh programs, and experiment a bit with Font Mover if you're eager to take advantage of those fantastic fonts! ☺

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REVIEW CORNER



by James M. Burger

Configure then install...

This is the first in a series of review columns, provided that newly elected President Warrick's mandated 26-hour days are the first official act of his term. Seriously, this column will cover three areas. First, to seek volunteers to review software. Second, to let you know about new products. Finally, a place where I can put down my random access thoughts about the state of Apple and the personal computer industry in general.

Reviewers. The Journal has been fortunate in having numerous review contributors. David Morganstein's "Soft-views" are a model of imaginative, helpful and informative software reviews. But, what many MacCritics initially called a paltry trickle of software is now a flood. A good review takes a lot of time and energy. Therefore, we are looking for more reviewers to look at new software.

If you have an interest in reviewing software for the Journal, and are willing to spend the time and energy, please drop me a note at the Pi office. Include information about your equipment, software you regularly use, what type of software/hardware you would like to review, your general background and any other information that you feel would be useful.

Also, we are going to make an effort to key reviews to upcoming SigMac meetings. In this way, with some careful coordination on our part, and the usual patience of Job of our intrepid editor, Bernie Urban, we hope to have review and background information on programs and hardware that will be the focus of the Saturday meetings.

New Products. The Journal receives a lot of information about new products. Because our turnaround time is much faster than other computer journals, we decided it would be helpful to you if this column included at least a small note on products and information we have received. The notes are not intended to be mini-reviews but just enough to let you know something about the product. If you have any comments on the format or information included (or not included - bearing in mind that we want to keep the entry to only a few lines), please let me know. Products and information received appears at the end of this article.

Random Access. By now most of you are aware of the great shakeup at Apple. 1,200 employees laid off. Steve Jobs removed as head of the Mac division. The Mac division and the // division merged into marketing and manufacturing units. Most of these moves, while painful, appear to be healthy for the long haul. But there are still a lot of concerns.

The attack on the "Fortune 500" was not altogether successful. Small businesses and vertical solutions were largely ignored or left to dealers. For a variety of reasons I

have not spent much time IBM watching. But two incidents brought home in a dramatic way how far behind Apple has fallen behind IBM in small business penetration.

Recently, a friend asked me to review a proposal by an IBM value added reseller (VAR) to put his small business accounting on a personal computer. He owns a small chain of retail stores. Of course, I wanted to steer him towards Mac. But, the proposal included substantial software uniquely tailored for a small business selling precisely his merchandise. In addition, the VAR had a substantial list of references and promised quick response to problems, upgrades etc.

In good conscience I could not steer him to a dealer that would just sell him boxes. He needed a solution. The VAR provided that to him. But at a price. For a small-business person, however, paying a premium to have a system tailored to his business with support is well worth it.

The second incident is the near dominance that IBM has obtained in the small law firms (and large as well). Although many medium to large size firms have dedicated word processing, PCs are used for litigation support, individual lawyer work, legal research, etc. A recent office automation special issue of a legal journal did not mention Apples in ads or in articles. Much copy was dedicated to IBM as well as a number of VAR advertisements. Also, I spoke on a panel to the Apple users group at the recent ABA convention. Attendance was well below the expected crowd (they must have heard me talk at WAP Board Meetings), while the IBM users group had double the numbers.

I hope that as part of its new direction, Apple concentrates on small business and promotes VARs that can provide those businesses with solutions and not boxes. The pieces parts are there, the MAC, Apple Talk, Laser, etc. They just have to be put together and supported.

PRODUCTS RECEIVED: (Unless otherwise indicated, the products are for the Mac and the price, if indicated is the suggested retail price)

HARDWARE -

AST Research Inc., 2121 Alton Avenue, Irvine, CA 92714. **RamStak.** For the MacXL. Adds up to 2 Mbyte of RAM, allowing much faster data manipulation on the Lisa and a very large RAM disk on Macworks.

Corvus Systems, Inc., 2100 Corvus Drive, San Jose CA 95124. **OmniDrive 5 Mbyte harddisk drive.** Connects through the modem port to give five megs of external memory.

Prentice Corporation, P.O. Box 3544, Sunnyvale, CA 94088. **Popcom X-100 \$495.** A 300/1200 baud "Hayes Compatible" modem. Auto dial and answering, voice and data

alternately during the same call, easy to set up. Price includes cables for the Mac, telephone cord, Straight Talk Software and one hour on Dow Jones.

SOFTWARE -

Brock Software Products, Inc., P.O. Box 799, Crystal Lake, IL 60014. **Keystroke**. Powerful relational data base and report generator.

Forethought, Inc., 1973 Landings Drive, Mountain View, CA 94043. **Typing Intrigue**. A typing course designed to improve typing skills, earning points to buy "clues" to solve a mystery. **FactFinder**. Free form electronic filing cabinet. No fields to define or formats to set up.

Living Videotext, 2432 Charleston Rd., Mountain View, CA 94043. **512K ThinkTank Version 1.1** \$245. The original thought/idea processor. A writer's indispensable tool.

Manzanita Software Systems, 1 Sierra Gate Plaza, Roseville, CA 95678. **The Business Accountant**, for the //e & //c: **System Manager** \$95; **General Ledger** \$295; **Accounts Receivable** \$295; **Accounts Payable** \$295; **Inventory Control** \$295; and, **Payroll** \$345. **The Advanced Business Accountant**. Add \$100 to each of the above packages except the System Manager. Both can be installed on a profile or other Prodos compatible hard disk. A complete accounting system.

Microsoft Corporation, Box 97200, Bellevue, Washington 98009. **Microsoft Word**. Hi-powered word processor that is a big improvement over MacWrite. If this is second generation word processing, I can't wait to see third generation.

Softech Microsystems, 16875 W. Bernardo Dr., San Diego, CA 92127. **The MacAdvantage Mailmanager Version 1.1**. A list, label and form letter generator. Keeps an address list and permits sorting by user defined criteria. Can merge with Word and Write.

INFORMATION RECEIVED:

HARDWARE -

Dayna Communications, 50 S. Main, Salt Lake City, UT 84144. **MacCharlie**, 256KB RAM, 1 320/360 Double-Sided/DoubleDensity floppy drive (5.25") \$1195. **MacCharlie Plus** 640 KB Ram, 2 DSDD \$1895. Turns Mac into an IBM clone, allows shared resources.

I/O Video, 225 Third Street, Cambridge, MA 02412. **MacPrivate Eye** \$595, **Ikegami Camera** \$225. A digitizing system.

TPS Electronics, 4047 Transport, Palo Alto, CA 954303. **PC-380 Bar Code Reader** \$795; **PC-580 Magnetic Strip Reader** \$695; and **PC-3800 Combination Reader** \$995. TPS' Bar Code Readers, with laser interface are installed in Apple's autoMac plant. A Bar Code Printing Program is available for \$50 with the purchase of a Reader or \$200 separately.

