

Washington Apple Pi ^{\$ 2}



The Journal of Washington Apple Pi, Ltd.

Volume 7

November 1985

Number 11

Highlights

UBBS Help

Lap Computers as Apple Accessories

The Business Accountant

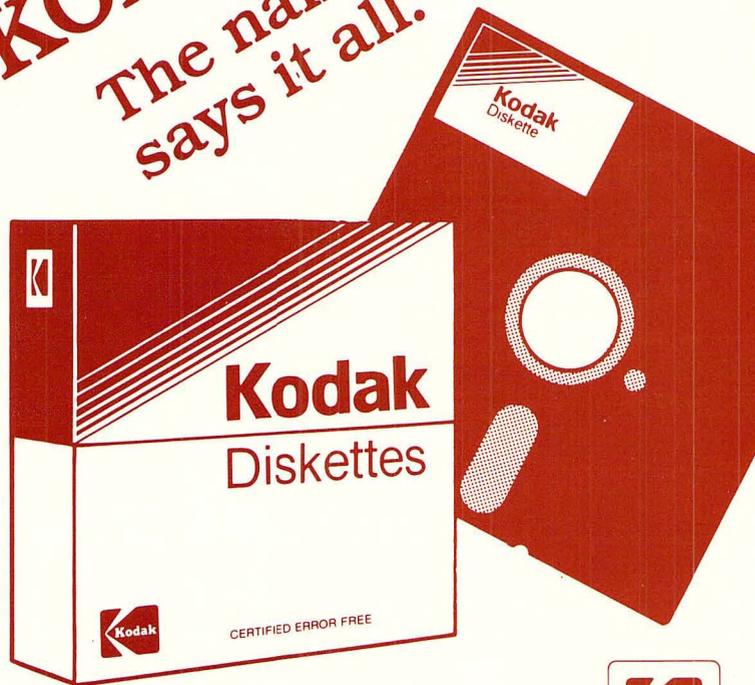
Dos & Donts of Spreadsheets: Part 1

Softviews: XL Serve etc.

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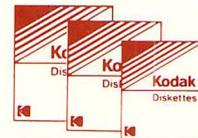
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Clinton Computer Offers Special Pricing to Pi Members on New Apple Products

New Products Announced By Apple

Apple™ Computer, Inc. has just announced several major new peripheral products for both the Apple // and Macintosh™ product families.

The product line is impressive! It includes composite color monitors for the Apple //e and //c which also display clear 80-column text in a monochromatic mode. The new UniDisk 3.5 is a high-capacity floppy disk for the //e and //c that greatly increases storage capacity and speed. The ImageWriter II, a worthy successor to the ImageWriter, features inexpensive color printing, near-letter-quality text, an optional sheet feeder, and a slot for expansion cards. Apple has also added a 20 megabyte hard disk to the Macintosh product line as well as a new modem and software for both Macintosh and Apple //.

Special Pricing for Pi Members

Clinton Computer is pleased to announce that Washington Apple Pi members will receive a **25% DISCOUNT** off the list price on all Apple brand hardware and software and on AppleCare. This discount extends to the new line of Apple peripherals, though quantities may be limited for a short period of time depending on Apple's allocation of product to our stores. To take advantage of this discount, just bring in your Washington Apple Pi Membership Card to our store.

In addition, Clinton Computer guarantees that our price is the lowest in-stock price for Apple products of any authorized dealer in the Washington Metro area.

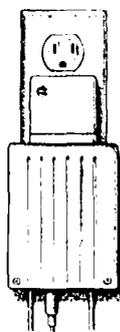
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Color Monitor //c

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Price to Pi Members \$299.25



Apple
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300-1200 Baud
List \$399.00
Pi Price \$299.25

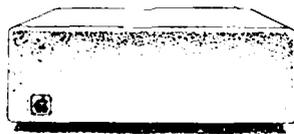


UniDisk 3.5
for //e and //c

List \$499.00

Pi Price \$374.25

(Unidisk to //e Kit, Pi Price \$51.75)



Hard Disk 20
for Macintosh 512K

List \$1499.00

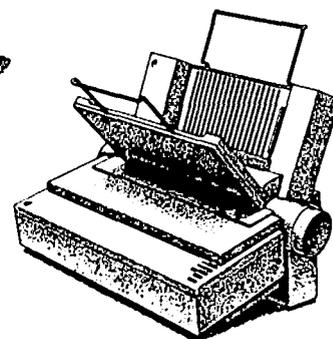
Pi Price \$1124.25



ImageWriter II*

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Pi Price \$446.25



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ImageWriter II

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Pi Price \$168.75

*Requires P8 Cable, Pi Price \$22.50

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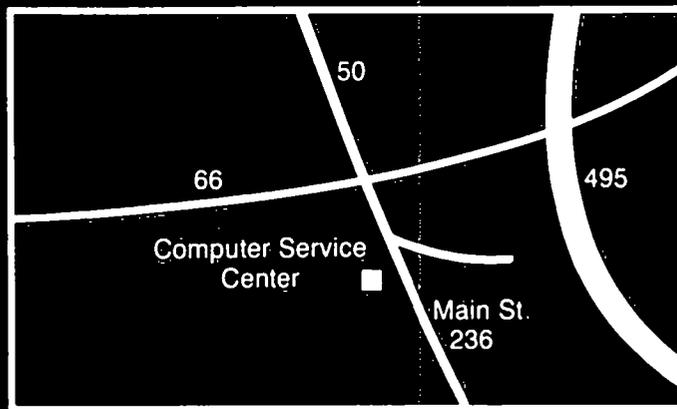
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EDITORIAL

To sectionalize or not . . . ? That is today's question. By now, many of you have noticed that we have tried to group together game reviews with the GAMESIG column, languages, business, telecommunications, //, //c, /// and Mac items, etc. This is to make it easier for the single-purposed to find items of interest to them and to ignore the rest. But this raises a problem--what to do about articles or groupings of articles which cross computer types? Take, for example, Ron Wartow's grouping. We have games for both the Apple // series and for the Mac. The discussion on the new BBS systems affect all members. EDSIG and the various review columns, e.g. David Morganstein's "Softviews", Jim Burger's "Review Corner" and Chris Klugewicz's "View from Durham", all at one time or other cover topics on more than one computer. This is more often the rule than the exception.

Thus, this editor is faced with the quandary of what to

do? George Sall in his letter to the editor in WAP Sept 85 voiced an opinion that to sectionalize was detrimental to his own education and computer maturation. Busy people naturally focus on things in priority order--if it is not of immediate concern, they don't read it. But they lose something in the process. How many of you have experienced the pleasure of finding related items of interest by browsing through the shelves of a library or bookstore? Serendipity, how sweet it is.

So, for the hard-pressed, single-minded, and those who need to solve their urgent problems at once, we will have sections of concentrated interest based on particular machines. However, be warned--lurking in that general article may be something of great interest or concern to you. Even that incomprehensible article about the "wrong" machine may be a god-send when your rich uncle gives you a new computer for Christmas. ☺

PRESIDENT'S CORNER

by Tom Warrick

A lot of exciting things have been going on since last this column was written. First, about 50 of us met on September 21 to discuss *The Future of the Pi*. A number of interesting ideas came out of that meeting to which I would like to get your reaction.

First, there was a general consensus that we should change the format of our main meetings. Customarily, our meetings have begun with a question and answer session at 9:00. (Yes, Bruce and I know that the starting time has slipped till 9:30 over the past few months, but from now on we're going to start promptly at 9:00, so come early to ask the questions you don't want everyone to hear!) There is a short business meeting at 10:00 with the presentation beginning at 10:30. Those Special Interest Groups (SIGs) that meet on meeting Saturdays begin meeting after the presentation, which usually means about 11:45 or noon.

Instead, how about having SIG meetings first, at 9:00, with the Q&A session beginning at 10:00. That way, SIG meetings could go longer than one hour if that's what people want to do. The business meeting would follow at 11:00 and the program would begin at about 11:30 and go for as long as the speaker, the audience and the security guards will allow. If you have any thoughts or comments on this proposal, pro or con, leave me a message on the BBS (System 1, on the Lafayette Park board) or on my answering machine at home, 656-4389.

Now for another, more radical suggestion: Instead of having two large meetings a month as we currently do, how about one even larger meeting once a month at a site suitable for larger groups to meet? Having a single large meeting once a month would enable more people to pick up their Journals rather than having to wait for it to arrive via third-class mail. More people could participate in such exciting things as approving the budget and changing the bylaws. It would save wear and tear on our volunteers who must now lug disks and other paraphernalia to two meetings each month. Moreover, we could pay more (if necessary) for one larger auditorium than we must now pay for two medium-to-large auditoriums. The meeting program would not necessarily be pitched toward any one type of computer, although there could be separate meetings held on the same day with demos and reviews of products specific to one type of computer before or after the general meeting. Alternatively, when we wanted to have specific product reviews, we could have several different presentations at different times during the day. What do you think?

Speaking of meetings, *a meeting reminder: the November 23 meeting will be at Walt Whitman High School, 7100 Whittier Boulevard in Bethesda*. Whittier Boulevard is just off River Road, south of the Beltway and north of Goldsboro Road.

The *December meeting* will be held, as it has been in past years, on the third Saturday at USUHS on Jones Bridge Road in Bethesda. Also, as it has been in past years, we will have a "garage sale" where you can bring all your solved adventure games (Ron, are you listening?), hardware from

which you upgraded, magazines you've read, and everything else remotely computer-oriented you would like to unload, er, ah, sell. Do all your Christmas shopping at one stop! There will be the customary \$1 admission fee. Remember, please, that no commercial sales may be made at USUHS because of site restrictions.

A final program note: Early in 1986 we'd like to have a program on "Electronic Cottage" uses of Apples. If you use your Apple or Mac at home to make some money by turning out greeting cards, publishing community newsletters, doing word processing, telecommuting or any other means of avoiding having to make the daily trek downtown or around the Beltway, by all means let Adrien Youell, our vice president for programs, or John Alden, our program coordinator, know about it. (Thanks to Pat Kirby for this excellent suggestion.)

Neil Shapiro, the well-known SYSOP ("System Operator") of MAUG on CompuServe, has invited Washington Apple Pi to be one of the three users groups whose publications will be available on CompuServe. The others are Boston Computer Society and the Berkeley Macintosh Users Group--a select group, indeed. That the WAP Journal was singled out for this is due to all of the great articles that our members have taken the time to write over the years--keep up the good work! Credit also goes to the Editor and Associate Editor for their dedication to the high standards that the Journal has maintained over the years. If you submit an article and do not want it posted on CompuServe, please indicate so in the text of your article.

The Computer Pornography and Child Exploitation Prevention Act of 1985: Joe Chelena, SYSOP of BBS System 1, deserves the thanks and appreciation of everyone who has or is thinking of getting a modem, for his work on S.1305, the Computer Pornography and Child Exploitation Prevention Act of 1985. This bill, introduced by Senator Paul S. Trible (R., Va.), has the most noble of motives, as the title suggests, but if passed as introduced would have had a devastating effect on computer bulletin board systems, electronic mail, online databases, and even companies and government agencies that link micros together on networks. Joe arranged a meeting with Senator Trible's staff that in turn led to an invitation to testify on October 1 before the Subcommittee on Juvenile Justice of the Senate Judiciary Committee. Joe, Bill Cook and I submitted testimony explaining how computer bulletin board systems work, and explaining what effects the bill would have on microcomputer users. Copies of our testimony are available at the Pi office and should be available on one of the Pi bulletin board systems.

If passed, S.1305 would make criminal the transmission of obscene matter or material pertaining to the sexual exploitation of children. Unfortunately, given the way BBS's work, we pointed out, it is virtually impossible to screen the character of every caller, let alone to monitor every message. Thus, under S.1305 if someone left a message on a bulletin
contd.

board system that was legally obscene, the BBS operator would be criminally liable for the transmission of that message to the next caller. Second, the bill contained language that made the operator of a BBS liable if he or she knew that the BBS "is being used" for the transmission of legally obscene matter--regardless of the steps being taken by the system operator to prevent it.

Third, S.1305 does not distinguish between messages left by adults for the purpose of persuading minors to engage in "explicit sexual conduct," and messages left by minors about themselves that amount to no more than "locker room" humor. One message I saw on a local BBS some years ago from a 17-year old bragging about himself would be a crime if S.1305 were enacted. Correcting such conduct should be a family matter, not a criminal matter. Finally, you can't tell the age of someone with whom you're corresponding on most BBS's, where there is little if any direct personal contact with the other people on the board. (WAP's boards are somewhat different in this respect because of the nature of our organization.)

The hearing itself had representatives with a wide range of views. The Department of Justice, the Federal Communications Commission and the Postal Service appeared. One of the "highlights," if you could call it that, was the screening of a videotape made by an investigative reporter who logged onto several bulletin boards dealing with child pornography, one of which was in suburban Virginia. Next came two prosecuting attorneys from Virginia who described cases they had handled involving computers and child pornography. One, the prosecuting attorney from Arlington, Henry Hudson, testified that there were five sexually oriented BBS's in this area. (And, no, he did not name them, so don't even ask.)

After the prosecutors came the vice president and general counsel of Citizens for Decency Through Law, Inc. You could pretty much guess what he had to say without any help from me. Then George Minot, executive vice president of CompuServe, testified on behalf of the Videotex Industry Association, the trade association that represents online database vendors and similar services. He made essentially the same points that we did, that the bill would impose liability on operators of online computer systems, who could not enforce the censorship laws on their users.

Joe and I then began our presentation outlined above, but before we were more than a third of the way through, Senator Tribble broke in and said that it was not the bill's intention to shut down innocent bulletin board system operators and others, and that he was willing to work with us to make sure that did not happen.

Last on the program was a representative from the American Civil Liberties Union, whose position provided a counterpoint to Citizens for Decency Through Law, Inc.

As a non-profit organization, WAP does not take a position on legislation, and we did not and do not take a position on S.1305. Our role in such matters is to serve the public interest as we serve our members, in other words, to help educate us all about computers. Our testimony on S.1305 served that role. It would have been less than candid, however, if we had not pointed out that S.1305 would have had a serious detrimental effect on WAP member services and on other services used by our members had it been enacted as

introduced. It appears now that those deleterious effects can be averted, thanks in large part to the work of Joe and Bill.

Now if InfoWorld had only moved its camera a little further back, perhaps Joe would still be speaking to me today. ☺

PIE ALA MODE

A Slice of Washington Apple Pi

by Tom Kroll

Pie Ala Mode meets on the third Saturday of each month at the Grange Hall in Great Falls, VA at 9:00 AM.

Information:

Tom Kroll (703) 368-1929

John Gersic (703) 430-6948

Upcoming Events:

October 19 - Expanding the Apple

November 16 - Apples and Income Taxes

December 21 - See you at the WAP Garage sale!

The topic for September was Word Processors and their uses. There was no one word processor generally used, as those we compared ran the gamut from WordStar to the freeware version of Apple Writer on the WAP ProDOS disk. Interestingly enough, most seemed to be integrated with a data base which was used for mass-mailings.

In November, Lee Raesly will be there to demonstrate his Apple //c expanded to 640K with the RAMWORKS Z-80 card. Should be interesting! See you then. ☺



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MINUTES

SUMMARY OF SEPTEMBER EXECUTIVE BOARD MEETING

The Executive Board of Washington Apple Pi, Ltd. met on September 11, 1985 at 7:30 PM in the office, with Tom Warrick presiding. At the request of Tom Kroll, the Board received the Manassas Slice into the Pi. A motion was approved to get a signer for the September main meeting. Tom DeMay reported that the Disketeria meeting had been held, and copies of the minutes were distributed. Mac disks are still selling very well, but // disks sales are slowly declining. Lee Raesly reported on the status of the Bulletin Board System changes. Interim copies of the program have been obtained and will be put into operation. The hard disk and file server have been purchased. The Classified Board has been converted, and new passwords are being allocated for the main Pi board. A new board - Lafayette Park - will be reserved for "discussive" items. Steve Hunt reported that WAP had a booth at the Boston MacWorld Expo. Five to six thousand people visited the booth, stacked ten to fifteen deep at times. Marty Milrod reported that negotiations with the University of Maryland had broken down, and meeting space was no longer being offered. A video projector is being rented for the SigMac meeting. The Board decided to inform the membership that a vote would be taken on the purchase of a projector at the October meeting. Tom Warrick reported on the Users Group Conference sponsored by Apple Computer at Cupertino. The Board approved the distribution of about 500 copies of the Journal to Alonzo Periodicals for distribution to Crown Book stores in the Washington area. From April 27 to August 24 there were 434 new members and 364 non-renewals, for a net growth of 76 members. The new member rate is satisfactory, but the renewal rate is disappointing.

SEPTEMBER GENERAL MEMBERSHIP MEETING

The main meeting of Washington Apple Pi was held at the Masur Auditorium of NIH on Saturday, September 28. After the Q & A session, the President, Tom Warrick, gave some of the results of the recent member survey, and also reported on the Future of the Pi meeting. A show of hands indicated that 85 percent of the attendees in favor of having the SIG meetings first, followed by the Q & A session, then by the business meeting and then by the main program. Two-thirds of those present agreed with having Mac and // meetings on the same day. At the October meeting, new video projects will be shown and a decision taken on which one to buy. Volunteers are needed to serve on an audit committee, to do some typing, some indexing, and to help with the Journal ABBS. Tom Warrick also reported on the 1985 Apple Users Group Conference in Cupertino. The main program was a series of demonstrations by the Disabled SIG, organized by Jay Thal. ☺

EVENT QUEUE

Washington Apple Pi meets on the 4th Saturday (usually) of each month. 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 5 business days notice. Call the office.

PLEASE NOTE: The November meeting will not be at USUHS. It will be at Walt Whitman High School, 7100 Whittier Blvd., Bethesda.

Following are dates and topics for upcoming months:

November 23 - Aspects of Music

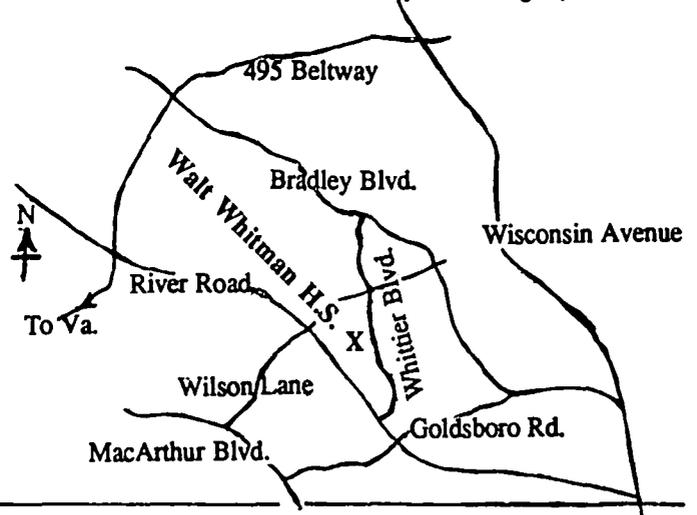
December 21 - Garage Sale

Dates for SigMac (held at Georgetown University) are:

November 2 - Decisions Support Systems

December 7 - TBA

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

Tues. & Thurs. - 7 PM to 9:30 PM

Saturday - 12 Noon to 3:00 PM

* November 1985 *

SIGNEWS

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2 SigMac 9AM-Geotown Univ-PreCln Bldg. 6A2&4 LISA/MacXL
3	4 Deadline for Journal Articles	5 Apple// Beginning Tutorial #1 7:30-9:00PM Office	6	7 SigMac 7:30PM-Lady of Lourdes; DisabledSIG 7PM-CCCC ->	<-Thursday 7th contd. GAMESIG 7:30-Off.	9 Mac Tutorial Multiplan/ Chart-Off. 10AM-Noon
10	11	12 Apple// Beginning Tutorial #2 7:30-9:00PM Office	13 Executive Board 7:30 PM Office	14STOCKSIG 8PM-Office; Apple /// 7:30PM-Conv Ctr. Inn ->	<- Thursday 14th contd. FAC Slice 7:30 MRIID Ft. Detrick	16 Pie Ala Mode Slice 9AM-Grange Hall, Great Falls, VA
17	18 PI-SIG 8:00 PM Office	19 Apple// Beginning Tutorial #3 7:30-9:00PM Office	20 EDSIG 7:30 PM Office	21 Pascal SIG 8:00 PM Office	Sat. 23rd-> contd. Mac Tutr. Multi Plan/Chart 10-12AM-Off	23 WAP Mtg 9AM-Walt Whitman HS Music -<
24	25 Mac Begin. Tutorial #1 7-10PM Office	26 WAP BBS Committee 7:30PM-Off; FAC SigMac 7:30-MRIID	27	28 Have a good Thanks- giving	29	30

Apple /// SIG meets on the second Thursday of the month at 7:30 PM in the Convention Center Inn, corner of 12th & K NW. The next meeting will be on November 14. See their news elsewhere in this issue.

Apple //c meets each month after the regular WAP meeting.

Appleseeds is the special interest group for our younger members, age 9 and up. They meet during the regular WAP meeting.

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

EdSIG - the education special interest group - usually meets on the 4th Thursday of the month at the office, 7:30 PM. Because of Thanksgiving the November meeting will be on Wed., Nov. 20. See EDSIG News elsewhere in this issue.

ForthSIG meets on the third Saturday of the month at the office, 10:00 AM.

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

LISA/MacXL SIG meets after the SigMac meeting on the first Saturday of the month.

PIG, the Pascal Interest Group, meets on the third Thursday of each month at the office, 8:00 PM.

PI-SIG meets on the third Monday of each month at the office, 8:00 PM. See their news elsewhere in this issue.

SigMac meets on the 1st Thursday of each month (programmer's meeting) at Our Lady of Lourdes School, 7500 Pearl Street, Bethesda, MD; and on the first Saturday (general mtg.) at Georgetown University, Preclinical Sciences Building, at 9:00 AM.

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

Telecom SIG meets after the regular WAP meeting on the fourth Saturday. See their news elsewhere in this issue.

* December 1985 *

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2 Mac Begin. Tutorial #2 7-10 PM Office	3 Apple// Beginning Tutorial #1 7:30-9:00PM Office	4 Deadline for Journal Articles	5 SigMac 7:30PM-Lady of Lourdes; GAMESIG 7:30-Off.->	<-Thursday 5th contd. DisabledSIG 7PM-CCCC	7 SigMac 9AM-Geotown Univ-PreCln Bldg. RmLA4 Mac/XL SIG
8 Happy Hannukah	9	10 Apple// Beginning Tutorial #2 7:30-9:00PM Office	11 Executive Board 7:30 PM Office	12STOCKSIG 8PM Office; Apple /// 7:30PM-Conv Ctr. Inn ->	<-Thursday 12th contd. FAC Slice 7:30 MRIID Ft. Detrick	14
15	16	17 Apple// Beginning Tutorial #3 7:30-9:00PM Office	18	19 Pascal SIG 8:00 PM Office	20	21 WAP Meeting 9AM USUHS Garage Sale
22	23	24 Christmas Eve - Office Closed	25 Merry Christmas	26	27	28
29	30	31				

WAP HOTLINE

For Use by WAP Members Only

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

General	John Day (301) 672-1721	Games - Apple //	Charles Hall (301) 330-4052
	Dave Harvey (703) 527-2704	Games - Mac	Ron Wartow (301) 654-4439
	Robert Martin (301) 498-6074	Hard Disks	
Accounting Packages		Corvus & Omninet	Tom Vier (ABBS) (301) 986-8085
Accountant(Dec.Sup.)	Mark Pankin (703) 524-0937	Sider	Jaxon Brown (301) 350-3283
BPI Programs	Jaxon Brown (301) 350-3283	Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine)	
Home Accountant	Leon Raesly (301) 460-0754	A	Peter Combes (301) 251-6369
Howardsoft (Tax)	Leon Raesly (301) 460-0754	A,I	Jeff Dillon (301) 422-6458
APPLE SSC	Bernie Benson (301) 951-5294	A	Richard Langston (301) 869-7466
Apple TechNotes	Joe Chelena (703) 978-1816	A	Mark Pankin (703) 524-0937
AppleWorks	Jay Jones (Balt.) (301) 969-1990	A,I,M	Richard Untied (609) 596-8816
Communications Packages and Modems-Telecom.		A,I,M	John Love (703) 569-2294
Anchor Mark 12	George Kinal (7-10) (202) 546-7270	M	Raymond Hobbs (301) 490-7484
	Jeremy Parker (301) 229-2578	P	Donn Hoffman * (412) 578-8905
Apple Modems	John Day (301) 672-1721	Forth	Bruce Field (301) 340-7038
ASCII Express	Dave Harvey (703) 527-2704	LISP	Fred Naef (703) 471-1479
	Marv Redd (301) 944-2150	MS Basic	Raymond Hobbs (301) 490-7484
BIZCOMP Modem	Jeremy Parker (301) 229-2578	Math/OR Applns.	Mark Pankin (703) 524-0937
General	Tom Nebiker (216) 867-7463	Monitor, RGB	John Day (301) 672-1721
Hayes Smartmodem	Bernie Benson (301) 951-5294	Operating Systems	
MDM	Joe England (7-10) (301) 953-1949	Apple DOS	Richard Langston (301) 869-7466
Robotics Modem	Joan B. Dunham * (301) 585-0989		John Love (703) 569-2294
SeriAll Comm. Card	Joan B. Dunham * (301) 585-0989	CP/M	Richard Untied (609) 596-8816
Smartcom I	Harmon Pritchard (301) 972-4667		Raymond Hobbs (301) 490-7484
VisiTerm	Steve Wildstrom (301) 564-0039	ProDOS	Leon Raesly (301) 460-0754
XTALK CP/M Comm.	Bernie Benson (301) 951-5294		Richard Langston (301) 869-7466
Computers, Specific			John Love (703) 569-2294
Apple //c	John Day (301) 672-1721	Printers	
	Scott Rullman (301) 779-5714	General	Walt Francis (202) 966-5742
LISA/Mac XL	John Day (301) 672-1721		Leon Raesly (301) 460-0754
	Don Kornreich (301) 292-9225	AJ 831 series	Joan B. Dunham * (301) 585-0989
Macintosh:		Apple Color Plotter	Joe England (7-10) (301) 953-1949
General	Steve Hunt (301) 262-9080	Apple Daisy Wheel	John Day (301) 672-1721
	Scott Rullman (301) 779-5714	Daisywriter 2000	John Day (301) 672-1721
	Donald Schmitt (717) 334-3265		Bill Etue (703) 620-2103
	Rob Clark (804) 850-2016	IDS 460	Henry Greene (202) 363-1797
Chart	Terry Monks (703) 471-4610	Imagewriter	Jeff Stetekluh (703) 521-4882
Comm. & Modems	Steve Hunt (301) 262-9080	MX-80	John Day (301) 672-1721
Concertware	Skip Horvath (703) 536-4091	NEC 8023	Jeff Dillon (301) 434-0405
Digitizers	JoAnn Stewart (703) 527-4072	Okidata	Bill Mark (301) 779-8938
Excel	David Morganstein (301) 972-4263		Michael Proffitt (301) 874-2270
File Vision	Steve Hunt (301) 262-9080	Scribe	Dan Robrish (301) 530-4202
Hard Disk	David Jamison(day) (301) 589-8841	Silentype	Phil Leber (703) 378-4391
Helix	Jim Berry (703) 662-0640	Spreadsheets	Bruce Field (301) 340-7038
	Harvey Levine (301) 299-9380		Leon Raesly (301) 460-0754
Inside Mac	Jon Hardis (301) 330-1422	Lotus 1-2-3	Walt Francis (202) 966-5742
	Don Landing (703) 690-1010		Raymond Hobbs (301) 490-7484
MacDraw	Tom Berilla (301) 434-3256	Multiplan	Terry Prudden (301) 933-3065
MacLion (DBMS)	Mark Miani (202) 362-8123	VisiCalc	Walt Francis (202) 966-5742
MacProject	Jay Lucas (703) 751-3332	Sprdsht. 2.0(MagicCalc)	Leon Raesly (301) 460-0754
MacTerminal	Jon Hardis (301) 330-1422	SuperCalc Ver. 2.0	Leon Raesly (301) 460-0754
Multiplan	John Boblitz (301) 356-9384	Stat. Packages	Mark Pankin (703) 524-0937
	Don Landing (703) 690-1010		David Morganstein (301) 972-4263
Multiplan/Chart	Steve Hunt (301) 262-9080	Stock Market	Robert Wood (703) 893-9591
MusicWorks	Walt Francis (202) 966-5742	Time-Sharing	Dave Harvey (703) 527-2704
OverVue	Bob Pulgino (703) 379-0512	Word Processors	Walt Francis (202) 966-5742
Spreadsheets	Skip Horvath (703) 536-4091	Apple Writer II	Dianne Lorenz (301) 530-7881
Sidekick	J.T.(Tom) DeMay Jr. (301) 779-4632		Leon Raesly (301) 460-0754
Word	David Morganstein (301) 972-4263	Format II	Henry Donahoe (202) 298-9107
Data Bases	Raymond Hobbs (301) 490-7484	Gutenberg & Jr.	Neil Muncy Can. (416) 298-3964
dBase II	Steve Hunt (301) 262-9080	Letter Perfect	Harris Silverstone (301) 435-3582
	Walt Francis (202) 966-5742	Magic Window and II	Leon Raesly (301) 460-0754
dBase II & III	Bob Pulgino (703) 379-0512	Peach Text	Joyce C. Little (301) 321-2989
	Skip Horvath (703) 536-4091	PIE Writer/Apple PIE	Carl Eisen (703) 354-8337
DB Master	J.T.(Tom) DeMay Jr. (301) 779-4632	ScreenWriter II	Jim Graham (703) 643-1848
Data Perfect	David Morganstein (301) 972-4263		Peter Combes (301) 251-6369
Data Factory	Raymond Hobbs (301) 490-7484	Supertext II	E. E. Carter (202) 363-2342
General Manager	Marty Milrod (301) 464-2154	Word Handler	Peter Rosden (301) 229-2288
		Word Juggler //c	Jon Vaupel (301) 977-3054
List Handler		Word Star	Carl Eisen (703) 354-8337
PFS	Paul Bublitz (301) 261-4124		Joe England (7-10) (301) 953-1949
	John Staples (703) 759-3461		Dana Keil (301) 350-3283
QuickFile II	Raymond Hobbs (301) 490-7484		
VisiPlot	Jim Kellock (day) (301) 986-9522		
	Leon Raesly (301) 460-0754		
	Dave Einhorn (301) 593-8420		
	Leon Raesly (301) 460-0754		
	Bob Schmidt (301) 736-4698		
	Normand Bernache (301) 935-5617		
	Leon Raesly (301) 460-0754		
	Jon Vaupel (301) 977-3054		
	Bill Etue (703) 620-2103		
	Ginny Spevak (202) 362-3887		
	JJ. Finkelstein (301) 652-9375		
	Leon Raesly (301) 460-0754		

* Calls up until midnight are ok.

WASHINGTON APPLE PI BULLETIN BOARD SYSTEMS

Bulletin Board Operator	Leon H. Raesly, L.C.S.W.
SYSOP Emeritus	Tom Warrick
Special Consultant	Barry Fox
Hard Disk Consultant	Dave Harvey
Programming Consultant	Rich Mlodoch
Library files Programmer	Mike Ungerman
BBS Files List SYSOP	Jack Mortimer
Group Purchase Files SYSOP...	Rich Wasserstrom
Indexing Committee - Chairman.	Emil Levine
Member	Bonnie Walker
Member	Jeff Berger

SYSTEM 1 (986-8085) SYSOP.. Joe Chelena
 Hardware, Software, General &
 Lafayette Park Boards SYSOP. Joe Chelena
 CP/M Board Board SYSOP Joe England
 dBASE II Board SYSOP Nick Veloz
 Apple /// Board SYSOP Carl Bowman
 Comments/Sugs. Board SYSOP. Lee Raesly

SYSTEM 2 (986-8086) SYSOP.. Larry Half
 MAC Hardware, Software, &
 Gossip/Misc. Boards SYSOP.. Larry Half
 Telecommunications &
 Telecom SIG Board SYSOP ... George Kinal
 Games/GameSIG Board SYSOP. Ron Wartow
 BASIC Prog. Board SYSOP..... Mike Ungerman
 AppleWorks Board SYSOP Ken De Vito
 Comments/Sugs. Board SYSOP. Lee Raesly

SYSTEM 3 (986-4715) SYSOP.. Mike Ungerman
 Passwords Board SYSOP Mike Ungerman

SYSTEM 4 (871-7978) SYSOP.. Lee Raesly
 The Classified SYSTEM - Hardware, Software,
 Misc. & Employment & Pi Officers/Volun. Boards

SYSTEM 5 (890-8984) SYSOP.. Alice Allen
 The Journal & Indexes SYSTEM

SYSTEM 6 (703-450-6822) SYSOP
 John A. Gersic
 (The Manassas/Great Falls Slice SYSTEM)
 Hardware Board SYSOP Bruce Johnson
 Sftwr., Misc., Gossip SYSOP.. John A. Gersic

BBS Committee - Charirman Lee Raesly
 Members - Joe Chelena, Mike Ungerman, Barry Fox,
 Dave Harvey, Larry Half, Marty Milrod, Emil Levine,
 Dave Helfrick, Joan Dunham, Tom Warrick
 & YOU, if you attend!

COMMERCIAL CLASSIFIEDS

FOR SALE: Apple][+, monitor 1 disk drive with software: VisiCalc, utilities, Finance Manager, memory expansion 128K, 80-column Videoterm, Apple Writer II, 150 games. Keyboard not working well. Call Judy Gunther 281-3427 at home during day or Mr. Gunther, work, 951-2381.

FOR SALE: WordStar Professional + 6MHz PCPI Appli-Card CP/M Board - Liquidation, \$179.95! WordStar Professional includes: WordStar 3.30, MailMerge, SpellStar and StarIndex. Appli-card has version 2.2 CP/M, runs at 6 MHz (roughly 5 times faster than Apple), has 64K RAM on board and can be used as a RAM disk under Apple DOS. The card allows you to display 70 columns and both upper and lower case without an 80-column card; the shift key modification is included. The card allows file transfer between Apple DOS and CP/M, and runs on Apple][,][+ and //e. Normal list price is \$1022, you save over \$840. Call BCE Liquidators (202) 944-3900.