Zilog, 1600 Wilson Boulevard, Arlington, VA 22209. **Ultra-Talk**. A Z8000 UNIX based Apple-Talk file server. It can handle up to 40 Macs offering Print spooling, modem pooling, data base management system, E-mail, ethernet interface, etc. with hard disk upgrade.

SOFTWARE -

Cognitive Software, P.O. Box 26948, Austin, TX 78755. **The Financial Utilities Pack** \$69. Solutions to common financial problems including compound and simple interest, annuities, interest rate conversions, amortization and 3 standards of depreciation.

Forethought, Inc., 1073 Landings Drive, Mountain View, CA 94043. **FileMaker** \$195. A data management system which permits custom-designed forms and reports, including incorporating graphics.

Emerging Technology Consultants, Inc., 1877 Broadway, Boulder, CO 80302. **MacOffix** \$149, \$10 rebate if purchased before September. A package program for the office with filing, word processing, forms design, finding forms, form letters, report generation.

Haba systems, 15154 Stagg Street, Van Nuys, CA 91405. **Quartet** \$199.95. Integrated program with spreadsheet, text editing, data base and graphics capabilities. **Window-Dialer/HabaDialer** bundle \$89.95. Desktop accessory that stores up to 250 names and 500 numbers along with hardware to interface with the phone to dial numbers.

Heyden & Son, Inc., 247 S. 41st Street, Philadelphia, PA 19104. **StatWorks** \$99.95. A comprehensive statistical package including common routines, e.g. regression analysis and ones I have never heard of, e.g. Wilcoxon signed rank test. (Hopefully, we'll get a copy for David Morganstein to review).

Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. **Telescope** \$125. Terminal software with directory, macros, and terminal emulation. **MacBooster** \$50. 512K Mac memory cache speed enhancement system with claimed 2 to 10 times speed increase.

Micro Planning Software USA, 235 Montgomery Street, San Francisco, CA 94104. **Microplanner** \$395. a scheduling and resource management planner.

Micro Focus, 2465 E. Bayshore Road, Suite 400, Palo Alto, CA 94303. **Mac Cobol**. Integrated COBOL Compiler runs of 512K Mac of MacXL.

PBI Software, Inc., 1155B-H Chess Drive, Foster City, CA 94404. **Icon Switcher**, **Icon Library #1** and **#2** \$19.95 each. Switcher permits customization of Mac icons. Library 1 is a collection of over 100 business and utility icons. #2 has over 100 "fun and games" icons. **Graphworks 1.2C** \$79.95. For the //e and //c, a business graphics program that uses AppleWorks spreadsheet data.

Peripherals Computers and Supplies, Inc., 2232 Perkiomen Ave., Mt. Penn, PA 19606. **VersaTerm** \$99. Terminal emulation program including DEC VT100, Tektronix 4014 and Data General D200 emulation. **VersaTerm-HP** \$99. Same except substitutes the Hewlett Packard 2621 for the VT100. **TekPrint** \$79. Allows zoom, rotation and printing of high resolution Tektronix 4014 graphics on the ImageWriter or LaserWriter.

Rune Software, 80 Eureka Square, Pacifica, CA 94044. **TalkShow** \$149. Adds speech to MacPaint documents using SmoothTalker drivers. **Complete Accounts** \$349, with a demodisk for \$20. Comes with specialized Sales, Purchases and General Journals, but permits creation of customized special journals.

Satori Software, 5507 Woodlawn Ave, N., Seattle, WA
contd. on pg 61

SOFTVIEWS

by David Morganstein



Spreadsheets Compared. This month we begin a comparison of spreadsheet packages. In this issue we look at the functions provided by four packages for the Macintosh: Multiplan (the first package released for the Mac), Click-On Worksheet (a desk accessory), Quartet and the recently released Jazz. In a future issue we will look at packages for the Apple II (the original VisiCalc, Apple's own Appleworks, Supercalc 3A and Mousecalc). Later we will add two other Mac packages, Crunch and when it is released, Excel.

Spreadsheets have played a crucial role in making the personal computer an acceptable tool for use in the home or business. VisiCalc established the Apple as more than a toy and Lotus' 1-2-3 catapulted the IBM PC into a lead position among its competitors. The Macintosh' unique graphics have led developers to produce spreadsheets with integrated (or nearly integrated) graphics capabilities, as well. While development of spreadsheets for the Apple II languished for a period after the release of Appleworks, two recent releases have returned focus to them for II users.

The comparisons provided in the table at the end of this article are not complete. The packages carry widely differing prices and perform different operations. At this time, the tables are limited to a listing of limitations, graphics features and mathematical functions provided. This information should be helpful in your decision making if you are trying to select one or deciding whether you require more features than your current program provides.

Statistical Packages. This issue features the first of several reviews of statistical packages for the Macintosh. In upcoming months we will discuss: Statview, Statworks, NWA Statpak, Statsoft, Lionheart and NCSS. The packages differ considerable in their support of the Macintosh user interface. Several of them (Statview and Statworks) were developed for the Macintosh and look like every other Mac application. They have pull-down menus, data windows, impressive graphics and they support Copying and Pasting between applications. Some of the packages were written in Basic or Fortran, possibly for other machines and merely ported into the Macintosh. However, a few of these, NWA Statpak and NCSS, perform analyses not conducted by other packages.

We begin with a look at Statview, distributed by Brainpower, the company that brought you Chipwits.

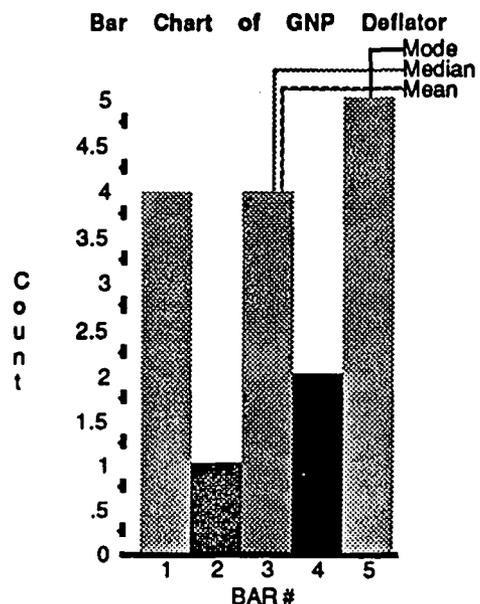
Statview. Written in Lisa Pascal for the Macintosh, Statview takes full advantage of pull-down menus, windows, high resolution graphics and data exchanging through the use of copy and paste. It is typical of many applications written for the Mac which make extensive use of the Mac ROM routines and operating system in that you don't need a manual to learn to use it. In the way of analyses, Statview provides for simple descriptive statistics and graphics, multiple regression, two-way analysis of variance, two-dimensional tables and non-parametric tests comparing two or more

groups. Statview holds all data in memory. Although I could find no reference in the manual to a maximum number of cases which it can handle, I was told that 15,000 integer data points is the limit (fewer when using real numbers).