CLASSIFIEDS

WANTED: An Apple][+, //e or //c computer with color monitor. If anyone would like to donate to a church, it can be a tax write off. We want to begin a program with children. Call Glenn Young at Fairhaven United Methodist Church, 12801 Darnestown Rd, Gaithersburg, MD 20878. (301) 926-4167.

WANTED: Documentation in any shape or form on DMV-1 Amdek RGB monitor. Call Charles 320-5171.

FOR SALE: Software for the Mac - Multiplan or Chart, \$70 each, both \$130; Omnis 2, \$125; Haba Window Dialer, \$30. Software for the Apple - S-C Macro Assembler, \$20; The Writer, \$20, Creative Writer, Filer & Calc, \$35; The Book of Adventure Games, \$15. Call David, (301) 972-4263.

FOR SALE: Apple //e, 64K, one disk drive, monitor, Imagewriter, Apple Super Serial Card, Hayes 300 baud Micro-modem, 80-column text card. Also included are Apple Writer, AppleWorks, VisiCalc, PFS File, PFS Graph, and much more software. Computer and peripherals in excellent condition. \$1500 complete. Call Roger after 7 PM weekdays at (301) 774-2753.

FOR SALE: IBM PC with 256 RAM and 10 Meg hard disk. Graphics board and color monitor, \$3200. dBase III, \$295. Call David (301) 972-4263.

FOR SALE: Microsoft Softcard II 6-MHz w/64K (new), \$225; Microtek Q-disk 128K RAM disk for DOS or ProDOS with CP/M & Pascal software, \$165; Videx Function Strip (new), \$15; Videx Videoterm 80-col board w/softswitch and inverse char. chip, \$125; Titan Neptune 80-col card w/192K of 150ns chips includes Pseudo-disk software for DOS, Pascal, and CP/M, \$185; Microsoft Multiplan (CP/M ver.), \$30; Artsci MagiCalc program (new), \$35; Nibbles Away II ver. C, \$25; Apple Integer Card, \$45; Apple //e 80-column card, \$20; Apple disk controller card, \$45; The General Manager database management system, \$85. Call Tom evenings only 935-5520.

FOR SALE: Complete MacLion software and documentation. Registration transferable. \$135 or best offer. Call Al Best (804) 786-9600 days.

FOR SALE: Three printers, one each: Gemini 10X, \$199; ProWriter, \$249; NEC 8023A, \$249. First purchaser can have Tymac interface (\$139) free. Call Jim in Columbia (301) 995-1166.

FOR SALE: 128K card (Legend Ind.) expandable to 1MB for //e, 128K card (Legend Ind.) for][+, 80-column card for //e, Word Juggler for //e or //c, PFS File, and PFS Report. Call (703) 998-8137 after 5 PM or (202) 692-7067 or 7068 between 7:30 AM and 4:30 PM. Ask for Bob.

FOR SALE: New unopened for Apple: WordStar Professional (WordStar, MailMerge, Spellstar, Index, etc.), DataStar, CalcStar, ReportStar, CP/M System and new CP/M card for Apple plus CP/M primer etc. WordStar Professional alone, \$150; total package, \$250. Retail value, \$595. Call Jules Lindau, days (301) 253-4515 or 774-4550.

FOR SALE: Apple][+, 80-column, upper/lower case, Epson printer & printer card, monitor, 2 disk drives, italics function, with VisiCalc, PFS and assorted other programs. \$800 or best offer. Call Peg or Hank at 596-5713 (W) or 997-8045 (B).

EDSIG NEWS

by Peter Combes

EDSIG Calendar

Thursday, October 24 at 7.30 p.m.

"Creative Writing with the Apple" - Jane Thomas

Wednesday, November 20 at 7.30 p.m.

"New Educational Programs for the Apple and the Mac"

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

Meeting Report

Thursday, September 26 at 7.30 p.m.

"Education and the Mac"

Perhaps, like me, you thought that little software had yet appeared for the MacIntosh, and that very little of what had appeared was educational. On behalf of EDSIG, Dr. Pat Kirby recently conducted an extensive survey of educational Mac software, and on Thursday, she deposited an impressive pile of 70 pieces of Mac educational software in front of the meeting.

Typing Intrigue by Forethought is a typing drill program, with the oddity that good typing is rewarded by winning clues in a detective game.

The visually oriented **Mac** is a gift for visually oriented subjects, and many of the available programs use the Mac for teaching Geography. **MacAtlas** by Micro Maps is a collection of geographic templates for **MacPaint**. Many kinds of maps of different countries and continents are provided.

Looking at things on a rather larger scale, **Learn about the Solar System and Halley's Comet** by Millet Software shows various aspects of the Sun and the planets. It is well packaged and has good graphics of star charts, together with animation of the comet's movements. It might well interest some children in Astronomy for the first time, linking neatly with current interest in the comet. Apple // users look forward to comparing it with **The Observatory** by Light-speed, which appears to offer much the same material.

Another program that exploits the graphics abilities of the Mac is **MacEdge** by Think Educational Software, a collection of programs for developing math and reading skills. It is in attractive format, but it got a mixed reception, as at least one educator was unhappy about its instructional design. "It appears to be written by 18 year olds for 18 year olds - which is a pity, because it is so close to being good." The help screens were very difficult, and the rewards were non-commensurate. The authors were recommended to look at **Herkle** by MECC. Dissenting voices pointed out that the parent or the teacher can set the level of the program to fit the needs of the pupil.

Queue supplied large package of material that appeared to have been ported over to the Mac with minimal modification, although the subject list was impressive. Pat is still trying to get a review copy of their "Baby sitter's manual" that purports to train babysitters in the basics of child care.

Jessica Weissman showed **Chipwits** and **ThinkFast**, both by Brain Power. **Chipwits**, which was also shown by Ron Wartow at the GameSig main meeting in August, enables pupils to "program" screen robots which then move around according to the program which they have been set up. Unlike **Logo**, which moves its turtle according to word based procedures, the **Chipwits** program is written as a flowchart in entirely visual terms. **ThinkFast** improves skills of coordination. However, in Jessica's view it does not test what it is supposed to test.

Millionaire, **Baron**, **Squire**, **Tycoon**, all by Blue Chip, have won awards as exciting and innovative programs. They provide high school and college users with simulations of making financial investments. The publishers now provide teachers with periodicals with data that can be linked to the games.

Microtest, by Chariot, is a grade book application. It also prints out statistics of pupils' scores and allows the teacher to generate many kinds of test, and to randomize from a pool of stored questions.

Filevision, by Telos, is inspiring people to make specialised templates for it, and many of these templates have been educational. A full review of **Filevision** will appear in an upcoming issue of the Journal.

Light Source, by Computer Learning Systems, is an authoring language, said to be very easy for teachers to use. It allows you to store and use parts of tests, flag particular pupil responses, make parts of the screen active for mouse interaction, use graphics and text.

Talk Show, by Rune, allows you to make a visual show using graphics and sound. It draws on **Smoothtalk** -- a sound building program.

We saw a demo of the digitizer **MAGIC**, by New Image. Like **Filevision**, it probably has wide educational applications waiting to be developed. Jessica is using it with a "Cameras in the Classroom" project. It provides a very fast way of getting children's pictures onto hard copy, and is a real aid to the teacher who wishes to include pictures in tests or notes.

Think Tank, by Living Videotext, is an outlining tool, not originally designed for education, but useful for writing syllabuses or for journalism exercises.

MusicWorks by Hayden will be demonstrated at the main meeting in November.

Full reviews of all of these programs are being prepared and will appear in future issues of the journal.

Pat also gave the following sources for information about the educational use of the Mac:

Literature

A GUIDE TO MACINTOSH SOFTWARE. From .MENU -- The International Software Database. 800- MAC-MENU. Good section on educational software included in more general catalog; is broken down according to subject area. No reviews.

contd.

APPLE EDUCATION NEWS (An Information Service for Educators and Trainers). 20525 Mariani Avenue, M/S 23DE, Cupertino, Cal, 95014. Sue Talley, Editor. As of this date, geared to other Apple computers. There may be a scholarly journal devoted just to Macintosh soon -- editor would be Dr. Alan Brightman.

EDUCATIONAL RESOURCES FOR MICROCOMPUTERS (A Product of the Microsearch Database). Washington, DC: Information, Inc. (1725 K Street, NW - 873-1174). On-line as well as hard copy available. Gives summary of product reviews. Constantly updated. Copy now in Pi Library. At present, not complete in Macintosh offerings, but no doubt soon will be.

MACINTOSH BUYER'S GUIDE. Vero Beach, Fla.: Redgate Publishing Company. Quarterly. Not education-oriented -- includes section on educational software under "Personal and Home Software."

MACAZINE (Especially Vol.2, No. 9 -- September, 1985). Issues generally do include articles and reviews on education, especially about Apple University Consortium. ("Macademia" features). September issue totally devoted to subject of education on the Macintosh -- may be the only such example of a special issue of a computer magazine.

MAC USER. (New journal as of Fall, '85) Nothing directly on education, but educational programs are reviewed under other headings such as entertainment.

OTHER USERS' GROUP JOURNALS. There are many other users' groups around the country, a number of which have reviewed educational software, notably San Diego, Minneapolis, Honolulu, New York. (In Pi Library)

Other

APPLE UNIVERSITY CONSORTIUM publication WHEELS FOR THE MIND. Boston College, Fulton 430, Chestnut Hill, Mass. 02167. Peter Olivieri, Editor.

(Under AUC) DARTMOUTH COLLEGE. (Totally Macintoshized!) For price information, etc.: Kiewit Computation Center, Hanover, N.H. 03755 (603) 646-2643. For other information: Don Spicer, Director of Academic Computing (603) 646-3241.

(Under AUC) REED COLLEGE, THE MAC LAB. Portland, Ore. 97202. For technical information: (503) 771-1112, x277, Scott Gillespie, Richard Crandall. For price information, data sheets, general questions: (503) 232-1712.

TRABUCO HIGH SCHOOL (one of 11 model high schools using Macintosh). 27501 Cordova Road, Mission Viejo, Cal. 9269. Bob Urell, Project Coordinator. (714) 768-1934. This is the model school of the group.

SOFTWARE FOR KIDS. 279-2975 (Based in Rockville, Md.) A service company. Arla Bowers and husband specialize in advising about youngsters' software (Macintosh and other). Concentrate on home market; review software and select what they consider best for different ages, subject areas, and purposes. Will bring computer and do 1 1/2 hour show in the home, allowing guests to try software out. No charge to host. Software sales are at discount. If not only such service in the country, one of a very few. ©

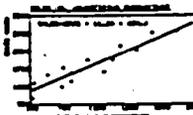
RECORD MASTER

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"Competes with DBASE II". WAP 1/85

"A very powerful program ...quite easy to use." Barons
Microcomputing Reports 12/84

RECORD MASTER has multi-level sorts and searches, global change, arithmetic capability including computed fields, file restructure, mailing labels and probably the most flexible report generator available. New features include MACRO ENTRY (e.g., type <,F> to enter First American Bank), ARITHMETIC GLOBAL CHANGE (reduce price of all disk items by 10%), and AUTOMATIC PRINT BREAK with subtotals and grand total (print and subtotal records by customer name). Use Record Master for bills, church/club records, client and employee data, collections, inventory, investments, sales, student records, or any other data which need order and control. NOW A NEW FAMILY MEMBER!



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Both programs are unprotected, completely documented, menu driven and easy to use. For Apple II+/e/c, one or two drives. Graph Master requires 64K. Write for info or order directly:

RECORD MASTER - \$59.95 plus \$1.50 shipping

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or save 15%

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TAKING APART THE APPLE /// DEMO

PROGRAM: Or Two Useful Programs for You

by David Ottalini

At the start, let me admit to all my Apple /// friends and users that I am not a programming whiz. Nor do I have that analytical ability to look at a problem in such a way that it can be boiled down to a 1000 line Business Basic program and work the first time (or even the second!).

What I do enjoy doing from time to time is fiddling. Fiddling with programs that are already out there to see if I can't adapt them to be more useful for my own specific purposes. Frankly, I find it to be kind of fun, although the frustration factor can be very high at times (there's always that single little bug that causes everything to hang like a wet noodle...).

One program I've found to be particularly interesting is the Apple /// System Demonstration program. If you haven't run it lately, you might want to fire it up to refresh your memory a bit. It's a great little program designed to show off some of the things the /// can do. When booted, you are presented with a "marquis border" (in color if you have a color monitor) within which is scrolling a choice of five different demonstrations. Among them is a program allowing you to reset the date and time, a graphics demonstration, and a demonstration of the type-ahead buffer.

After you have chosen one of the programs, it will run and then allow you to return to the main menu to try something else. My demo disk, by the way, was for the Apple ///+ and is listed as being version 2.2. I can't tell you what earlier versions looked like, but I suspect there is little difference. If you load the program into Business Basic and then list it, you will find a fairly compact program that provides decent documentation through the "REM" statements. The program is basically broken down into a number of easily identifiable sections (which is what made it easy for me to tear it apart).

Basically, the screen is set up, data for the demos is read in and then the "marquis border" is printed one space at a time. The program uses the 40-column, 16-color mode. The scroll subroutine is next followed by the subroutine that allows you to choose the demonstration you would like to see. At that point, the program is instructed to run the particular demonstration you have chosen (the demos themselves are separate programs on the disk). Once the demonstration is run, you are given a choice of returning to the main menu or quitting.

There are two pieces within this program that intrigued me enough to do a little fiddling. I will now pass them along to you. The first is the "marquis border" program. The second is the scroll program. Each can be included as subroutines in other programs, perhaps as part of a "Hello" program, message board or other use.

In any case, let's take a look at the "marquis border" program:

```
10 TEXT
15 LEFT=8:RIGHT=9:DOWN=10:UP=11
20 COLOR$$=CHR$(19)+CHR$(15)+CHR$(20)
    +CHR$(1)
```

```
30 PRINT CHR$(16);"1";:REM SET 40-COLUMN,
    16-COLOR MODE
35 PRINT CHR$(1);:REM SET VIEWPORT
40 PRINT COLOR$$
45 HOME:VPOS=2:HPOS=2
50 PRINT CHR$(21);CHR$(0);:COLOR=5:
    REM ALL AUTO TEXT OPS OFF
55 FOR X=2 TO 38:GOSUB 200:
    PRINT CHR$(RIGHT);:NEXT
60 FOR Y=2 TO 22:GOSUB 200:
    PRINT CHR$(DOWN);:NEXT
65 FOR X=39 TO 3 STEP-1:GOSUB 200:
    PRINT CHR$(LEFT);:NEXT
70 FOR Y=23 TO 3 STEP-1:GOSUB 200:
    PRINT CHR$(UP);:NEXT
73 PRINT CHR$(21);CHR$(13);:
    REM STANDARD TEXT OPTIONS ON
75 PRINT COLOR$$;:WINDOW 4,4 TO 38,22
80 HOME:PRINT"THIS IS A GREAT
    APPLE /// BORDER"
85 GOTO 220
200 COLOR=COLOR+1:
    PRINT CHR$(20);CHR$(COLOR);" ";
210 RETURN
220 END
```

The subroutine at line 200 is what is actually used to print each colored square, beginning at screen location 2,2 and then moving right, down, left and up. The actual window within the border is set at line 75 and the heading is read in at line 80. The program sets the 40-column, 16-color mode at line 30 while the screen is initialized at line 20. Since I only have a Monitor ///, I cannot attest to what the border actually looks like in color. But I suspect it is "mahvalous."

The second program taken from the demonstration is a simple scroller which I have adapted to let you insert any message you might want and have it move from bottom to top within an inversed window on the screen. Let's take a look:

```
5 HOME
6 INVERSE
10 DATA THIS PROGRAM SCROLLS
20 DATA FOR YOU AND CAN BE USED
30 DATA IN MANY APPLICATIONS. TRY IT!
35 DATA THIS IS ADAPTED FROM THE
37 DATA APPLE /// DEMO DISK.
39 DATA USE "RENUMBER" TO PLUG IT IN.
40 DATA <<END>>
42 NUMDEMOS=5:K1=2:K2=NUMDEMOS-K1
50 WINDOW 20,5 TO 60,18
55 SEEK=0
60 PRINT CHR$(9)
```

contd. on pg 15

Operant Systems

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Q & A

by Bruce F. Field



I have had a number of questions over the past months about how to use Apple's Mousepaint program with printers other than the Imagewriter. My solution which is not very satisfactory is to save the graphic picture to disk, exit Mousepaint, load the picture back in using a BLOAD command and use a screen dump command to print it. Bob Gardner of E-Tech Services (P.O. Box 2061, Everett, WA 98203, phone (206) 337-2370) sent me a neat little program that he sells for the incredible price of \$7.95, that modifies your copy of Mousepaint to work with Epson printers. Several options are available, single size, double size, normal and inverse print. Once the new driver has been installed on your Mousepaint disk you select "Print Picture" from the Mousepaint menu to print it to the printer. I had a friend look it over and he reported that the program is easy to install, it takes about 5 minutes and is all menu driven. He used it with a Grappler + interface and an Epson RX-80 and it worked fine. He also tried it with an Pkaso interface and found it didn't work. Bob is looking into this problem.