One of its strongest features is its easy to use data window. Much like the Multiplan data window, you can scroll vertically or horizontally, change column widths by clicking and dragging on the between column divider, and cut and paste columns or rows. Unlike Multiplan, it allows you to select any font from your system for display of your data; however, this capability applies only to the data window, not the computed output. I had no trouble copying a standard data set from the scrapbook and pasting it into Statview.

One of the menu items is "Utilities". Among the many useful options are: one and two variable transformations, recoding, sorting and selecting. You can use any of the standard four functions (+, -, *, /) to combine a variable with another variable or a constant. You can apply a wide range of transformations to a single existing variable or create a new random variable. The recode option is easy to use and allows you to convert a quantitative variable into discrete levels in a matter of seconds. By selecting all rows meeting a set of logical conditions you can restrict your analysis to specific case types.

The graphic displays include: bar, line, and pie charts and scattergrams. The charts can be drawn automatically or you can tailor the display ranges to your interest. As you can see below, the bar chart does not display the horizontal scale. The bars are labelled from number one to the number of bars, each having its own shading, an unusual approach. I suggested to the folks at Brainpower that display of the X-axis scale should be added. Statview graphics can be copied readily into the clipboard using a menu option.



While I have seen only a draft manual for Statview, it appeared to be easy to read and to follow. The 122 pages contained many Macintosh screens and consisted primarily of examples which were stepped through to provide a tutorial. Beyond the examples, the manual did not contain a reference section on each function of the program; however, a 374 page statistical text is included with the package. While there is no direct connection between the text and Statview, you can use

the text to learn about the various statistical methods provided by Statview. The draft did not contain an index but it did contain an appendix with the formulas used in the computations.

The current version will run on a 128K Macintosh and is available for \$199.95. Brainpower, 24009 Ventura Blvd., Calabasas, CA. 91302. Phone: 818-884-6911.

	CLICKON	JAZZ	MULTIPLAN /CHART	QUARTET
PRICE	\$69.95	\$595.00	\$320.00	\$200.00
CAPACITY				
Max Rows	50	8192	255	1000
Max Columns	20	256	63	62
COPY PROTECTED	N	Y	Y	Y
GRAPHICS				
Pie	1	1	1	1
Line	1	1	1	1
Bar	1	1	1	1
Area	0	1	1	0
Scatter	0	0	1	0
MATH				
Absolute Value	1	1	1	1
Sign of Entry	0	1	1	1
Ceiling (round up)	1	0	0	0
Floor (round down)	1	1	1	1
Round x to n places	1	1	1	0
Random Number	0	1	0	0
Square Root	0	1	1	0
Any Exponent	0	0	0	1
Natural Exponent	1	1	1	1
Powers of two	0	1	0	0
Scaling Function	0	1	0	0
Logarithms	1	1	1	0
Modulo or Remainder	0	1	1	0
Sin	0	1	1	0
Cos	0	1	1	0
Tan	0	1	1	0
Arcsine	0	1	0	0
Arccosine	0	1	0	0
Arctangent	0	1	1	0
Pi	0	1	1	0
LOGICAL				
If Then Else	1	1	1	1
Is Not Available	1	1	1	1
Is Error	0	1	1	1
Is Blank	0	1	0	0
Is String	0	1	0	0
Is Number	0	1	0	0
FINANCIAL				
Future Value	1	1	0	1
Present Value	1	1	0	1
Net Present Value	1	1	1	1
Loan Payment	1	1	0	1
Internal Rate of Return	0	1	0	1
Discounted Present Value	1	0	0	0
Compounded Future Value	1	0	0	0
Compounded Yield	1	0	0	0

Depreciation:				
Straight Line	1	0	0	0
Sum of Years Digits	1	0	0	0
Double Declining				
Balance .	1	0	0	0
STATISTICAL				
Mean (Average)	1	1	1	1
Count	0	1	1	1
Min/Max	1	1	1	1
Variance	0	1	0	0
Standard Deviation	1	1	1	0
Sum	1	1	1	1
DATA RANGE FUNCTION	0	1	0	0
SPECIAL FUNCTIONS				
Choose Nth Element				
from List	0	1	0	0
Table Lookup	1	1	1	0
Number of Cols or Rows in Range	0	1	0	0
Value at Specified Row/Column	1	1	1	1
Cell Attributes	0	1	0	0
CALENDAR FUNCTIONS				
Current Date & Time	1	1	0	1
Date Value	1	1	0	1
Date Value Conversion	0	1	0	0
Time Value	0	1	0	0
Time Value Conversion	0	1	0	0
TEXT FUNCTIONS				
Changing Case	0	1	0	0
Comparing Text	0	1	0	0
Number of Characters	0	1	1	0
Removing Leading/Trailing Spaces	0	1	0	0
Remove Control Codes	0	1	0	0
Character Code Conversion	0	1	1	0
Repeat Text	0	1	1	0
Find Text	0	1	0	0
Extract Sub-string	0	1	1	0
Replace Text	0	1	0	0

⌘

SYSOP WANTED!

Tom Warrick has had to resign as WAP SYSOP. The pressures of his new job as WAP President require his full-time efforts. It was with regret, but understanding, that the Board of Directors of the WAP accepted his resignation. You have done extremely well for the WAP, Tom, and the Directors, and all members who have known you wish to thank you.

Tom has asked Lee Raesly to head the new SYSOP Committee. This committee will coordinate and manage the club bulletin boards, and all matters pertaining to them. As SYSOP Chairman, Lee will report directly to the President.

The new arrangement will be to have a BBS SYSOP for each of the current boards. These new Board SYSOPs will work directly with Lee, to coordinate the various activities of each board. The Board SYSOP will maintain message currency, maintain the Bulletin for each separate board, and monitor that board's messages for appropriate content. Each

will have password access necessary to do the job.

The access will be either from the Pi office, or from the SYSOP's own Apple at home through his own modem. It can all be done from his home, with the Bulletin mailed in to the WAP office, as needed.

We will need TWO new SYSOPs - one for the MAIN BBS, and one for the MacIntosh BBS. As stated above, you do not need to be able to get to the WAP office, but it would be helpful once in a while. If you are interested, call Lee Raesly at (301) 439-4743 (his office near College Park, MD) or at home at (301) 460-0754 (in Wheaton, MD). You can also call and leave your name and telephone number at the WAP office, for forwarding.