Last month I had a question about modifying a Master Catalog program for use with an Imagewriter printer rather than an Epson printer; some of the control codes had to be changed. Joan Dunham wrote to say she has already done all the work and it is available on Washington Apple Pi disk 154. She said she did have a problem with control characters imbedded in program names sending her printer berserk, so this version replaces them with a blank space. Thanks Joan.

Ray Merlin dropped me a note about problems he had with a Hayes Micromodem II and a Grappler + interface card. "I recently bought an enhanced //e and transferred my cards over from my][+. I then tried a new terminal program with it and spent a week in various stages of frustration trying to get the printer to work. Just before throwing the whole thing out the window, I decided to try other interface cards on the selection menu. Lo and behold, I discovered that the menu had two Grappler selections, one "Grappler" and one "Grappler +". I made the proper selection, and instant success. When scrolling down a menu that comes up from the bottom, the Grappler appears first, and it is easy to stop and overlook the fact that Grappler + is yet to appear. I'm not saying that this is the problem that others are having, but it's worth mentioning."

Q. I have a problem with THE Spreadsheet. In a monthly sales model, I want to input the monthly sales figures for various products, but also, automatically keep a year-to-date total. If under column 'A' I input new figures, and under column 'B' the YTD totals are kept, the formulas +A+B or even @SUM(...) do not work, since they recalculate several times. What am I doing wrong?

A. As I understand your problem you are trying to sum columns A and B and store the result back in column B. As you have said, this will not work because THE Spreadsheet will continuously recalculate. Instead you will have to store the results in column 'C'. Thus your column 'B' will be one month old and column 'C' will contain the latest results. After adding the new figures, save column 'C' to disk as a DIF file (use the Save menu) and then before changing the data for the next month load the DIF file back into column 'B'. The DIF file only transfers values not formulas so no recalculation will take place.

Q. Also on THE Spreadsheet, if I want to copy a cell under the condition that a certain cell is not '0' I can use @IF(<>0,....), which works with values only, but not with labels. How can I copy a word (or name) if the condition applies, or am I

asking for the impossible?

A. As you note, the IF command only works with values, not labels. I don't know of anyway around this. Perhaps an enterprising reader has a work-around solution.

Q. How do you get by the statue in Pixel's Revenge?

A. I've had a lot of trouble with this one, so I asked Ron Wartow, our authority on gaming, for a little help. His response was "eat the swordfish then hold the bones over your head and say the word "crackerjack". I haven't tried this but when it comes to swordfish, Ron knows his onions.

Q. How about a brief tutorial on the relationship between memory capabilities and the Apple's central processing unit? It's my understanding that the 6502/65C02 processor is limited to 64K in terms of random access memory that it can directly address. Yet, Apple developed a system called "bank switching" that provided an extra 64K. Why are 8-bit processors limited to 64K or direct-address-memory, and how does the bank switching get around this limitation?

A. At the risk of being slightly incorrect technically (there are always exceptions), let me see if I can explain how it works. The processor in the Apple II (6502 or 65C02) has 16 pins used for addressing memory and input/output devices. If you consider that each pin may be "on" or "off" (high voltage or low voltage) there are 65536 possible combinations possible. A "K" is defined as 1024 things, so 65536 is 64K things. The memory in the Apple is arranged so that it can be accessed by bytes, thus we can choose one of 64K bytes of memory using our 16 pins. Now visualize two boxes connected together by 16 wires. The box on the left is the 6502 and the box on the right is memory. Suppose we did a sneaky thing and replaced the box on the right with another box containing different memory. The processor could now use this new memory but not the old. Remember I said before that the 16 pins are used for addressing input/output devices as well as memory. One of these "devices" is a switch. Reading or writing to a particular memory address causes the switch to change position and the switch controls which box (or "bank") of memory is connected to the processor. So, although we have 128K of memory only 64K can be used at any one time. However it only takes a few microseconds to change the switch from one setting to another.

You can see then that it is possible to have many banks of memory around and switch in whichever one is needed. The problem is just a little more complicated though. If you are running a program that is in one bank and you switch to another bank that doesn't contain a copy of the program, the processor thinks the program just disappeared and will probably go into never-never land. To prevent this the designers set up the controls to switch only pieces of the memory at one time rather than the whole thing. This is one problem with plug-in memory cards for the Apple, except the 64K cards for the //e. The memory cards contain the circuitry to do the bank switching and not all manufacturers do it the same way. The circuitry for the //e 64K card is on the Apple motherboard so those cards are compatible with one another.

There is no inherent reason why 8-bit processors like the 6502 etc. can address only 64K except that when these processors were designed the designers thought 64K was more than enough memory for anybody. Newer 16-bit chips can address up to 16 megabytes, and someone ten years from now will probably wonder why they don't address more.

contd.

Q. In Integer Basic you could put a line in a program which modified a line in the same program when it was run. Along the lines of PRINT "10110 M\$=A\$". Is there a way to do this in Applesoft?

A. One quick way to change a program on the fly would be to do :

```
PRINT CHR$(4)"EXEC MODIFIER"
```

where the text file MODIFIER contains Applesoft instructions with line numbers. There are a couple problems with this method, after the new lines are EXECed into the program Applesoft returns to the command mode, i.e. the program stops running. One way around this is to make the last line in the text file "RUN" or "RUN linenumber". The second problem is that all your previously defined variables are set back to zero.

If you only need a few lines changed and can enter them from the keyboard, Cornelis Bongers had an article in the September 1982 issue of Call -A.P.P.L.E. with code that allows you to input executable Applesoft lines as string input at run time.

Q. I am writing a testing program for my students using Applesoft and need a way to protect it from being listed. Is there a way to do this?

A. There are a couple levels of protection you can provide and since they would prevent most people from ever "getting at" the program they ought to hold back teenagers for at least 15 minutes. Memory location 214 is a parameter that can make Applesoft treat all commands typed from the keyboard as RUN commands. If you try to LIST the program, it runs instead. To use this make the program you want to protect your HELLO (or greeting) program and put the statement POKE 214,128 at the beginning. Whenever the disk is booted the program will be run and then no Applesoft commands can be executed. The problem with this is that if you boot the computer with another disk you can then load and list the "protected" program if you are careful not to run it first.

To add another level of protection you can move the disk directory from its normal location on a DOS 3.3 diskette to another track. This is a somewhat more complicated procedure and requires the use of a Disk Zap program that can read and write individual sectors to the disk. One location inside DOS, \$AC01, controls which track contains the directory on the disk. You need to change this location from its normal value of 17 (\$11) to a different value say 16 (\$10) and then initialize a new diskette with the modified DOS. Now you must modify track 16, sector 0 on this new diskette; the second byte should be changed from \$11 to a new value of \$10. You must also set the track bit map to indicate that track 16 is used. Change bytes \$78 and \$79 of the same sector from \$FF to 0. Now save the revised sector back to disk. To copy a program to the new diskette set \$AC01 back to \$11 (POKE 44033,17), load the program from a standard diskette, change \$AC01 to \$10 (POKE 44033,16) and save it to the new diskette. You will be able to boot this new disk and load and run your programs, but you will not be able to copy them individually to another disk unless you know "THE SECRET". Combined with the location 214 technique above this provides a moderate amount of protection against listing the programs but still allows the disk to be copied using the standard Apple COPYA program. ☺

The Musical Apple

by Raymond Hobbs

This month's Musical Apple column will be short and (?) sweet--it consists of one announcement and one request.

First the announcement: For you music aficionados, the November 23rd WAP meeting (see calendar of events) will be an all-music program! We will be attempting an audio-visual presentation of some of the topics that have been addressed in this column, and we will also demonstrate some of the hardware and software used for music synthesis on both the Apple and the Macintosh.

Now for the request: We can present a broader range of products for both Apple and Macintosh if I can get a few volunteers (a favorite WAP word) to help with the presentation. Specifically, we have covered the Alpha Syntauri, the Applied Engineering Music System and the Concertware package for Macintosh. WE HAVE NOT covered the Soundchaser or Alf synthesizers, or Musicworks for the Macintosh (and perhaps some others that I do not know about). If you are interested in helping to make a complete demonstration, please contact me at (301) 490-7484 evenings, preferably before the 10th of November. ☺

Apple /// Demo Program contd. from pg 12

```
80 RESTORE:DEMO=1
90 READ A$:IF A$="<<END>>" THEN
  ROUNDS=ROUNDS+1:GOTO 80
95 IF ROUNDS>=5 THEN SEEK=1
100 PRINT DEMO" . ";A$
110 IF SEEK=1 THEN GOTO 300
120 IF SEEK=0 THEN FOR TIME=1 TO 300:
  NEXT TIME
130 PRINT
140 IF SEEK=0 THEN FOR TIME=1 TO 300:
  NEXT TIME
150 PRINT
160 DEMO=DEMO+1
170 GOTO 90
300 PRINT:PRINT:PRINT" **** STANDBY: HERE'S
  THE PROMPT!
305 FOR X=1 TO 1000:NEXT X
310 TEXT:NORMAL:HOME:END
```

The size of the window in this program is set at line 50. The program will scroll five times (it counts <<END>> five times to do that) and then prints the message located at line 300. The message is held with a simple count-down subroutine at line 305 before returning you to Business Basic (I added that part). You can set the speed of the scroll at lines 120 and 140. The original program set time = 1 to 460, which was a little slow for this demonstration.

I think the best part of "fiddling" is that you can learn a bit about how a program is put together. That helps me understand Business Basic a little better. And sometimes the end result is something that is even useful!

If you don't want to spend time typing these in, both programs are available in the /// SIG Disketeria. ☺

TELECOM SIG NEWS

by Dave Harvey

The Telecom SIG met after the WAP meeting on September 28 and was conducted by George Kinal. There were about 8 members present. One reason for the low turnout was that the WAP main meeting was held at the Masur Auditorium at NIH.

The meeting started with one participant asking why his modem is sometimes found to be half off. In this particular application the modem was being used with a Bulletin Board System. Power surges could cause this if the power goes off for a few seconds and then comes back on. Another possible reason might be that someone tried to call the system just when the modem was changing from one mode to another. George Kinal suggested that for a Bulletin Board System a dumb modem should be used that has autoanswer and nothing else. No dial out features, etc.

We then discussed the upcoming program for the WAP main meeting in October. The program will be on Telecommunications and will involve a number of people. The main theme of the program will be applications and how people use the telecommunications capability of their Apples. The meeting will be at Northwood High School and a telephone line may be installed in the auditorium so that external communications would be possible during the program. We intend to have both Apple // and Macintosh computers

available during the presentation and applications will be shown on both types. There will hopefully be three different types of video projectors available to use during the presentation. Because the setup with the video will be so involved, Mike Ungerman and others will be meeting the day before to hookup all the computers and the video equipment. It promises to be a very interesting program.

George next reminded everyone that elections for officers for the Telecom SIG will be held at the next SIG meeting in October. He urged everyone to volunteer to run for one of the offices, and said that at this election there will be an additional officer, Vice President, whose duties will be to take over the running of the meeting in case the President is absent. It is important to have new people on the election slate so fresh ideas for running the Telecom SIG can be realized.

We then discussed the need to attend the October 1 BBS committee meeting, which will cover important issues about policy and manner of running the BBS systems. Another BBS related item discussed was that the library connected with Telecommunications should be built up to include information on how to set up Macros for use with ASCII Express Professional. This is a much needed help file that is asked for again and again. ☺

THE SUNOL HARD DISK STORY: WAP BBS - The Adventure Continues

by Nancy Harvey, Observer

Several weeks passed between the arrival of the SUNOL disk at WAP and its use for the Bulletin Board System. Did you wonder why it took so long? The answer in a word is "DOCUMENTATION" ... it's lack and inaccuracy. The good news is that once the disk and its multiplexer work, they work very well. Before they work, however, there are a few things you will need to know that the documentation won't tell you.

1. Don't judge a book by its cover. The SUNOL manual's cover says it is for DOS 3.3. Too modest. Inside pages admit instructions for ProDOS are included.

2. Don't turn Apple on before disk drive is completely settled. This means the whirring noise of the disk has stopped and the status lights on the drive register 00. If Apple is turned on too soon status errors and timeouts occur.

3. Don't believe everything you read. Passwords must be assigned to each partition you establish. SUNOL is only kidding when they tell you they are optional. If a password is not assigned in response to the password prompt, the menu driven installation procedure stops.

4. Not everything you need to know is in the manual. When the password is entered for the first time during disk installation, the SUNOL will respond with a cheery "unable to load ProDOS". The correct answer to is to press RESET. Once RESET is pressed the] prompt appears. Entering a PR#6 followed by a carriage return will result in the booting of ProDOS.

5. Do believe WAP members are an invaluable resource - Mike Hartman, for example, whose earlier experiences with SUNOL disk installation helped unlock the mystery for the BBS committee.

Editorial comment by the author: There are many theories to explain why documentation continues to be such a problem. The explanation is simple. Documentation is written by the same people who write adventure games. The objective of the user (player) is to guess the clues, solve the puzzles, outwit the designer, and win through to success despite misdirection, omissions and outright error. Just a ton of fun - but the graphics could be better. ☺

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UBBS HELP

by Joe Chelena

MAIN MENU COMMANDS

** BULLETIN BOARD ACCESS:** This command allows you to enter the message base of the BBS. [Please refer to BBS commands for a full description of your options once there.]

<C> COMMENTS TO THE SYSTEM OPERATOR: This command allows you to send a message to the System Operator that is displayed to the SYSOP only, and which resides in a special file - not on the message base board.

<L> SYSTEM LIBRARY: This command will access the system Library. [Refer to Library commands for an explanation of Library commands]

<M> MEMBER LIST: This command will display all the names and cities of users on the system. Due to the file structure used, the names are NOT in alphabetical order. If you use this command, and follow it with the name of a particular user you are trying to find, to see if he uses the board, only that name will be searched for. In using a specific search, however, you must enter the name of the person you are looking for EXACTLY as he typed it in when he logged on. Looking for Tom Jones will come up with no entry, if Tom Jones logged on as Thomas Jones.

<O> OFF - QUIT THE SYSTEM: As elsewhere, O will allow you to exit the BBS and log off.

<P> PASSWORD INFORMATION/REQUEST: This command may be activated in the future.

Passwords are now assigned in one of two ways.

1) If you do not have a password from the old WAP Bulletin Board, you must call the office and request one.

2) If you have a password from the old bulletin board, and have not applied for a new number, call via modem 986-4715 for instructions on how to obtain a password and number.

Please Note: WAP requires that you use your legitimate names (no aliases) and real phone numbers for logging on, or may require additional information than that requested in the password generator. If this is the case, make sure you supply the requisite information to the Sysop in order that he has all the information needed to validate you.

Note #2: If you have requested a password, and have been assigned a LOGON ID, but it does not work when you next log on, it means that your LOGON ID has been removed by the sysop for failing to abide by the rules of the system, or for failing to provide him with the information he requested from you.

Note #3: The UBBS system marks messages, To and From, under the name supplied when you first applied for a password. You are allowed to use a nickname if you are known by it. Example: Joe for Joseph, or Bobbie for Roberta.

<T> TIME DISPLAY: This is a time toggle - and operates only on those systems on which a supported clock card has been installed. It will display the date and time, the time you have spent on the system, and the amount of time remaining for the current call.

<U> USER PROFILE: This command allows you to

set defaults for the following:

- A) Alter your password
- C) Upper/Lower Case Toggle
- L) Linefeeds you need
- N) Nulls you may need
- P) Prompt character of your choice
- V) Video width (number of columns)
- S) Screen clear character(s)
- X) Expert User mode
- Y) Display Your Status on the system

Alter password allows you to change your 5 character password at any time, but not your record number.

Prompt character is used to set the character (of your choice)...when you first log on, there is no prompting character.

Expert User mode does away with the line of command prompts.

Display Your Status allows you to see what access you have, how long you can be on the system, number of calls permitted per day, etc.

All the other commands are self-explanatory, and all selections are fully explained and prompted.

<!> SEARCH FOR MESSAGES TO YOU: By means of this command, you can quickly be informed of what messages have been left marked for you on which board.

<*> PAGE THE SYSOP: As elsewhere, this command alerts the System Operator that you wish to "chat." The "chat" flag is valid through your entire call, and you should use it only once during any call.

BULLETIN BOARD COMMANDS

The following commands are available when you are on one of the message bases (boards).

When you enter the message base with the command, the boards that are available will be displayed. Subboards which have messages posted since the last time you called will be preceded by a "*" to alert you that new messages have been posted.

You also have 4 global options:

<O> Logoff - This will log you off the system immediately

<R> Read All - This will allow you to read all the new messages of the Subboard

<S> Search - Will search all the subboards for messages to you

<Q> Quit - Returns you to the main menu.

As soon as you log on to a specific message base, you will also be told the beginning and ending number of the entire message base, and the number of the last message you read, e.g.

Messages 55 to 157 are available

You last read Message #145

If you have used the "R" command for Read All you will be asked at the end of each subboards message base if you want to add a message. The replies are:

contd.

- <Y> Yes
- <N> No
- <X> The "X" cancels the Read All command and returns you to the prompt.

BBS Commands.....