If you are interested, please call Lee and discuss it with him. It would be a lot of fun, and some minimum work, with a lot of support from the new SYSOP Committee. ⌘

GATO FOR THE MAC

by Michael Drolet

If you've been waiting for Flight Simulator for the Macintosh, GATO may keep you satisfied for awhile. GATO is a "WW II Gato-class submarine simulation"; it has ten difficulty levels, and 20 different missions on which to try your skill, and luck, as Commanding Officer of the USS Growler.

GATO takes place in a 20 "quadrant" patrol area which is divided into an allied area, a neutral area, and an enemy area. You can look at a map which shows all 20 "quadrants" at once, or at a larger-scale map of a single "quadrant". One of the maps is always displayed on the screen; both always show your position and trace. The large map (Figure 1) shows enemy ship positions and traces only at the three lowest difficulty levels; the "quadrant" map (Figure 2) shows enemy ship positions and traces at the six lowest difficulty levels. Both maps show any islands in the area.

Besides the map the screen display shows: radar scope; digital readouts and gauges for depth, speed, and heading; digital readouts of battery and fuel levels; fore and aft torpedo tube status; speed control; depth/heading controls; periscope control; power source selector; and O² (oxygen) gauge. These indicators and controls are always visible on your screen when you are on a mission.

Two other status indicators are shown, depending on which map you have on the screen. The large map takes up almost half the screen area; when it is visible, the mine control is also visible. When you shift to the smaller, single "quadrant" map, you can see the view out your periscope or from the conning tower (you can switch between the two), and a damage indicator which shows those areas on your sub that are out of commission.

Each mission begins with a Morse code radio message which assigns an objective. I can't swear that the Morse code you hear is accurate, but I have no reason to think it isn't. The message also prints out on the screen, unless you're playing at level seven or higher. (A Morse code tutorial is included under the Special menu.) The missions are of three types: destroy, mine, or rescue. To complete the mission you have to destroy a certain number of enemy ships, lay a minefield in a specified area, or stay on the surface right next to an island in enemy territory for the time necessary to rescue downed airmen or stranded sailors.

Once you have your assignment, you need to replenish your supply of torpedoes and/or mines, and repair any previous damage, if you haven't already done so. You do this by rendezvousing with your subtender, which cruises in the Allied-controlled "quadrants". When you get within a thousand "units" of the tender, all damage is automatically repaired, fuel and O² are replenished, and your supply of torpedoes/mines is renewed.

Now you're ready for the bad guys (and gals too, Regina). But right away you run up against reality - it takes a while to get to where the enemy is. You don't expect them to be waiting right around the corner, do you? Well, they're not,

and it could take up to 15 real-time minutes to get to the farthest "quadrant" if that's where your mission takes you. But if you look under the Special menu, you'll find a little goodie called "Rapid sub deployment"; select it and everything happens at about 10 times normal speed. And I do mean everything - you move faster, but so does the enemy, and your fuel and air consumption speeds up too. Once you're detected by the enemy, the game automatically switches to normal speed. Or you can transit to the mission area, and then switch back to normal speed.

Depending on the difficulty level you've chosen, you may or may not know where the enemy is from their traces on the map, but nothing happens till a ship comes within your maximum radar range of 3500 "units". Then you see a blip on the scope and hear a beep. The scope shows your position in the middle of the screen. All other vessels are plotted relative to you; that means the top of the scope is not necessarily north, but is whatever direction is directly in front of you, and the ship off to your left is shown to your left on the radar even if it is due south of your position. Shortly after you get an indication on your radar, the other ship will come into visual range and now it's time for action.

At the least difficult level you can stay on the surface and torpedo any ship that comes in range pretty easily, but higher levels definitely require more strategy. You have to sneak up on the enemy while you're submerged, fire your torpedoes, then start evasive tactics without waiting to see if you were on target. Enemy patrol boats and destroyers will be after you with sonar and depth charges; once you're below periscope depth you're operating blind, except for the traces on the map if you're at a low enough difficulty level. Sometimes you evade them by twisting and turning, other times by turning off all power and "running silent" and deep. And quite often they just blow you to smithereens. Before that happens your gauges will crack and quit working, and quite a few of your damage indicators will be lit up. You'll be using up your batteries and your O² supply while you're submerged, so you may suffocate before the enemy gets you. If you survive their attack, you surface to recharge your batteries and O² tanks, and continue your mission.

The manual is pretty good. It explains all the instruments and controls, and all the menu items. It has a copy of the large map, and several pages on strategy and tactics. It also has a tutorial on the Mission Creator, which does just what its name implies. You can make up your own missions when you get tired of the 20 default missions. It's easy to do, and gives you some insight into enemy tactics.

Some random notes:

all the controls can be operated with the mouse or the keyboard;

a brief description of the GATO class submarines during WW II is included under the Special menu;

if you get too close to an island, you may run aground and be stuck if you can't back off;

a record of all the ships you sink is kept in the Captain's Log - if you get sunk yourself, the log goes down with you and the next game starts with a blank log;

you can suspend play to answer the phone, or get a beer, or whatever;

you can save up to five games, and come back to them later - this is a good way to keep from losing all the ships entered in the Captain's Log;

you can return to the tender during a mission, replenish, and go back out to complete the mission;

during the game, you can change the settings of the submarine and the enemy ships - speed, fuel consumption, etc.;

the periscope seem to have some bugs - a couple of times, when I turned the periscope around, the view did not change although I knew for a fact that it should;

GATO bombed two or three times in 20 - 25 hours of playing it; **

GATO is copy-protected, and a back-up disk costs \$10.

I like GATO. It's a challenge at all levels, but it's easy enough at the lower levels so you don't get totally frustrated and give up; you can win while you're learning the strategies that you'll need at the higher levels.

** The company is in the process of sending out notices to all registered owners about a free replacement for any disk other than Version 1.3. In addition, the problem seems to occur mainly on 128K Macs, and only in very sporadic instances. Therefore, be sure to send in your registration cards. For further information you can call Spectrum Holobyte in Boulder, CO at (800) 621-8385, ext. 262.

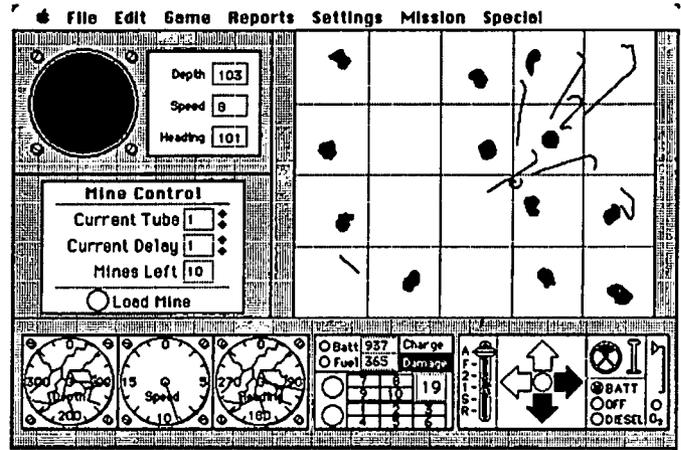


Figure 1

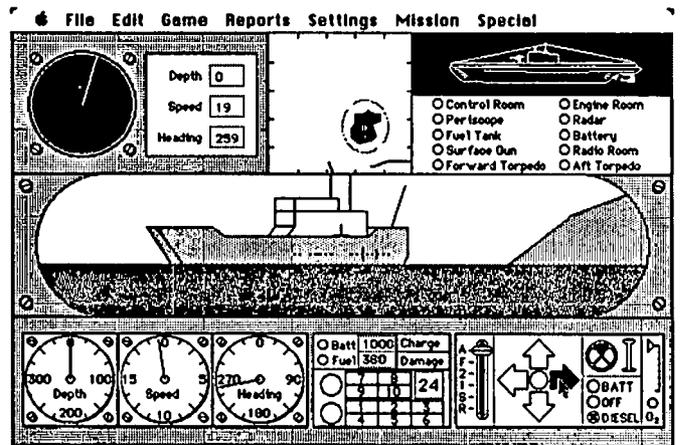


Figure 2

Disketeria Dispatch contd. from pg 62

- Saddle
- Bouncy
- Key Caps
- New Keys
- Dvorak
- Calculators
- HP12C
- Reverse Polish Notation
- std Apple
- original Apple
- HexCalc
- Analyst (demo of TI Business Analyst II)
- Base Tool
- Disk Utils
- Disk Information
- Delete File
- Quit
- Skipfinder
- Idle/Sleep
- Heap Doctor
- Trap List
- Transfer...
- Memory Window
- Utilities

- Compact
- Uriah Heap
- Set File
- Mousometer
- Journal
- Explorer
- Extras
- Word Count
- Ascii
- Screen Save
- Idle
- Auto Dial Folder
- Auto Dial
- Resource Mover
- Auto Dial.Doc
- System Folder
- System File (minimal Fonts and DAs)
- Finder
- Startup Screen
- Clipboard File.

For a brief description of each DA, select the DA from the Desktop Window and get Information (Command-I or select with mouse from File Menu).

Where the information was available, authors of DAs are credited in the Information Windows. Thanks to one and all! ☺

THE BEST OF THE WAP ABBS

by =Alexander-

From WP4614 to ALL 06/17 Questions to you all

First off: I got this informal job of organizing stocks and bonds by putting them into the data base of AppleWorks. Anybody have any idea of the "going rate" for something like that? Also, at the end of this summer my family is going to buy another computer for my sister to take to college. Anyone know what Apple is the best buy nowadays?

_ - Bobby - _

From WP2645 to:WP4614 06/18 Answers

For going to college I would suggest that she get a Mac if she wanted something small, but personally I would go with the Apple //e because of its ability to expand (mouse, 80 cols). OK? /// kitt diebold ///

From WP1962 to:WP4614 06/18 Good Computer

The cheapest way to get a 'good' computer is to buy a used][or][+. Portabilitywise, //c's are great and let the user switch to the Dvorak keyboard arrangement (20% more efficient?). By the way, if you're looking for an extremely low price, don't fall into the Commodore or Sinclair traps (they -can't- be used for word processing). ----ELI S.

From WP3150 to:WP4614 06/19 Computer Advice

Before you make any decision of what type of computer to buy for your sister I would find out what types of micros the university uses the most. That way, if she wants to work at school or at home she doesn't have to lug around a computer. Another thing I would find out is whether the school has some type of consortium (ala Apple Mac). You might be able to purchase a micro from the school much cheaper than you can find around here. Now, I know it would be great to get an Apple for her, but you should be pragmatic about it and buy one that will be the most use to her while at school. TIM WEST

From WP4772 to:WP3150 06/20 Computer Advice

You made some good comments. Might want to add (even though I am a loyal Apple user) that the IBM PC and clones may be a better choice. Seems like Big Blue (how I hate the color blue, now!) has gotten hordes to march to its drum, and that fact can not be ignored. The Apple is alive and well, but Big Blue is the bully on the block!

From WP2351 to ALL 06/12 Ext Speaker

I have some 8 ohm speakers laying around that I would like to use on my][+. (I'm not using it for a speech synthesizer.) How would I do this correctly? PACO

From WP2754 to:WP2351 06/12 Speakers...

It's basically as simple as connecting the existing wire from your Apple to the external speaker. The Apple is actually a pretty powerful output; it's just that now your speaker is facing right into the table and you get a muffled sound from it...

FRom WP1730 to ALL 06/07 BBS Operation

Our school is thinking of starting a BBS for its students using an Apple //e and has heard that leaving the machine running constantly may cause it to wear out in a year or two. Can anyone verify or comment on this from his or her own experience?

From WP2243 to:WP1730 06/07 BBS Oper (r)

Naaaa, don't worry about the Apple! In fact, you do more damage to it by turning it -off- than by leaving it on all the time. We have an old][+ here at work that we have beat to death over the last 4 years, left it on all the time except for weekends (in case of power-outages), and it runs just fine. Never been in for repair. Brett

From WP1821 to:WP1730 06/07 BBS's and //e

It's perfectly safe to leave your Apple on for long periods of time. We do it at school all the time and it works. I run a BBS at home on my][+ and have had no trouble with it. If you are worried you can always put a fan near the Apple.

From WP4160 to:WP1730 06/08 Heavy Duty Apple Use

Apples and all other electronic equipment last much longer if they don't run hot. A reduction of ten degrees in a warm area may double the average time between failures! If you rig up a good cooling system your Apple may age less rapidly with it than if it were on only a few hours a day without cooling. I don't know how good the commercial fans are but they almost certainly help considerably without requiring custom fabrication or cutting thru Apple case. Cooling will not make much difference in failures to the mechanical parts and heads of your disc drives. Most floppies in intermittent use seem to not even get warm, therefore they will probably not benefit from a fan. If you use a fan you may need to dust inside the Apple !

From WP2754 to:WP1730 06/08 BBS's

In answer to your question about hardware strain - the computer should be ok if it has a fan, but drives tend to wear out after heavy use. Hope this helps...

--^Pete^--

From WP6840 to ALL 06/08 Help

I am a new user to this BBS as well as boards in general. My problem is connecting to most other boards. All I get is a line of random characters and then disconnected. Is it line noise or incorrect baud rate, or trying to call outside the local area (I have extended area coverage), or something else? The WAP & IBM-PC boards work fine. I would appreciate some help/info. DOUG

From WP1629 to:WP3195 06/08 Compute! WP?

Is Compute!'s program really public domain? Some magazines like Nibble allow you to copy the program but it is not considered to be PD. Is there any way of checking the pgm after it is typed in (checksum), like Nibble offers? Thanx, Bill.