<A> ALTER/EDIT OLD MESSAGE: By use of this command a user may read back into memory any message that HE has written and edit it. After entering new header information, or using a carriage return to keep the old header, you will see "Edit Message:" If you wish to change the body of your message, reply "yes", and your old message will be loaded into memory, and you will be taken to the Editor, from which all the editing commands are available for you to make changes. If you change your mind, and decide not to change the message, type "no" and the message alteration will be aborted.

<E> ENTER A MESSAGE: By means of this command, you may enter a message. [After entering your message, and saving it, you will be prompted for password protection for your message. If you enter a carriage return at this prompt, the message will be public, readable by everyone. If you enter a 5 character (or less) password only the person to whom the message is addressed or anyone who knows the password will be able to read it. This can be useful for leaving messages to a number of people who you have given the predetermined password to...You would also title your message not to a certain person, but to a predetermined group name such as the "Dr. Who Club" or whatever you decide upon.

If you wish the message to be private, and readable ONLY by the person you address it to, you enter the letters PRIV, and your message will be unreadable by anyone except the recipient.]

...The only exception to this rule is that the Sysop, and any user with Sysop privilege will be able to read ALL messages on the message base... This is standard practice on BBS's. Sysops have FULL access. If you have something to say that is truly private, a BBS is not the place to say it.

[After you enter your message, you will be placed in the Editor mode for saving the message, or making any changes. See Editor commands for details.]

<F> FIND MESSAGE BY KEYWORD: By means of this command, you can search for a message by Title (Subject), the sender's name (From) or the recipients name (To). If no match is found, you are returned to the BBS prompt.

<L> LIBRARY FOR (BOARD NAME): Each board on UBBS systems has its own Library, which can be accessed with this command. [Refer to Library Commands help file for full details.]

<M> MARK MESSAGES FOR YOU: By means of this command, you can mark for later retrieval with the <R>ead and <M>arked commands, all messages to you. This command will remark all messages, even those you have previously read and unmarked.

<O> OFF - QUIT THE SYSTEM: Permits you to log off the system.

<Q> QUIT TO MAIN MENU: Permits you to return to the Main Menu.

<R> READ A MESSAGE: This command allows you to read messages in a manner which you specify: Subcommands are:

<F> Forward Continuous Read: This command permits you to read messages forward (from oldest message to most recent message). By typing in a message number, you can initiate the reading at that message number. By pressing "carriage return" in place of a number, you will begin from the very earliest message on the system.

Another way to accomplish this is to simply respond with a message number followed by a ",", at the Read prompt. This will cause messages #XX to the end to be displayed.

Example -- FORWARD PROMPT then "87,"

<M> Read Marked Messages: This command allows you to read only those messages that are to you, or those which you have marked for later retrieval.

<N> Read New Messages: This command allows you to read all the new messages entered on the system since you last logged on.

<R> Reverse Continuous Read: This command functions exactly as the Forward command, but in reverse order. Or, you may use the same shortcut, but by using a "-" instead of a ",", to indicate reverse retrieval.

After you use the Read command, you will be displayed a message, followed by the "More..." prompt. At this prompt, you have the following options:

<A> Read Message Again - Allows you to reread message

 Backup to Previous Message - Redisplay the previous message

<C> Continuous Message Retrieval - Takes you to continuous read mode without the "More..." prompt

<E> Examine Replies to This Message - Allows you to read any replies left to the message that you have just read, then returns you to the next message in sequence.

<N> Next Message - Permits you to go to next message.

<P> Read Previous Message in Thread - Allows you to read the message to which the message you have just been displayed is in response to (Note: Thread is only maintained if the same subject header is used).

<Q> Quit to BBS - returns you to Main BBS prompt

<R> Reply to this Message - allows you to reply to this message. Note...you will be prompted for a header (Subject). If you enter a carriage return, the same header will be used, preceded by a R/msg# (the number of the message to which you are replying to.) This preserves the message "thread. Entering a new subject, breaks the thread's continuity.

<T> Top of Thread - Allows you to go to the beginning of the message base and read in sequence, all messages within that thread (all the messages and their replies with the same subject header) in order to read the conversation from beginning to end.

And now, back to the rest of the BBS prompts...

<S> SCAN MESSAGE BASE: This command will display, from oldest to newest, the headers of all the messages. You may mark messages that you wish to read during the scan by pressing <M> on the message header following the one you wish to read. For example, to read message 85, you would press "M" while header 86 were displayed. Successful marking will be displayed, and you can then retrieve the marked messages by means of the Read and

contd.

Marked Messages command.

<T> TITLE SCAN - QUICKSCAN: This command works identically as does the Scan Message Base command, except that it displays only the Subject Headers.

NOTE: IN BOTH THE SCAN MESSAGE BASE AND THE TITLE SCAN COMMANDS, YOU MAY SPECIFY A BEGINNING NUMBER FROM WHICH TO SCAN, AND USING THE "," OR "-" SIGNS APPENDED AFTER THE NUMBER.

<*> PAGE THE SYSOP - Allows the user to page the System Operator.

<!> SEARCH FOR MESSAGES FOR YOU - If you have messages marked for you, you will see:

1 message (or whatever number) found for you
Retrieve (Y/N)

<This message will also appear when you first sign on to a subboard.**>** If you answer Yes, you will be shown the messages waiting for you. **** NOTE.** If you reply yes the lowest numbered message waiting will become the starting point for the last message read file. For example -- The message base has messages #3 through #127 in it, and you last read #91. Message #107 is waiting for you. If you use the "Yes" your last message read file starts at #107 NOT #91.**

THE EDITOR COMMANDS

After you have entered your message you may enter a **<RETURN>** on a blank line to get to the Editor prompt, from which you can make corrections, or save the file to disk. Or you may enter ANY of the editor commands directly in the text of your message by simply preceding the command letter with a period **<.>** on a blank line. To save a message, for example, you can exit your message, and type "S" at the Editor prompt...or you can finish typing in your message, hit return to take you to a blank line, and enter ".S" followed by a carriage return. All the editor commands function both in Editor Mode and in Dot Command Mode. Listed below are the Editor commands:

<A> ADD TO FILE (#): This command allows the user to add additional material to an existing message which has not yet been **<S>**aved. If you enter this command without adding a line number behind it, you will be adding new material to the end of your existing message. By following the command with a line number, you will be adding the new portion of your message at the specified line. **WARNING: THIS IS NOT THE SAME AS THE INSERT COMMAND. WHEN YOU ADD TO A FILE FROM A LINE WHICH ALREADY HAS TEXT ON IT, YOU WILL BE OVERWRITING THE EXISTING TEXT WITH THE NEW TEXT.**

<C> CLEAR FILE IN MEMORY: This command allows you to completely delete a message that you have entered, and start all over again.

<D> DELETE A LINE (#): This command allows you to delete a selected line from your message. You must follow the command by the line number of the line you wish to delete.

<E> EDIT A LINE (#): This command allows you to Edit, or completely **RETYPE** a line in the message. You must follow the **<E>** command by the line number of the text you wish to retype.

<F> FIND: This command is used to search the file you

have entered for occurrences of a string of characters. The lines in which the string is found will be displayed. **Caution:** make your strings unique. If you enter the string "low" the editor will display not only the word "low" but also words in which the letters "low" are to be found, such as "follow." This command also will not permit you to change the line in any way - it merely finds a particular string.

<G> GLOBAL SEARCH AND REPLACE: This command is used to search a file you have entered for occurrences of a string of characters which you wish to replace by another string of characters. You will be prompted for the string you wish to find (such as a mistyped word), then for the string with which you want to replace it. Again, the same caution applies as in Find. If you enter the word "low" for your search string, to be replaced by "now", not only will every occurrence of the word "low" be replaced by "now", but so will occurrences of those letters **WITHIN** a word, and "follow" would be turned into "folnow". To avoid this, make the search string unique, by typing in the word preceding and the word following the word you actually wish to change.

<I> INSERT LINES INTO FILE (#): This command allows you to enter lines of text from a specified point. The **<I>** command must be followed by the number of the line at which you wish to begin inserting. If you have a message with 5 lines, for example, and you wish to insert some material after line 3, you would enter the **<I>** command followed by the number 4 (to indicate that the line you are about to insert is to become line 4), and you type in two lines of material, your inserted text become line 4 and 5, and your old text following the insertion become lines 6 and 7.

<L> LIST THE FILE (#): This command permits you to list out the file for review. By entering a line number following the command, you are telling the editor that you wish to list the file starting at that line number.

<N> (LINE) NUMBERING MODE ON/OFF: We have talked at length about specifying line numbers, although no line numbers appear in the normal course of entering or editing text. The **<N>** command is an on/off toggle which can be used to assign a line number to each line of text.

<Q> QUIT - CLEAR FILE AND EXIT: This command allows an unconditional abort from the message being entered: The file will **NOT** be saved, and you will be returned to the Main Prompt.

<R> READ BACK FROM TEMPORARY FILE: This command, in conjunction with the **<T>** command (described below) provides a means of temporarily storing (saving) a file to allow you to go back to a message base or library file for further information, then return to the temporarily saved file to continue work on it.

To use, simply use the **<T>** command to save your message to a temporary file. When you are ready to continue with your message, retrieve it for further work by means of the **<R>** command.

<S> SAVE FILE AND EXIT EDITOR: This is the command to save your file to disk.

<T> WRITE FILE TO TEMPORARY FILE: By means of this command, you can save your message to a temporary file to be recalled later (in the same call) to be completed by means of the **<R>** command.

<X> EXCHANGE (): This command is the same as
contd.

the <G> command, but it only works on one line in the file, rather than globally through the entire file. You must specify the line number in which you wish to make a change.

SOME ADDITIONAL EDITING HINTS...

Whenever you are editing a line, globally searching and replacing, or making any changes, the line which contains the original string is displayed, then the corrected line is displayed. If this does not occur, the change has not been made DESPITE the message you receive that it was done. The problem may be that you typed in all lower case, and the original text was upper case.. TEXT MUST BE ENTERED EXACTLY AS LISTED.

- Ctrl-X erases the entire line on which the cursor is on.
- Ctrl-O creates an underscore " _ " character.
- Ctrl-K creates a left bracket "[" character.
- Ctrl-B creates a backslash character.
- Ctrl-I is the Tab function.

(These latter commands are for the convenience of those users on whose keyboards these characters are not available.)

WORD WRAP AND REFORMATTING FEATURES

UBBS works like a word processor. Unlike other BBS systems, you do not need to enter a carriage return when you get to the end of your line. You simply continue typing, and, like a word processor, the line of text will "wrap around" to the next line if there is not enough room on the line on which you are entering the text. The ONLY time you will want to enter a carriage return is when you wish to end a paragraph.

If you wish to format an announcement, you can do so by entering your message ending each line of text with a carriage return, as shown in the example below:

```

These help files were written [carriage return]
      by [carriage return]
      Sue Goodin [carriage return]
And reworked by Joe Chelena [carriage return]

```

To skip a line between paragraphs enter a carriage return, then hit the space bar then a second carriage return.

IMPORTANT NOTE: BE AWARE THAT WHEN YOU USE CARRIAGE RETURNS AT THE END OF YOUR LINES, YOU ARE ABORTING THE REFORMATTING FEATURES (DISCUSSED BELOW). PLEASE USE CARRIAGE RETURNS ONLY FOR SPECIAL FORMATTING...AND ONLY WHEN NECESSARY SO THAT OTHER READERS CAN BENEFIT FROM READING TEXT IN THE COLUMN WIDTH THAT THEIR COMPUTER USES.

REFORMATTING...UBBS has a second feature that was designed into the system with the thought in mind that many users who call may have other than the standard 40 or 80 column formats. If their computer displays 22 columns, or 64 columns, for example, messages usually end up looking sloppy and messy. To overcome this, UBBS automatically reformats every message to the column width of the user currently on the system...

Messages entered in one column format automatically reformat to the column width of the next user calling. This is why you are asked at logon what your column width is...and

why, after you are validated, you may wish to use the "U"ser Profile function on the main menu, to make sure that you are set at the correct column width.

UPPER/LOWER CASE: This system will allow you to view messages in upper or lower case, depending on your capability. If you have lower case, and see all the messages in UPPER case, go to the "U" function on the Main Menu and make the necessary corrections.

LIBRARY FILES:

<L> LIST AVAILABLE FILES: By means of this command you can list all the files currently on the Library.

<R> READ A FILE: This command allows you to read a specific file (you must follow the "R" command with the number of the file you wish to read).

<*> PAGE THE SYSTEM OPERATOR: This command sends a bell tone to the System Operator's computer to let him know that you have requested a page. Your page is effective until you end your call.

<O> OFF, QUIT THE SYSTEM: Allows you to log off the system.

<Q> QUIT TO MENU: This command quits you from the Library, and returns you to the Main Menu. ☺

**FOOD FOR THOUGHT
by Hunter Alexander**

Is the Internal Revenue Service going after people who use electronic mail and home computers to earn money, and who fail to report such earnings to the government? At a meeting of a Tandy computer users club near Washington on September 17, several people said that they have encountered computer bulletin boards which were set up by the IRS to entrap or identify delinquent taxpayers. These BBS's didn't seem normal. A New York Times article of September 19 discussed the IRS's targeting of self-employed persons and the use of IRS computers. ☺

**IEEE COMPUTER SOCIETY
ANNOUNCEMENT**

The IEEE Computer Society's 3rd Annual Symposium on "Improving the Productivity of the Professional Through Personal Computing" will be held on Tuesday, December 10, at the Johns Hopkins University Applied Physics Laboratory. The Keynote Address will be given by Daniel Bricklin, Co-Developer of VisiCalc. The program will include hands-on presentations covering Expert Systems, networks, PC to mainframe communications, interactive graphics, and management tools. The workshop will be preceded on December 9 by two tutorials: Local Network Technology, by Dr. William Stallings; and Advanced Spreadsheets and Databases, by Dr. Margaret R. Eggers. For more detailed information and registration, call Carol Daly, 953-5000, ext. 7364 (from DC area), 792-5000, ext. 7364 (from Baltimore). ☺

THE MAC BOARD IS ... DEAD! Where Goes the BBS Now?

by Leon H. Raesly

THE KING IS DEAD! LONG LIVE THE KING!! This English sentiment accurately reflects my feelings in terms of Tom Warrick's ABBS program. Tom's program has served the Pi and its' members well over the last four years. The improvements which Tom made in the ABBS kept it from being a static program.

Tom appointed a BBS Improvement Committee last fall, chaired by Dave Harvey. They made their report to the Board of Directors early this summer, and the Board accepted their recommendations and budgeted the money to implement them. In July, when Tom became President, he resigned as the Pi's Bulletin Board Operator (BBO) and SYSOP for the Main & Mac Boards. He appointed me BBO, and asked me to implement the Board's decisions. This I have attempted to do, with the able help of many volunteers. To get an idea of the strength of the group now working to implement & improve the Bulletin Board System (BBS), just glance at the number and names of the people who are listed for the various functions on the BBS List elsewhere in this issue!

The long-range goal, which I hope will be attained by Spring, is to have multi-user telephone lines, on automatic rollovers for each telephone line. These will be connected with the new UBBS program, which we have just acquired, with site licenses for all 6 lines. This program will then have 24 Boards, connected to a common data-base. So that when you call the first number, you will always get the same data-base of messages, regardless of which line you are physically connected to.

The new program currently has room for 8 Boards per line, with 32 Library files of information for each Board, PLUS 32 Library files for each SYSTEM. As a short-term solution, we are operating 3 separate SYSTEMS. SYSTEM 1 (986-8085) has 8 current Boards that you can access (PLUS their Library files. These are: Hardware (Non-MAC) Board; Software (Non-MAC) Board; Misc. & General (Non-Mac) Board; CP/M Board; dBASE II Board; Apple /// Board; Lafayette Park (The Philosophical & Discussive Board); and a UBBS Comments & Suggestions Board.

Let's look for the moment at the old MAC Board. With ABBS it had 255 possible messages. Each message could be 80 characters long, and a maximum of 5 lines. Thus, each message could be up to 400 characters, for a maximum character data-base of 102,000! However, on the new SYSTEM 2 (986-8086) there are 3 separate MAC Boards (MAC Hardware; MAC Software; and MAC Misc & Gossip) each Board has the capability of 127 messages up to 880 characters long, and the messages data-base total is 335,280 messages, or 111,760 characters per Board! A better than three-fold increase! Thus, like the Phoenix, the MAC Board is dead, in flames, but has arisen to a three times improvement! Plus, a total of 96 Library files connected to the three Boards!!

Since the "demise" of the old MAC Board, is also the "demise" of the primary use of Tom's ABBS, I thought it would be appropriate if the LAST message posted on the old

Board, be listed here. I have shown it in exactly the same format it was on the screen!

MSG 118 FROM WAP035 to [YOU] DATE=10/05
SUBJECT: FROM BOB GRUBB

PHONE 774-4720 (OLNEY). I'D LIKE TO SEE ABOUT THIS PROJECT.. AT THE MOMENT TIME IS A PROBLEM AS I AM EAR DEPP IN WORK PROJECTS. HOWEVER, I'D STILL LIKE TO KNOW MORE. OH NO THAT PHONE SHUD B 77 4-7206. FEEL FREE TO CALL ME LEE. MAYBE U CAN FIGURE OUT THESE BBS WORDS. I CAN'T SEEM TO USE MY ASSIGNED NUMBER ON EITHER SYSTEM. THANKS. RESPOND/WHO SENT?/NEXT MESSAGE (R/W/CR)

There it is, immortalized in print! The last message of the MAC Board, and Tom's ABBS! The symbolism of the message has led several of THE Crew to accuse me of planting it, but it is real!

Getting back to SYSTEM 2, it has 5 more Boards on it besides the 3 new MAC Boards. They are: Telecommunications & TeleCOM SIG Board; a Games & GAMESIG Board; A BASIC Programming Board; an AppleWorks Board; and (for the convenience of those using only this SYSTEM) a UBBS Comments & Suggestions Board.

The Classified SYSTEM is in full operation, with a series of For Sale, etc. Boards, as well as a special Board for all the Directors, Officers, & Volunteers (DOVs!) to use exclusively to communicate with each other concerning Pi matters. So if you want access to this Board, get yourself a Modem and VOLUNTEER! Call Tom today, or anyone else that you see on the Masthead, and say that you would like to help!

The Journal SYSTEM will be updated to UBBS soon, and will gradually become a very positive force. We are planning a whole series of Indexes which you can either read, or Download for insertion in your own data base (so you can sort, etc. anyway you like). Currently, there is a complete index to Bruce Field's Q & A, suitable for downloading into your data base! We plan to add a complete index of the Pi issues (all downloadable) and then (maybe!) move on to other user groups, and possibly even the full range of Apple related Micro magazines!

About the middle of November, the BBS for the Manassas/Great Falls Slice should be up with John A. Gersic as SYSTEM SYSOP. This will reach to quite an area that currently must call with a long distance charge, as well as serve the growing Slice! There is the possibility of a Baltimore Slice, with a related BBS in the future. We have been requested to help them form such a group, and it is being looked at and considered now.

In terms of what has been implemented so far, let me fill you in on that. I would like to introduce you to THE Crew!

Dave Harvey has put the Sunol hard-disk into operation,
contd.

and modified it for our special needs.

Rich Mlodoch has written several utilities that we need to enable us to custom fit UBBS to the Pi. These include the ability to move passwords from one SYSTEM to another, and to update the Boards for each SYSTEM (i.e. The Classified SYSTEM has only 6 Boards, versus SYSTEM 1 & 2 with 8 Boards each). Further, he has written some modifications to the program that allow us to lock-out all non-password holders from the SYSTEM, as well as set each SYSTEM so that you cannot apply for a password except on the Password SYSTEM (986-4715). Incidentally, if you have never had a password before, call the Pi office to obtain one. If you have had a password before, call 986-4715 and apply for a new one there. Be sure to follow instructions, and also COMPLETE THE SURVEY!

Mike Ungerman has almost finished developing a modification to the SYSOP Function module that will allow the various Board SYSOPs to upload Library files, then convert them to the UBBS format remotely! He has also been testing and developing the means for the SYSTEM SYSOPs to be able to run BASIC remotely to permit system maintenance, without having to go by the Pi office!

Joe Chelena has been securing and training new Board SYSOPs for the various Boards on the different SYSTEMs.

Barry Fox (our UBBS Guru) has been hard at work teaching us the innards of the program, and maintaining contact with the author. At times, a difficult job, as the author has been difficult to reach!

If this is THE Crew, I guess that makes me Skipper. That would be legitimate, since I have a Coast Guard Captain's License. Besides, like most Skippers, I don't seem to be doing much!

Some of the features of this new SYSTEM (besides the expanded Boards) are: The message Editor has a parsing feature (word-wrap) like a Word Processor (WP) You can also Globally search & Replace like a WP, so you do not have to retype whole lines, just Globally execute the changes you wish. It can delete lines, insert lines, etc. Messages can be 80 columns wide, and upper & lower case. Further, you can write your messages offline, and then call and transmit your messages with text Uploads! It will Search all Boards within a System for a message to you, or scan all Boards (with a Find command) for Key words in a title, then mark them for retrieval by you. A very powerfull SYSTEM!

We have a number of enhancements that we will slooowly add in the future. These will include using macro's with ASCII Express (AE) easier; the ability to have in a User Profile file those boards you wish to read (or skip), and other items. One of the major ones (that we are already set for) is to expand the maximum number of passwords from 999 to 9999!

So as you can see, a lot has been going on for your BBS these last few months, and more is being implemented all the time. I will try to keep you posted in the future. Thanks for listening. ☺



=====

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LAP COMPUTERS AS APPLE ACCESSORIES

(The First In a Series)

by George Kinal

Introduction

This is the first in what I plan as a series of articles in the WAP Journal on using portable "lap computers" such as the Radio Shack Model 100, NEC 8201, and Olivetti M10, in conjunction with larger, less portable computers, especially the Apple // series. "In conjunction with" actually means "by connecting to". This series will build upon the lap computer tutorial summary which ran in the October 1985 Journal.

This is not going to be a series on how to use the lap computer communications capabilities by themselves. For example, I don't plan to elaborate on how to use your machine to connect with the ABBS, CompuServe, or a mainframe computer. This is, after all, a Journal originally oriented towards the Apple computers. On the other hand, while the emphasis may be on the Apple // series, the same concepts and principles apply to the Apple ///, the Mac, and indeed other nameless (but common) microcomputers. I hope that our Mac-oriented readers who have an interest in these kinds of applications don't breeze right by the "Apple // section" in which these articles presumably will be running!

Applications of Laptop <-> Apple Connection

I'll begin this series with a listing of the various applications which can be used on your portable, battery-powered remote "Apple extension". (No doubt there are many more: I welcome inputs from WAP members on their experiences.)

There can be little doubt that the most widespread use for laptops is text entry. The story goes that, on the press airplane that accompanies Air Force One, virtually every journalist uses one. In many cases, the text prepared on such away-from-home sojourns is transmitted to the office by means of the built-in modem that most of the laptops have. In other cases, it is converted to hard copy using the printer port and an available printer. I won't have much to say about these modes of text transfer, since the manuals explain both pretty well. Assume that you have an Apple either at home or in the office, and you wish to transfer some text from the laptop to the Apple for further processing or printing. Or perhaps you want to transfer a plain text file (maybe a speech, or a list of clients, or....?) from the Apple to the laptop. I will be reviewing the several approaches for doing this.

Another very similar, but not quite identical, application is to use the laptop as a convenient, accessible program entry and development device. This can take two forms. With some attention to language differences, you can enter BASIC programs on the laptop, and later transfer them to the Apple for execution. The laptops actually have MUCH superior editing features to those on the Apple // (is there anyone out there who REALLY knows how to use the Apple "ESCAPE diamond" editing "feature" ?), and a keyboard which is certainly better than the one on the Apple][/][+. For languages such as PASCAL, or even assembly, where the source code is essentially text, it is possible to enter the code at your

convenience on the laptop, and later transfer it to the Apple. I have actually prepared Turbo PASCAL procedures in exactly this way, merging them later into the overall program. You can't, of course, compile (or assemble) the source code on the laptop (unless Borland comes out with Turbo Pascal for 32K laptops....), but you can enter the code.

Transfer of programs in BASIC is useful in BOTH directions. The MicroSoft BASIC provided with the laptops is similar in syntax to Applesoft, but has a number of commands that don't exist in the latter. So, it is often possible to transfer programs from the Apple // to the laptop, and have them run with no editing. A program written for the laptop may not run on the Apple, however, because of the additional commands (most annoyingly, the PRINT USING x.xx). One interesting and important fact, though, is that laptop BASIC is virtually identical to MicroSoft MBASIC (running on an Apple // under CP/M), IBM PC BASIC and BASICA, and (I believe) MicroSoft BASIC on the Mac. I'll have more to say in this series about why an Apple // outfitted for CP/M is inherently more compatible with the laptops than a native machine. Returning for a second to the question of Applesoft to laptop compatibility, I have found that some of the early WAP Disketeria applications programs, such as the Math utilities and educational text (not graphics) games will transfer and run with little or no change. Thus, WAP members have a ready source of simple utility programs to calculate compound interest, do linear regression, and so on. One important point to remember, and which I will be reviewing, is that all program transfers between different computers MUST be done with TEXT versions of the programs.

Yet another "similar but different" application is to employ the laptop's memory as a means of portable data (file) transfer. For example, suppose your Mac or //c does not have a modem, but the non-Apple computer in the office does. Or, even if all the machines have modems, perhaps the right software is not available (for example, none of the machines can be set up for unattended auto-answer). You can load data files into the laptop using its RS-232C port, then at a later time transfer these files to the "target" machine by modem to modem connection. The laptop in this mode serves as a non-volatile storage medium and as an interface conversion device as well.

Another twist on the same theme: your Apple can serve as a bulk storage device for the laptop. There is a commercial program for doing this, enabling the laptop to use the Apple's disk drive. But even with ordinary communications software (or, in some cases, just the operating system's built-in commands and utilities), it is possible to store laptop files on the Apple's disks. You might find this technique more convenient than a cassette tape recorder.

I mentioned the superiority of the laptop's keyboard to that at least of the Apple][/][+. It is possible to connect your
contd. on pg 25

FRONTIER'S EDGE: Networks at College

by Ken Knight

My name is Ken Knight and I am a freshman at the College of Wooster in Wooster, Ohio. We have just opened up the Douglass Experimental Network (DEN) and to the best of my knowledge it is the first of its kind. Let me explain. Most colleges now have at least one mini-computer on campus and several terminals networked into it. Here at Wooster we have a VAX 11/750 (we will have a second VAX by January or so.). A Sytek-engineered broad band network connects the VAX to terminals and microcomputers throughout the campus. However, connecting to WoosterNet is expensive--about \$1000 per station.

In comes DEN. DEN connects every room in a residence hall, using an APPLETALK network. DEN is designed to run with the Mac or IBM PC. When the appropriate bridge becomes available (expected by the spring of next year), DEN will be able to connect directly into WoosterNet. As you may have noticed, it is "experimental." All this means is that if it works well in the first residence hall (Douglass), the remaining residence halls will be wired in.

The network will have access to a 20 meg hard drive, for storage purposes, and to a LaserWriter printer for high quality printing (for a sample of what the LaserWriter can do look at your WAP Journal). In effect, we have a super BBS with all that it implies. Students will be able to use any of the software that is on the hard drive, save data to the hard drive, leave messages for other users, and when the bridge is installed connect to the VAX 11/750 and gain all the power of that machine.

Students and faculty will also be able to check-out commercial software from the college's main library for brief periods of time. There is also a public domain library that will be placed on the hard drive so that users of the network can gain access to it at any given time. As it stands, the majority of software in the library is for the Macintosh. Eventually the library will contain software for varying types of computers.

The hoped for result is that students and faculty will be able to share information more freely. This is especially important to a library arts school like the College of Wooster. Hopefully the people that use the network will be able to gather and absorb more information than they could if they did not have access to such a network. This brings up the one potential flaw of the system.

The network here at the College of Wooster campus is designed for the Apple Macintosh and IBM PC (and compatibles); however, most students do not have either of these two machines and are unwilling to pay for one. Case in point: there are two or three Mac owner's here at Douglass. However, there are two Apple // series owners (I am one) and two Commodore owners on my own floor. For us the network is closed. This has the effect of severely limiting the potential power of the network. Unfortunately, until a system is developed for a broad base of computers, that problem will remain. Right now, however, the best one could probably do is try to find an adapter that would enable one to connect into

the network and at least read messages, upload/download text files, and hook into the VAX. That person could not use most of the software that is on the hard drive since it is not for his/her machine, but the true power of the network lies in its ability to allow for a free interchange of information, and you do not need a word processor to facilitate that.

The other limiting factor is that although there are many computer databases out in the real world, they all cost a great deal (even at discounts given to students) and the information that is stored, in general, contains just brief abstracts (very much like a super catalog) on many varying fields of study. You cannot go very deeply into any one given topic. Until these databases become more general in their use and come down in price, computer information retrieval will be rather costly. As time passes this should happen, and when it does and the student or faculty member can gain easy access, the idea that is DEN will come into its own.

If you would like more information or want to make any comments or suggestions, I can be reached at the following address:

Ken Knight
Box C-2018, College of Wooster
Wooster, Ohio 44691.

My phone number is (216) 263-2000, ext. 2649. ☎

Lap Computers contd. from pg 24

laptop to the Apple in an on-line manner as an external keyboard, for use in word processing and other applications. Why spend half the price of the laptop to buy an external keyboard for your Apple //, if the laptop can do the same job?

The laptops have an input socket for a bar code reader. It could be convenient in some applications to use the bar code reader and laptop to collect the data (inventory, sales), but to later manipulate the data on a larger computer with data base capability.

The lap computers can also be used as a telecommunication accessory. The built-in clock, modem (some models), auto-dial and auto-logon capabilities might be something you don't have on your Apple. So, write a program for the laptop to download the stock quotations from Dow Jones at 3 AM, and transfer the data to your spreadsheet on the Apple the following day.

Stay Tuned!

I hope the above has aroused your interest. If you have a laptop, you may discover some new and better ways to do what you've already been doing, or may find new symbiotic uses for the combination of laptop and Apple. If you don't have one, you should be aware of the fact that the prices for the first generation laptops are falling rapidly, to levels which make them genuinely attractive as Apple computer accessories. It is my intention to make this series of articles as timely and informative as possible. Some of the above applications I have used extensively, while others are in the "exploratory development" stage. Readers' comments are welcome, and will be folded into the future articles for everyone's benefit. ☎

MODEM LIGHTNING PROTECTION

by George Kinal

I was reminded once again by a recent experience of the importance of protecting modems and computers connected to them. I was engaged in a telephone conversation with a fellow WAP member; we were preparing our Apples for an exchange of files via modem. I heard a "crackle" on the line, followed a second or so later by the sound of thunder (at his location, not mine). When we tried, five minutes later, to hook our modems together, we found that his modem as well as his interface card had failed. It is my conjecture that even if his computer had not been on, and even if we had not been engaged in the telephone conversation at the time, the same surge on the telephone line would have caused the same damage. Let me explain why I believe this. The explanation will serve as an introduction to lightning protection devices for modems.

Two very different kinds of surges can occur on both power lines and telephone lines. (Ciarcia's article mentions these - see the References). Most everyone seems to understand the transverse surge. That's when, instead of 115 volts on the line (between the two conductors), some larger value appears. Large motors on the power system can cause such surges. Lightning also can indirectly cause such surges, when the power company's equipment switches its equipment in reaction to a lightning strike.

Transverse peaks can also occur between the two conductors on the telephone line, but they are relatively rare, and not likely to be caused by lightning except in unusual installations. More often, a longitudinal or "common mode" voltage appears on the line. This is when the voltage potential on both wires is the same (there is no potential difference >across> the line). The potential from each wire TO GROUND, however, can easily be thousands of volts. Longitudinal surges on power lines of this magnitude are rare, because your A.C. power line actually has one of the two conductors grounded at the entry box to the premises. The telephone network is not grounded.

So, what separates a useful lightning protector from one that is (almost) useless? A ground wire. If you use a protector without a ground, or don't have a protector, that longitudinal voltage will try to "find" a ground to jump to. Your computer, unless it's battery operated (or not plugged in), has a handy ground for the surge to arc over to. Incidentally, the C&P Telephone Company in particular has invented a unique concept whereby they can avoid installing a lightning protector on your phone line, in many cases, by claiming that surrounding buildings, tall trees, etc. create a "cone of protection." And even if you do have a protection block installed on your phone line by the telephone company, it is very likely to be the "carbon block" type, which is not adequate for protection of modern solid state electronics.

What follows is my own survey of commercially available lightning protectors. This is a "paper" survey only; I have not tested or even inspected these devices, and cannot give you any assurance as to their quality (but then, by now you're all familiar with disclaimers about the suitability of a software

product for any purpose whatsoever, so why not the same disclaimer for hardware ?).

1. TRANSVERSE SURGE PROTECTORS

(No ground wire !)

The Zapper, \$12.95, Spaceport Products, Box 227, Cape Canaveral, Fla. 32920.

Teleguard Data Line Surge Suppressor C4593, \$19, GLOBAL Computer Supplies, 45 So. Service Rd., Plainview, N.Y. 11803.

(Protectors without ground NOT RECOMMENDED)

2. GROUNDED PROTECTORS

(NOTE: These protectors either use the ground wire of your A.C. power outlet, or have a lug for a separate ground wire, which you could connect to the power outlet ground or a separate ground).

Telemax, \$58, Panamax, 150 Mitchell, San Rafael, CA 94903

Telebyte Lightning Sponge Model 22, \$89, GLASGAL, 207 Washington St., Northvale, N.J. 07647

Industool Telespike Box, \$59.95, 325 W. Huron, Chicago, IL

MCG DLP-4, \$68, 160 Brook Ave., Deer Park, N.Y.

MT-2W Surge Suppressor, \$45, Datalink Ready, Box 2169, Melbourne FL 32902.

Discussion: Judging purely from the descriptive literature and the photographs, I believe that the Telebyte Lightning Sponge is the best of the lot. The manufacturer specifically mentions the need for more than one "stage" or level of protection. The other products all appear to be simpler in design and of less rugged construction, but no doubt are still a lot better than the phone company's carbon block or "cone of protection." (Could an organization elsewhere than in Washington come out with such Doublespeak malarkey....?) Nothing, of course, beats the idea of only connecting your modem to the line when you actually need to communicate, but then that's not a practical suggestion if you run a BBS or want remote access.