From WP3195 to ALL 06/11 ABBS Fee

Why not give the board some input on the new fees for WAPABBS? June Journal (page 2) says a fat one time fee is better than an annual fee because of ease of record keeping. Do we agree with this?

From WAP580 to:WP3195 06/11 ABBS Fee(s)

When I presented the proposed new ABBS, one of the items addressed was how to pay for the system. There were basically 2 alternatives: one time signup fee or a yearly fee. The proposal from the ABBS committee recommended a yearly fee and after much discussion at the Board meeting the main objection was the large administrative burden put on the SYSOP(s) and others to keep track who paid and who didn't. The final vote was for a one time fee. After thinking about it, I think that is the best approach. A basic fact is that at a WAP general meeting a few months ago the members voted that the new ABBS should be self supporting. The great majority of WAP members do not use the present ABBS.

From WAP208 to:WP3195 06/11 BBS Fee

Having served on the BBS Upgrade committee, I can give you my feedback. I recommended a user fee for two reasons. First, the activity should pay its own way. Second, a fee tends to discourage abusers. People generally consider free things worth every penny they pay for them and treat them accordingly. With modems cheap and membership growing, there has to be some way to support and expand the system as users increase. Finally, we should not be satisfied with a plain vanilla system. We could have a mini-Compuserve with the number of users we have. A user fee allows for some expansions and improvements. I recommended a yearly fee. We are a computer club, and computers make bookkeeping easy. An annual fee is the way to go.

From WP3181 to:WP3195 06/11 BBS Fees

Both a large one-time and a smaller annual fee have advantages. Who wants to pay \$25 to access a board you may use very little? If the one-time fee approach is used, MAKE

SURE that non-members have some sort of access (non-members including WAP & non-WAP who have not paid), otherwise you force a blind purchase. Why not offer both, a \$5.00 annual fee AND a \$25.00 lifetime fee, good for as long as the user is breathing? Of course, with an annual fee you provide more money theoretically, but need to have something like a logon-msg warning those who are due to send in a check to do so, allowing at least a 1-month period where such a warning comes out, perhaps including a few weeks grace-period before disabling the account. I agree that a non-automatic method of keeping track of expirations and informing users of them would require enormous #s of man-hours (or Tom-hours!).

From WP5181 to:WAP580 06/12 Annual vs One-time Fee

Right now, there's the administrative hassle of taking off the WAP BBS the people who have not renewed. But I agree that an annual fee could compound this because a particular member could have 2 "tickler" dates: membership exp. date & BBS renewal date. New members who join after the new BBS is up would have the same date probably, but earlier members wouldn't.

From WP2513 to ALL 06/13 "Tickler" Dates

I like the idea of a modest one-time fee (\$20-25), but I do believe that a yearly fee could be paid also. Two dates would be poor, so why not make the BBS payment the same date as the renewal date? Sure, some people are going to get more of a 'free ride' than others the first year, but I think most people could live with it. Yearly fee? Very small - \$5.00 - \$7.00. Chris

From WP2411 to ALL 06/22 Laser use

Is there a computer store near Reston that allows the public to use Apple's LaserWriter printer at a nominal cost? Does WAP do this? Thanks in advance.

From WP5394 to:WP2411 06/22 Laserwriter Use

Clinton Computer has a store in Clinton near Andrews AFB, and one in Alexandria (I think). The Clinton store allows you to use the Laserwriter controlled by a MAC. I would expect that the other store would, too, as it is business oriented. Call them and find out.

From WP2439 to:WP2411 06/24 Laserwirter/Reston

See ads in WAP Journal for the Reston Copy Center. (I'm not sure about the name). They advertise LaserWriter use with a discount to WAP members.

From WP2439 to ALL 05/14 Turbo Pascal

Would someone tell me about Turbo Pascal running on Apple CP/M? How widely is it used? Is there any graphics support? Can you suggest any reviews for the Apple CP/M

version other than the one in the WAP Journal? How portable is source code to other machines with Turbo?

From WP4488 to:WP2439 05/17 Turbo Pascal

I've heard little but good things about Turbo Pascal, though I've never used it myself. My brother uses it on an Epson QX 10. He likes it. He also says that the versions for each machine have some machine specific commands, but that if you avoid these, the code is completely portable to other machines (assuming you can get it into the machine, say by modem). Kevin.

From WP1095 to:WP1821 06/08 CP/M & Turbo

Virtually all of the CP/M for the Apple is CP/M-80, i.e. Z-80 based. CP/M-86, for 8088/8086, has never achieved much prominence and you'll have a hard time finding much software for it. Turbo Pascal is so much better than Apple Pascal in its compile and execution speeds that there's no contest. Source code is maybe 95%, but not 100%, compatible; I/O & files differ.

From WAP193 to ALL 06/01 Wordstar, CP/M Free

I received an ad for WordStar for \$164.95 plus a CP/M board free from BroadReach, 505 Industry Drive, Seattle, WA 98188. It is WordStar 3.3 & the board is Appli-Card 2.0. Is this for real? Has anyone purchased it or tried it? I would like to buy it if there is no gimmick. Please, let me hear from WAP members who know about this offer.

From WP4772 to:WAP193 06/09 R-WS/CPM Free

If it is the same ad that I saw, it has a 70-column screen that is software generated. I would suggest the MS Soft-Card. There may be fewer compatibility problems down the road, since the MS card is considered the standard.

From WP3181 to:WP1821 06/11 CP/M Cards

Ken, when buying a cp/m card, it is wise to check for the following: (1) comes WITH operating system. Some cards don't & assume you have pirate copy; (2) check for decent clock-speed. As long as using different CPU, no need to use a slow one; (3) check for on-board RAM. This is related to #2 above. If the Z80 is using the regular Apple RAM memory, all RAM access has to go thru BOTH the card's CPU and the 6502, SSSLLLOOOWWWWWW! The Applicard/Starcad fit the above and can be gotten fairly cheaply.... Bob M.

From WP2074 to:WP1821 06/11 (R) CP/M Info

1. Go with Z-80 CPM. Instruction set is richer and easier to understand. 2. Best deal on a CP/M card is the Applied Engineering card. It really works, and the price is right. 3. Turbo Pascal is better than advertised, easy to use, runs fast and has good documentation.

From WP1755 to ALL 05/30 CP/M W/S Error

I received a "bad sector error" in a WordStar drafted letter. It would not copy to another disk. Is that a sign of a bad disk or a bad disk drive?

From WP5139 to:WP1755 05/31 CP/M Error

Try another disk in the same process and, if there is no reoccurrence of the trouble, and if you can redo the data on that disk, reformat that disk. This sometimes fixes a disk error. Good luck.