P.S. - Some of you may be wondering what I use for protection. Well, after the 1982 incident (see reference), I installed a commercial telephone company type "gas tube" protection block. Unfortunately, these are not generally available on a retail basis, and I'm not convinced that a gas tube alone is adequate, either. I unplug my modem when not in use, during peak thunderstorm season.

LIGHTNING PROTECTION REFERENCES

(Note: Some of these articles refer to power line protection, not telephone. The principles are, however, similar).

"MACGUARD Review", B. Urban, WAP July 1985

"Wednesday's Child is Full of Woe", L. Raesly, WAP Nov. 84

"Keep Power Line Pollution out of your Computer," Ciarcia, BYTE, p. 36, Dec. 1983

"Is Your Communicating Apple Lightning-Protected?", G. Kinal, WAP November 1982

PRESS A KEY CONTEST

by Gary Hayman

How often have we written programs which displayed text on the screen and then down at the bottom we said, "PRESS A KEY", in order to move to the next screen. We can do better than that!

Announcing the first PRESS A KEY CONTEST. Let's see how ingenious we can be with our "PRESS A KEY" displays. A special prize will be given to the best three submittals - I will donate the prizes (it won't be much but it will be interesting). Maybe WAP will add to it.

Judging will be accomplished by a special committee of volunteers. It is hoped that the routines will be published on a future WAP Disketeria Disk.

Here are some general rules, conventions, guidelines and suggestions:

1. Programs must be submitted on a 5-1/4 inch floppy disk written in Applesoft. The disk must be in DOS 3.3 format.

2. The program is to start at line 1000 and is to be a subroutine, i.e. a "RETURN" must exit the routine. The first line (1000) should be a REM statement giving the Name of the Routine and Your Name and WAP Membership Number. The second line should clear the screen (HOME), display your routine name and your name on the screen (possibly centered).

3. The "PRESS A KEY" display should be exhibited in the bottom portion of the screen - rows 22, 23 or 24 - or all of them, while your program name and your own name remains on the screen.

4. If your routine affects SPEED, INVERSE, FLASH, does some POKES, or in general alters normal function, you must reset your changes before you exit from the routine. Please, no DATA statements, as many of the routines will be placed in a program together and this might complicate things.

5. If there is a DIM statement, please use a flag to skip it

just in case your subroutine is accessed a second time. For example,

```
1020 IF D1 = 1 THEN GOTO 1040
```

```
1030 DIM DI$(100): D1 = 1
```

```
1040 <Program continues>
```

6. If you are creating many strings with the same name, please use Z=FRE(0) to collect garbage before you exit with a RETURN.

Here is how to submit your programs:

1. Drop them off or mail them to the WAP office marked to the attention of Gary Hayman - PRESS A KEY CONTEST.

2. Or mail them directly to me at:

Gary Hayman

7315 Wisconsin Avenue, Suite 605-W

Bethesda, MD 20814

3. Or send them to me via modem. Give me a call at 345-3230 to see if we can work this out.

SPECIAL INCENTIVE: Your submitted disk will be returned to you containing some special programs of interest that you have never seen, provided you INCLUDE A SELF-ADDRESSED STAMPED mailer with your disk. Otherwise you can retrieve your disk at the WAP office or at a WAP meeting at a future announced time.

If you have any questions, call me at 345-3230. Let's get behind this and have some fun. Who will be the most creative? 

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COMPUTERS

APPLE REACTS

This is a memo that was distributed within Apple following the Apple Users Group Conference (See Tom Warrick's report on the conference in the October, 1985 WAP Journal.)

To: Dan Hillman
From: Rob Moore x6383/Fern Bachman x6230
Subject: User Group Reps - Apple // comments
Date: September 10, 1985

During an interesting lunch with representatives from a variety of Apple user groups from around the country we gathered a number of comments. We asked the question "What should the next Apple // family computer be like?" The response was as follows:

CPU:

The 65C816 was mentioned as the CPU to use and there seemed to be general agreement. At least there weren't any dissenting comments or other suggestions.

Disk Drives:

They want the 3 1/2" drives and would like to be able to read and write MacIntosh text files. Disk caching in RAM was mentioned and the Hard disk on a card for the IBM was mentioned by several people. It sounds like a compact hard disk would be a winner if priced reasonably.

Memory:

Many of them had heard rumors about an Apple RAM expansion card and the comments seemed to be favorable. We asked what the minimum memory size for a new system should be and got suggestions that ranged from 128K to 1 M-Byte. There were a number of comments that the memory should be expandable to "unimaginable" levels. Certainly there should be the capability for lots of memory.

Video:

There were comments that we should put out "true" NTSC. They seemed to like the NTSC color monitors that they'd seen and showed little interest in RGB (probably due to our current RGB limitations.) Several people felt that the IBM Enhanced Graphics Adaptor capabilities were becoming a standard and that we should provide that level of graphics - which would of course require RGB output. There was little or no comment about using TV sets as monitors. Several people mentioned video expansion capabilities so graphics and video cards could be added.

I/O:

They definitely want slots and built in I/O. RS232c ports, Real-Time Clock/Calendar, parallel ports, MODEM's, and AppleTalk were mentioned by various people. A CD-ROM interface was also mentioned and one person suggested an SCSI interface although it wasn't clear if he wanted this on a card or built-in. There was total agreement that the I/O must be expandable.

Keyboard:

They like built-in keypads and several people agreed that they like the feel of the switches in the Apple /// keyboard. (I believe that these were the same switches used initially in the Apple //e.) There was agreement that programmable keys would be useful and built-in type-ahead was also mentioned. Several people mentioned preferring a detached keyboard -

there was no disagreement on this.

Applesoft:

They would like Applesoft to be able to use a larger memory area as significant programs are still written in BASIC, and also an enhanced Applesoft with more features.

Operating Systems:

There were a number of comments about various OS features. They would like the OS to provide print-spooling from RAM and from disk, disk-caching, and a ROM-based Finder-like user interface. OS in ROM was mentioned as a desirable feature, although I suspect that this is partially in response to disk capacity limitations. A few people mentioned providing a built-in programming language although there didn't seem to be any consensus on which one to provide. Multi-processing was also mentioned by one person as a desirable feature. Another feature mentioned would be the ability to get a screen dump to the printer or to a disk file with a keystroke instead of having to load a screen dump program.

Compatibility:

There seemed to be general agreement that downward compatibility to the Apple //c - Enhanced Apple //e level would be appropriate. There was some discussion about the large number of people who currently have Apple]['s and Apple][+'s. The consensus seemed to be that it would be great if we could find some way to upgrade them because they're being left behind as our machines improve. Personally, I can't see any way to do this without completely replacing their entire machine.

Regarding software compatibility, they don't like pre-boot programs. Additional memory and features should be handled transparently.

Price:

No one asked for a lower price. They felt that new machine should be at about the current retail prices but should include more features, memory etc.

Packaging:

One person mentioned portability but this did not seem to be a serious concern. There was also a comment that a smaller desk "footprint" would be nice.

Conclusions:

This meeting was certainly worth the time spent. The comments were intelligent and useful. The user groups are the backbone of our user community, supplying answers to questions and technical support that is often not available from dealers. As a whole, they are intensely loyal to Apple and Apple computers. We can learn a lot from them and we should do more of this sort of thing. Copies of this memo are being sent to the various participants at this discussion and many of them have indicated an interest in polling their respective groups so that they can provide a more detailed response by mail.

If there are any further responses please address them to:

Rob Moore
Apple Computer, Inc MS-22Q
20525 Mariani Ave.
Cupertino, CA 95014

☺

IN MY OPINION

by Brother Tom Sawyer, csc

]] COMPUTER LITERACY - FORGET IT! [[

When I meet someone for the first time and they ask me what I do, my answer is, "I teach." My fear is that they are going to ask the next question, "What do you teach?" since my reply, "I teach computer programming", often brings me face to face with the great computer myths. Those myths are represented by remarks such as; "Computers are the future.", "Everything nowadays is computers.", and "My kid fools around with them all the time. I can't understand half the things she says about them." These statements reveal some common misconceptions about computers. Computer literacy programs, if they must exist, should focus on these misunderstandings rather than on the machines that give rise to them.

] "Computers are the future" (Where have you been for the last forty years?) [

People my age (over forty and proud of it) grew up with computers that were out to take over the world. Those block-long monsters were attended by men in white coats who talked science and who were agog at the great brain's blinking lights and metallic voice. There were other men in white coats taking care of the insane but no one ever made the connection. A woman (just one) was also part of the early computer room scene. Whether or not she wore a white coat, there was no doubt that she was in a man's world.

Adults who have carried a lot of this baggage with them into the present should ask some simple questions about the "great machine." For example, if computers are so smart how come it has taken them so long to catch on? Television, the "boob tube", caught on much faster. Most children can turn on the TV by the time they're eighteen months old and by age two can select their favorite channel. The video recorder takes a bit longer to master but certainly by age seven any one of us can handle those and a host of other gadgets which have at least fifty knobs and/or buttons. Some home video and sound systems are awesome but very few people are awed by them. So why are computers such a big deal? It's the baggage. It's the men in white coats telling us that computers are science, not appliance. Even though the advertisements tell us that every family should have one, the white coats remind us that you'd have to be insane to let one of those monsters into your home. I believe that if you have a problem with computers the first step is not to take a course to learn about them. Rather, you should take some time to unlearn what you think about them.

The lone woman in the computer monster movies is a good example of a myth that has to be "unlearned." Most programmers are male and understandably they write programs that appeal to them, at least in the entertainment category. When females don't appear interested in such things we initiate studies, hold workshops and write articles on "computer phobia." The computer gender gap myth is based on the belief that everyone, at least those under the age of

twelve, must know how to program a computer. The gap and the "phobia" would disappear if computers were programmed to do what was of interest to people, male and female. If it's true that females don't take to "shoot 'em up" games then there's hope for the world. A phobia for violence seems healthy to me. It's sad to take such an attitude as a sign of illiteracy. I think that computers should be handled like television; something for everybody - let the audience decide what it wants to watch.

Another myth to be unlearned is that you have to know science and math to run a computer. Ads for many computer products help propagate this myth (128K, MS-DOS, UNIX) and some computer literacy courses compound the problem by trying to cram the alphabet soup of computer terminology down children's throats. Admittedly, computers are very technical inside, but so are stereos. If you can shake the foundations of your house with your thousand watt amplifier without knowing (or caring) anything about graphic equalizers then there seems little need to know about bits and bytes, chips and DIP's, VLSIC's and ULSIC's or any of the other gizmos inside the computer. We educators are introducing courses in computer jargon while computer companies are making machines like the Macintosh. All you have to know about a machine like that is where to put it.

] "Everything is computers" (Are we really necessary?) [

The next myth about computers is that they can do anything and everything. If you don't learn about them you will be irrelevant. Anyone who does learn about computers knows with absolute certainty that the machines can't do anything by themselves. Even if you are successful at getting them to do something, it is obvious that no one could ever get them to do anything close to everything. In order to write this article on my computer I had to put in a disk, turn on the power and push a RETURN or two just for starters. The machine is not enjoying my wit or protesting when I type that it's a MORON. It is just doing what some human programmed it to do. Forgive me. You already know that. Next to "PC" the most current computer word is "software."

It's a friendly word. It's "pillows and teddy bears, baby bottoms and flowing hair (softhair?)." To me it says, "computers are nothing. People are everything." The experts never tire of reminding us that computer errors ("I paid that bill!") are really human errors. Logically (said the computer), computer accomplishments are really human ones. Human beings conceived, built and continue to improve on computers. We can use these magnificent morons to make life better for ourselves. If computers could "want" to do everything, I'd let them. That would leave me free to go to the beach. No computer in its right memory would go there because the sand and water would ruin it.

What schools are doing, often at the insistence of parents, is reinforcing the myth that "computers are everything." A contd.

school's excellence is now measured by the number of computers it has. Universal computer literacy is our goal and millions of dollars have been spent to install equipment, train teachers and impress the neighbors. When people visit our computer center the most frequently asked question is, "How many computers do you have?" I would rather they ask what we are doing with them. I believe that every student should have access to a computer and that teachers should have the opportunity to use them for their paper work and for classroom instruction. It is not necessary to put any of them through the "you've got to learn computers" wringer. It is up to the software developers, not the schools, to make the usefulness of the machines obvious. What schools can do is dispell the notion that computers are everything and stop inducing panic in teachers, students and parents. Computers, like television, will be everywhere and will be used by most people when the hardware and software manufacturers develop products which deserve universal acceptance.

A corollary to the "everything" myth is that the machines will become the penultimate teaching tool. Computers can do a lot for teaching and can help learning but we have to wait a decade or two until they can reach what I would consider the teaching stage. My dream is to have my brain waves recorded and stored in a computer and then played back to students - a brain to brain transfer. That would obviate the language barrier, eliminate the volumes I have to speak to convey a simple idea and allow me to collect my royalty check at a cabin in the mountains. For the present we have to be satisfied with "simple simon" drills and the beginnings of simulation software and hope that our students can benefit from it and develop their own dreams of what might be.

]"Children are naturally good with computers."[

](You've never taught programming.)[

The misconception that all young people are good at computers causes more problems for me than I care to have. Those of you who teach programming are now thinking, "Truer words were never spoken." When an otherwise good student gets a 'D' or an 'F' in programming I spend time wondering why. I also spend time with that student and his parents trying to identify that certain "something" that is missing. For want of a better word, I call it the "Knack." Either you have it, or you don't. When parents want their child to take a computer course it's difficult to explain to them that such courses aren't for everyone. "No, your child isn't stupid. It's just that he dosen't seem to have what I think it takes to succeed in the course." When a student tells me that he "programmed" a game when all he really did is turn on the machine and play Galactic Mayhem, I know that not all young people are good at computers. Even students who do well in programming have to be prodded past Dungeons and Bludgeons. Otherwise they revert to playing a minor role in the computer's game which, with very few exceptions, the computer always wins. From my experience I conclude that only a few youngsters are "naturals" in computing. Most prefer play to the discipline and mind numbing work that writing programs requires. I don't blame them and sometimes envy them. I am addicted. They are not. Who's to say which

of us is better off.

Those who have read this far probably believe that I am against computer literacy. You are partially correct. Many of us educators have found computers to be fascinating beasts that challenge us and keep our minds alive and well. It is natural to want our students to experience the same fascination and sense of accomplishment. I'm sure that those who find pleasure in classical music feel the same way about their experience. The reality is that no subject is for everybody. Almost everyone listens to music but only a few people make music. That's not a fault. It's a fact. Why then insist that everyone "learn" computers?

] "What is computer literacy?" (Seen any good TV lately?) [

Computer literacy should aim at showing people how to USE the machine. Introduce them to some of its possibilities and to the power it can give them, but let them learn what they will learn. Those who have the "Knack" will show themselves. What is most important for young and old is the attitudes they have toward the Machine. Adults need to examine themselves, look for the myths, and see the computer for what it is and what it could be. The young need help in examining values they hold relative to computers. Software piracy and breaking in to a system are two topics that can provide long and interesting exchanges of ideas.

Discussions about the benefits and liabilities of television viewing have been going on for a long time and show no sign of dying off. In this respect, computers will be no different. Both are machines which have unmeasured effects on our lives. Both are signs of human ingenuity. Both offer possibilities for human development. Neither is the answer to all our problems. Television had to prove itself. Computers should have to do the same. ☺

PI SIG NEWS

by Raymond Hobbs

PI SIG's last two meetings were somewhat clipped, first by a conflict in scheduling between the SIG and the Macintosh tutorial classes, then by illness. Hopefully, we are past our scheduling difficulties for this year, and can get on with our business.

PI SIG has been addressing the topic of software development in a broad sense (philosophy, finance, marketing, documentation and coding), and will be moving on to specific applications for software development on the Apple][, Macintosh and other personal computers (keeping in mind that for commercial purpose, the big bucks are still aligned with Big Gray (or Big Red, or something). We will be tackling the thorny issue of copy protection in our November 18 meeting, and anyone interested in this topic is invited to attend.

PI SIG meets on the third Monday of every month, at the WAP office on Woodmont Avenue at 8:00 PM. ☺

AUGUST 24th MEETING REPORT

by Adrien Youell & Ronald Wartow

Adrien Reports:

TEA, GAMES, JOKES, ABUSE AND A CARD. Sounds like an average fraternity party, OK? Wrong! This was the first time Bruce Field chaired the meeting as Vice President. After asking for Apple Tea volunteers but before introducing Ron Wartow with his party games, jokes and abuse, Bruce 'suffered' an immense exhilaration of pride being the officer to thank David Morganstein for his devoted 4-year stint as President and presented him with a certificate of lifetime membership (only the second - the first was given to the WOZ). Such a signal offer, Bruce said, required more than a mere cardboard card (the hoi poloi variety), so the Board had authorized a more longlasting identification; a brass 'credit card'-sized card, numbered 001. David was truly transfixed with emotion (trans.: rendered unusually speechless) and sat down with 2 cards! One brass, one silvered. David, which one has retired to the family vault? (My own comments on David Morganstein are undeserving of your attention, but I will continue anyway! Since I first saw David presiding in January 1984 my respect for him has been unbounded. During our ever closer contacts leading to my currently 'exalted' position I have perceived the mettle of the man; superlatives of intelligence, diplomacy and commonsense little suffice. He is a good man and a friend to all Pi members. May his memory maps be writ in green ink! May his little girl ever wear her Pi T-shirt - that's silly she'll grow up - and may his Pi Journal writings continue to enlighten, inspire and instruct.)