From WP2722 to:WP1755 05/31 (R) Wordstar Error

The error message you describe has happened to me when I forgot to check on available disk space at the beginning of a session. Have you filled the disk too full? Too full doesn't always mean that the disk is 100% full, because there has to be room for the back-up copying that WS does automatically. Paul

From WAP371 to:WP1755 05/31 Bad Sector Error

If this error occurs on only ONE disk, and in all drives, then it is a bad disk. If the error occurs on ALL disks, but only ONE disk drive, then it is the disk drive.

From WP4609 to ALL 05/31 3 Drives-Wordstar???

I would like to have all three drives used with Wordstar. Is there anyway that it can be done? I need extra disk space since I have the WS thesaurus and with 2 drives only have 20k left for files. Thanks, Debby. P.S. I have only one card for the two drives I'm using currently.

From WP5139 to:WP4609 06/03 Additional Drive

You need to get another controller card and install it in an empty slot (like 5). You connect the third drive to that controller board and the system will then be able to use drive 3 (or C: in CP/M)....
JACK ☞

Review Corner contd. from pg 53

98103. Bulk Mailer \$125. Mail list program.

SoftStyle, Inc., 7192 Kalaniana'ole Highway, Honolulu, Hawaii 96825. Laserstart \$95 including standard Mac printer cable. Printer driver for the HP Laserjet. JetStart \$45. Printer driver for HP ThinkJet printer.

Stoneware, 50 Belvedere Street, San Rafael, CA 94901. DB Master \$195. A Mac Database program from the makers of the successful data base program for the //.

Vamp Inc., 6753 Selma Ave., Los Angeles, CA 90028. McCad \$395. A "computer aided design" system for the Mac for printed circuits. ☞

DISKETTERIA DISPATCH

This month we are introducing two new disks into the SigMac Library. The following descriptions are from Tony Anderson.

SigMac Disk 21: Utilities I (ResEd)

This disk marks a number of firsts. This is the first disk with the new Finder (version 4.2). The first Program Notes written with the new disk-based MacWrite (version 4.5) and the first disk devoted exclusively to Utilities. These utilities are well worth a disk of their own. 512K Mac Disk Copy allows you to load an entire disk into the Mac's memory and then write as many disk copies as needed without re-reading the original. FEdit is the old standby with new features added for file recovery. Set File sets the "type" and "creator" of any file. Last, but not least, the best utilities of all time, ResEd and REdit. These powerful utilities allow you to customize everything about your Mac to match your own style. Don't like the cursor shape? Change it. Don't like a menu item's command key equivalent? Change it. Want a new system font? Install it. Have fun with this new-found power, but don't forget that while this gives you the power to create, it also gives the power to destroy documents and even whole disks. Only use these utilities with backup disks. Let the SigMac library see what you do with ResEd. If you create a new font or icon, why not submit it?

The following items are available on SigMac Disk 21:

Set File. Each document or application has a "Type" and "Creator". This application from Apple allows you to change these and a few other flags. Can also be done from within FEdit3.0.

ResEd. ResEd is the Apple Resource Editor. This is version 'Proto#0.5-5/10/85' off the May '85 software supplement. Use ResEd to add, delete, and edit resources; see also REdit, the European resource editor and the July 1985 MacWorld, page 130 for help with this utility.

REdit. This is Redit, the European Resource Editor. This is version 1.0--March 18, 1985. REdit allows one to edit resources, and, unlike ResEdit, will also allow you to decompile resources to RMaker source code. See the July 1985 MacWorld, page 130 for help with this utility.

FEdit3.0. (by John Mitchell) The author writes, "This is Fedit version 3.0. It contains not one, but two file recovery facilities that do not depend on correct tags. These are designed for use with hard disks that do not support sector tags. There are also some bug fixes and a few new features such as write and edit boot blocks, reverse forks and a couple of "expert mode" configuration options. You should read Fedit.Doc for details."

FEdit3.0 Doc. This is the documentation for FEdit version 3.0

512K Mac Disk Copy. "This was sent to me after a phone call to MicroAnalyst who ships a similar version

along with MacZAP. I urged them to release it to the public domain and they obliged. Copy times are: 20 sec to read a disk into memory 27 sec to write a disk from memory 15 sec extra if the disk needs to be formatted" -

SigMac 22: Desk Tools

Overview of Desk Tools

Desk Accessories (DAs or Desk Tools) are mini-applications which can be selected from the Apple Menu from the Desk Top or while running any application. DAs reside in your System File, and up to 18 DAs may be included in one System File. Each DA occupies a variable amount of memory. It is generally recommended that DAs larger than 18K be reserved for use with a Fat Mac (512K RAM), but large DAs may run on a 128K Mac as long as the number of DAs is kept to a minimum and there is sufficient RAM available from within an application.

DAs may be added or deleted from your System Files with the Apple Font/DA Mover available from your dealer. A copy of this utility program is included on this disk. Don Brown, the author of all of the MockSoftware included on this disk distributes his programs through MAUG with the understanding that if you like and use the programs you will send him a check for the appropriate amount (see Information boxes with each program). For your convenience, all DAs were converted to the new icon for this Desk Tools disk, and you add or delete them with the Apple Font/DA Mover.

For a more complete discussion of DAs, read the following:

- "Mac's Desktop Tools: Understanding Mac Accessories", Arthur T. Denzau, MACazine, May 1985, pp. 39-43.
- "Decking Out the Mac's Desktop", Gordon McComb, MacWorld, March 1985, pp. 44-52.

This disk contains the following Folders with these DAs:

- Calendars
 - Corvus calendar
 - DeskCal (Mike Schuster's Desk Calendar, 18K)
- Clocks
 - Alarm Clock (from Apple)
 - Clock (sans alarm)
- MockSoftware
 - MockPTerminal
 - MockTerminal
 - MockWrite
 - MockPrinter
- Fun Folder
 - Executive Decision Maker
 - Fantasy Role Playing Die Roller
 - System Bugs
 - Magnifying Glass
 - Puzzle
 - Trails

contd. on pg 58

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Note: DOS 3.2 disks (Volumes 1 - 40) have been discontinued. The office will maintain an "archival" copies.

- | | | |
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| <p>DOS 3.3</p> <ul style="list-style-type: none"> () Volume 41 IAC 25 Mach. Lang. Util. () Volume 42 One Key DOS *** () Volume 43 IAC 29 Utilities H () Volume 44 Utilities I () Volume 45 Diversi-Copy ***
 () Volume 70 Business/Math/Statistics () Volume 71 Music () Volume 72 Keyboard Games () Volume 73 Text Adventure Games () Volume 74 Paddle Games () Volume 75 Color Graphics for Fun () Volume 76 Education () Volume 77 Utilities
 () Volume 90 Spreadsheet C Genl. Bus. () Volume 91 Spreadsheet D Investment () Volume 92 Spreadsheet E Bus. Recd. () Volume 93 VisiPlot & VisiTrend () Volume 94 CALCULINK ***
 () Volume 100 Utilities A () Volume 101 Utilities B () Volume 102 Games A () Volume 103 Merry Christmas () Volume 104 Business A () Volume 106 Science Engineering () Volume 107 Games B () Volume 108 IAC 10 (Graphics) () Volume 109 IAC 11 (Applesoft Tutorial) () Volume 110 Personal/Education () Volume 111 Games C () Volume 112 Utilities C () Volume 113 Business B () Volume 115 IAC 12/13 Misc. () Volume 116 IAC 14 Micromodem II () Volume 117 Picture Packer () Volume 118 Utilities D () Volume 119 IAC 15 Misc. () Volume 120 IAC 16 Misc. () Volume 121 WAPABBS 1.1 Doc. ** () Volume 122 IAC 17 Misc. () Volume 123 French Vocabulary () Volume 124 Utilities E () Volume 125 IAC 18 Misc. () Volume 126 Sights and Sounds () Volume 127 Math/Science () Volume 128 Games D () Volume 129 GLAQ () Volume 130 Diversi-DOS *** () Volume 131 Personal/Educ. 2 () Volume 132 IAC 19 - Utilities F () Volume 133 IAC 20 - Pascal & DOS 3.3 () Volume 134 New Members Disk | <p>DOS 3.3 contd.</p> <ul style="list-style-type: none"> () Volume 135 WAPABBS 1.1 Disk 1 ** () Volume 136 WAPABBS 1.1 Disk 2 ** () Volume 137 IAC 21 Spreadsheet A () Volume 138 IAC 23 Utilities G () Volume 139 IAC 24 Education 3 () Volume 140 Education 4 () Volume 141 Special Data Bases () Volume 142 IAC 28 Pinball Games () Volume 143 Sports () Volume 144 IAC 27 Applesoft Prog. () Volume 145 Apple Logo Tool Kit () Volume 146 Logo Documentation () Volume 147 Apple Logo Sample Prog. () Volume 150 EDSIG1 (Elem. Math) () Volume 151 1983 Tax Template () Volume 152 IAC 31 Miscellaneous () Volume 153 Investments A () Volume 154 Investments B () Volume 155 IAC 33 Miscellaneous () Volume 156 IAC 35 Applesoft-AW/e () Volume 157 IAC 36 Arcade Games () Volume 158 Apple Logo Programs () Volume 159 Recipe Files () Volume 160 Utilities & Games
 <p>Eamon Series</p> <ul style="list-style-type: none"> () Volume 180 Dungeon Designer () Volume 181 Beginners Cave () *Volume 182 Lair of Minotaur () *Volume 183 Cave of the Mind () *Volume 184 Zyphur Riverventure () *Volume 185 Castle of Doom () *Volume 186 Death Star () *Volume 187 Devil's Tomb () *Volume 188 Caves of Treas. Isl. () *Volume 189 Furioso () *Volume 190 The Magic Kingdom () *Volume 191 The Tomb of Molinar () *Volume 192 Lost Isl. of Apple () *Volume 193 Abductor's Quarters () *Volume 194 Quest for Trezore () *Volume 195 Underground City () *Volume 196 Merlin's Castle () *Volume 197 Horgrath Castle () *Volume 198 Deathtrap () *Volume 199 The Black Death () *Volume 200 The Temple of Ngurct () *Volume 201 Black Mountain () *Volume 202 Nuclear Nightmare () *Volume 203 Feast of Carroll () *Volume 204 The Master's Dungeon () *Volume 205 The Crystal Mountain () *Volume 206 The Lost Adventure () *Volume 207 The Manxome Foe () *Volume 208 The Gauntlet | <p>Pascal (See also Volume 133)</p> <ul style="list-style-type: none"> () Volume 300 PIGO: ATTACH 1.1/BIOS () Volume 301 PIG1: () Volume 302 PIG2: () Volume 303 PIG3: () Volume 304 PIG4: () Volume 305 PIG5: () Volume 306 PIG6: () Volume 307 PIG7: () Volume 308 PIG8: () Volume 309 PIG9: () Volume 310 PIG10: () Volume 311 PIG11: () Volume 312 PIG12: () Volume 313 PIG13: Guerilla Guide () Volume 314 PIG14:
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- () September 3 - INTRODUCTION TO APPLE COMPUTER HARDWARE
() September 10 - HOW TO USE YOUR APPLE SOFTWARE
() September 17 - BEGINNING APPLESOFT BASIC
() September 24 - INTERMEDIATE APPLESOFT BASIC

The fee for each tutorial is \$10.00 with an Apple, monitor and disk drive, \$15.00 without (monitors available for 1st 5 registrants - call office). Please note that WAP does not have equipment for you to use; if you do not bring your own, you will have to look over someone's shoulder.

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SigMac is sponsoring a series of two monthly tutorials for the beginner. The fee for two tutorials is \$20.00. They will be held at the office, from 7-10 PM on Monday evenings.

- () Monday, July 29 and August 5
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() Monday, September 23 and 30

A "non-regular" Apple tutorial is being offered on Exploring the WAP New Member Disk, and is being taught by J.T. (Tom) DeMay Jr. It is scheduled for Saturday, September 14, 9:00 AM - 12 Noon at the office. Attendees should bring their Apple and disk drive, New Member Disk, and an empty disk which has been formatted.

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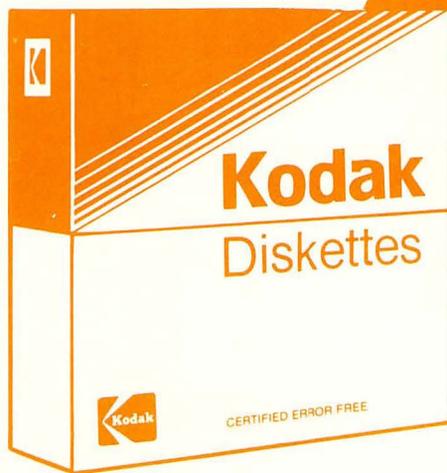
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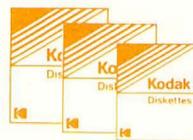
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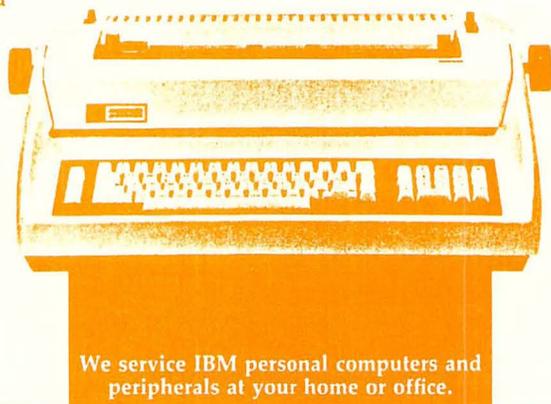
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