That's it! GAMESIG started and the frat party rolled out all their worst behaviour.

Ron Reports:

After months of programs on "hard-core" computer topics like hard disks, printers, and telecommunications, the August meeting was turned over to the club's gamers, formally represented by GAMESIG. The 300 club members who attended heard a discussion of the latest quality games, were treated to a demo of some gaming classics, and were brought up-to-date on the latest gaming developments. During the formal program, several gaming trivia questions were asked and the correct answerers were awarded T-shirts, hats, and posters, all generously donated by Spectrum Holobyte, the GATO people. On display were the newly-established GAMESIG Poster Archives, comprised of 9 mounted gaming posters donated by various software companies.

The members were apprised of the following. The club is currently receiving several gaming packages a month and is now on the "review" lists of about 10 software companies. The number of companies involved is continuing to grow because the software companies recognize the benefits of dealing with a users group of over 4000 Apple // and almost 1500 Macintosh owners. At least two reviews will continue to appear every month. A 15 pages "short-shot" review of 60 games and gaming categories is on the club bulletin boards

and at the office for photocopying.

The members were also told that more and more Apple // series gaming programs are either requiring 128K or will run faster with 128K. At present, Macintosh games do not require 512K, so "skinny" Mac owners can breathe easy, at least, for awhile. Also, the Mac has spawned a move by Apple // programmers to use a joystick or mouse interface, games exhibit increased forms of artificial intelligence, and construction sets are becoming the vogue.

CHIPWITS (Brainpower for the Apple // series and Macintosh) was demonstrated first. The first-blush reaction that this was an infantile program was quickly dispelled when the programming and logic concepts which go into building your chipwit-robot to survive in 8 separate adventure environments were demonstrated. Some of the classic chipwits were paraded before the members: Burny Urbn (his one mission in life is to eat pie), Gena Urbn (upon finding and capturing a disk, she sings a song), Tum Warik (he roams around zapping members (oops! that's electro-crabs), and the venerable Bru Feeled (he heads for the door at the sign of any trouble).

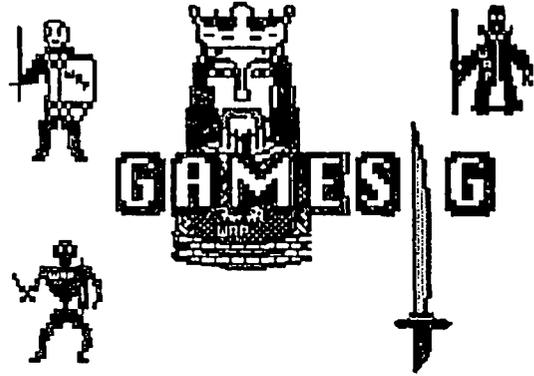
SUNDOG (FTL Games for Apple // series) was demoed next. The members were hard pressed to believe that they were watching an Apple //. The space adventure program is entirely joystick-run and employs Macintosh-style windows, all in crisp color, with the ability to visit 54 cities on 18 planets in 12 star systems. The members particularly enjoyed tooling around town in the little shuttle, visiting bars, stores, banks, and stock exchanges, and their first hyperspace voyage to another star system. (Several members with WAP membership numbers under 1000 were not impressed as they had already visited several star systems.)

Next was **ARCHON** (Electronic Arts for the Apple // series and in the future for the Macintosh), an arcade and strategic dream. The big screen amply showed off the program's combination of chess with ancient creatures and the arcade fight to the death when a square is contested.

Other games demonstrated and discussed were: **THE HOLY GRAIL** and **INCA** (Hayden Software for the Apple // series - just-released principally text adventures which run in real-time), **BALANCE OF POWER** (Mindscape for the Macintosh -- a strategic game of foreign relations by Chris Crawford), **DEJA VU** (Mindscape for the Macintosh -- a 1930's detective graphic adventure which makes effective use of the Mac's features), **WHERE IN THE WORLD IS CARMEN SANDIEGO?** (Broderbund for the Apple // series - an educational program in the guise of a world geography adventure game), and **ULTIMA III** (Origin Systems for the Macintosh - a conversion of the classic Apple // fantasy role-playing game). ☞

GAMESIG NEWS

by Ronald Wartow



Sir-Tech Visit Highlights October Meeting

About 40 club members attended the October meeting which was highlighted by a visit from Lynn Bresett, Director of Customer Relations, of Sir-Tech Software, Inc., the WIZARDRY people. Ms. Bresett brought along the players guide for the soon-to-be-released MACINTOSH WIZARDRY and answered questions ranging from future release dates (she was appropriately noncommittal) to job opportunities in the software industry.

The programs demoed were BALANCE OF POWER (Mindscape) (see review below) and ULTIMA IV for the Apple II series.

Elections were held. Ronald Wartow was elected Chairman and Barry Bedrick was elected Journal Columnist.

Macintosh Wizardry Demonstrated at SigMac Meeting

Sir-Tech gave me permission to demonstrate the soon-to-be-released Macintosh WIZARDRY at the October SIGMAC meeting. 200+ members got an advance look at this long-awaited program. Since I was a beta tester of the program, it would be inappropriate for me to comment on its merits, but Sir-Tech has sent WAP review copies of software in the past, and I expect will provide this for review. As soon as we receive it, it will be given to a "disinterested" GAMESIG participant, and the review will appear within a few days on the GAMESIG board (see below) and the following month in the Journal.

System 2 Games and GAMESIG SubBoard

GAMESIG now has its own subboard on the club's SYSTEM 2 BBS (the old Mac BBS). Everyone is encouraged to use it for gaming inquiries, information, informal reviews, hint requests (answers as private messages only please). There will be 250K worth of library text files of past Journal game reviews, a comprehensive set of review of many Apple games, other reviews, and anything else that is appropriate. Uploads are encouraged with advance arrangements.

New Software Donations

AMAZON, FAHRENHEIT 451, and DRAGONWORLD (Telarium for the Macintosh). These graphics and text adventures have been ported over from the Apple II series. They are authored by renowned writers of fiction and science fiction and have generally been favorably received. Reviews in the December Journal.

CHAMPIONSHIP BOXING (Sierra On-Line for the Macintosh). A strategic simulation of boxing which can be played in 3 modes (arcade, simulation, and strategy). The program contains a roster of many great champions from the past and present. You can create your own superboxer and the detail from a strategy standpoint is impressive. Review in the December Journal.

ULTIMA I (Sierra On-Line for the Atari). This version of the classic beginning of the ULTIMA series would not work

on any of my Apple computers. I'm trying to figure out why. I'll report next month. Seriously, this program has been mentioned before in the Journal and no review will be forthcoming, but my nephew who can run the program will demo it to his friends.

November Meeting

The next GAMESIG meeting will be on Thursday, November 7, beginning at 7:30 p.m. at the Office. ☺

BALANCE OF POWER: A Review

by Richard Bollar

Overview

Balance of Power (Mindscape) for the Macintosh is a geopolitical simulation of bi-polar superpower confrontation. The game lets you become either the President of the United States, or the Soviet Premier. The object is not to win, rather to survive. Winning, which would certainly involve nuclear war, is not desirable; in fact you don't even get the simple satisfaction of watching the world turn to ash. Since you can't win, the basic idea is to maintain the status quo and to terrorize the minor third world countries, in an eight year period from 1986 through 1994. The player has an opportunity to increase his prestige and influence among the countries of the world, while at the same time, decreasing the prestige of his opponent. Your policy options are dependent upon the level in which you are playing. The introductory level is limited to military actions and reactions. You can send in military aid or "advisors." The intermediate level adds economic aid and political destabilization policy. Effectively, you can buy governments by monetary infusions to their economy, or you can send in the CIA or KGB to affect your policy in a more covert manner (i.e. assassination or Coup d'Etat). The full-blown expert level adds diplomatic pressure and treaties which the author terms Finlandization, the act of making a country feel isolated so that it will align itself with yours.

Playing the Game

The basic play screen is a simplified map of the World. Not all countries are present, but their absence does not detract
contd.

from game play. At the beginning of each year, the map shows a summary of major events occurring as a result of the previous year's activity. After review of this map and other maps which show spheres of influence, military and economic commitments, destabilizations, and other helpful information, you will want to see the summary of the opponent's activity for the current year. When viewing this information, you will have the opportunity to question actions which you feel are in violation of your interests. Your opponent can either back down or challenge you. You can respond by either backing down or escalating. This goes back and forth, building the importance of the crisis, until one side backs down, or the world ends with an escalation into superpower warfare (The End). Normally a crisis will be resolved at a much lower level because one side or the other will decide that the situation is simply not important enough to end the World. Exceptions would include the United States sending military advisors to Poland, or the Soviet Union invading Mexico.

After challenging your opponent's actions, it is your turn. You can now go to each country and make policy. Policy is made by clicking on a country, and selecting an option from the Make Policy menu. The first time you play the game, there is the temptation to go into every country giving massive amounts of aid and troops to your allies, while fomenting revolution and pestilence in the lands of your enemies. You may be tempted to put about an hour into this, but don't get carried away, because after you enact your brilliant scheme for World domination, and select the next turn option, the plan will start to unravel. Your opponent will take you to the mat over most asinine policies, and is perfectly willing to nuke the world if you don't get your Marines out of Poland (assuming you are the U.S., of course).

Problems

Although the game has several fine points, I found a significant group of problems. The most significant is my belief that the game is impossible to complete. After many hours of testing, there was not one game which lasted the complete eight year period. Actually, there were very few games which lasted past 1987. However, probably in anticipation, a game can be restarted right before the move which started the holocaust.

Also, since I played as the Americans for most games, it seems that the Soviets were more hard-nosed than I could be. Repeatedly I witnessed the end as the Soviets introduced combat troops into Mexico, and refused to back down. Actually, I could have avoided a war by backing down ourselves, but what United States president would allow the Soviets to maintain a force of 500,000 soldiers in Guadalajara? It seemed that the opposition's response was erratic, at best. Chris Crawford, the author, says in the manual that the computer analyzes both sides of each conflict, and then decides which side will find the event to be more important. If the computer decides that the issue is more important, it will escalate to a war. It doesn't seem to have an algorithm to determine the importance of a crisis. It should also be pointed out that the one time that I played as the Soviets, the Americans were also hard nosed and erratic. Many a game was ended over treaty agreements with South American countries. The game, however, is extremely complex, and it would

probably take many more hours of play before all of its subtle interrelationships are fully comprehended.

Finally, I am down to nitpicking. Every command is entered through the mouse. There are no keyboard shortcuts in this version. To complete a session of policy changes on one country, requires as many as ten menu selections, and 25 mouse clicks. It seemed to me that there could be a single page menu for each country which would allow all policy decisions to be made from it. Unfortunately, you could not make policy decisions while looking at the all-important statistics screen, which MUST be viewed for each country every turn. In addition the program does not seem to take advantage of a 512K machine. The response times between menu selections can be agonizingly slow. I solved this problem by adding Nevins Microsystems TurboCharger®.

Okay, I Like it, but Will Anyone Else?

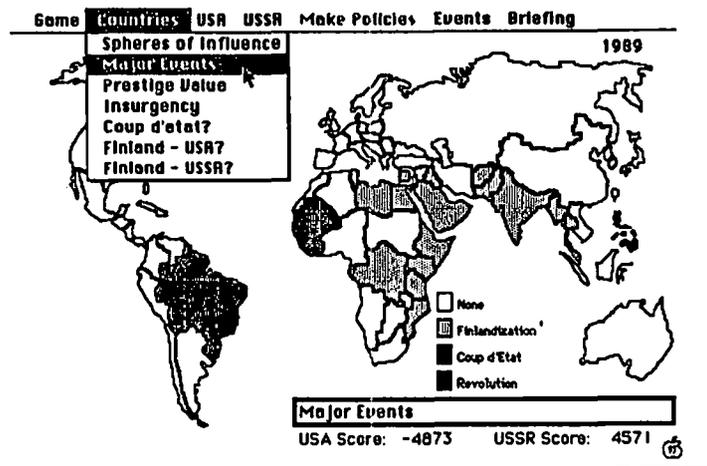
Balance of Power is unequivocally the most sophisticated geopolitical simulation available to the general public. It is certainly more sophisticated than the much touted Inter-Nation Simulation written by Harold Guetzgow at Northwestern University in the early 1960's. After reading the documentation, I was disappointed that I didn't have a gamma test copy rather than the beta test I was using. The documentation states that earlier versions were considerably more sophisticated, and more accurate, but exceedingly more difficult for the average game player to master. The original version included multipolarity and third world neutrality among other features. Crawford states:

"Unfortunately, this multipolar view of the world is just too cerebral for most game players. It has something to do with our expectations of games; a mature, otherwise sophisticated adult will sit down with this game and ask, "How do I nuke the Commies?" Games, like stories, must have conflict, but people have been so inundated with the brutal, violent conflict standard in computer games that they are unable to grasp the subtle, indirect conflict arising from a multipolar world."

Despite Crawford's reservations I think the added realism resulting from multipolar conflict could be a super addition to the game, and also one that would not make it unplayable for most people. Even the current version will not be enjoyable for many people.

So who would like this game? Well, it is probably easier to describe who will not like the game. It is not for arcade gamers and not for fantasy/role playing gamers (Wizardry, Ultima). The only group of people who we feel will definitely enjoy the game are chess players and some war gamers, although this is most certainly not a war game (or peace game). Most of the game is situation analysis, with the moves being a brief interlude between analyses. The best analogy is Avalon Hill's Diplomacy, but Balance of Power is infinitely more complex. Maybe the better question is not who will enjoy this game, but rather who will find this game useful. As a teaching tool, I feel that Balance of Power will be very useful to impart the complexities of decision-making and the fabric of geo-political relations.

contd.



GHOST MANSION: A Review

by Charles Don Hall

GHOST MANSION (Crystalware: 1985 for Apple // series; list price \$49.95) is a fantasy role-playing game recently donated to the club. According to the documentation, it is set in 20th century Bavaria, in a haunted palace built in 1886 by the mad Baron Von Ludwig. (Also according to the documentation, the game was inspired by the works of H.P. Lovecraft and Stephen King. I myself was reminded more of the banquet scene from Richard O'Brien's "Rocky Horror Picture Show," but that's probably just my personal bias.)

Reading further into the documentation reveals that the game has everything the a game of this type should have: mazes, wine cellars, rotting corpses, secret passages, 30 useable items, multitudinous treasures, and a Vorgan Slime Creature. It was thus with great excitement that I booted up the game to review, on a stormy night in July.

I eagerly awaited the initial graphics display, after which I was shown a list of 5 character attributes. Action paused briefly, as I went to the manual to find out what "Cunning" and "Courage" were good for (they turned out not to be documented).

Next, I was asked to buy provisions from a list of 15 items, randomly selected each game from a possible 30; they ranged from 9 Lives Cat Food to an M16 automatic rifle. It was at this point that I noticed that the manual supplied was written for a Zenith Z-100 computer, and instructions given for purchasing supplies simply did not work on the Apple keyboard. A few minutes of pounding at random revealed the correct method.

After provisioning, I continued on. This took, by my watch, 93 seconds--not counting the time it took me to do the 3 disk swaps. In other words, the program is written in BASIC, and uses standard DOS disk access routines. At long last, I was greeted by a hi-res view of a human figure standing in a garden, facing stone steps leading into the mansion proper. To the author's credit, the graphics were much better than one would expect from a BASIC program, although the

scenery items were too small, and the black background tended to dominate the picture. I decided to equip myself with weapons at this point, and banged on the keyboard for a few minutes before I discovered the "U" (use?) key.

After I was through with the text screen, I hit the key to continue the actual game. I was rewarded with a picture of the room I was in. Which the program promptly erased. And then redrew. After 22 seconds of spinning the disk drive, I'm afraid that I reacted rather badly. . .

I wandered around for awhile (it also takes 22 seconds to draw the next room after leaving the current one) and found my first treasure: "You find a music box. It plays 'The Way We Were'". Now this could have been a good move on the author's part, because that was my high school graduating class's song, and I still go into a blind rage every time I hear it. I was therefore in the right mood to kick around a couple of orcs; of such things are favorable reviews made. About 50 seconds later (as in 22 times 2 plus 6), I ran into, not a satisfying bunch of sword-fodder orcs, but a werewolf. We closed, and I started pumping bullets into him. I quickly realized that I had no idea how much damage he could take, how much I was doing, or even if I was hitting at all. I could have found out how much damage he was doing to me--provided I'd felt like going into the status page and wasting 22 seconds getting back out afterwards. I got killed. To add insult to injury, there is no "save game" function. When you get killed, you start over from the beginning.

In a later game, I found a treasure-document which said that the palace had 370 rooms. With another program, I might have been impressed; with this one, all I could do was collapse onto the floor, whimpering "370 times 22 (not counting backtracking or actual playing)."

You get the idea. I never got to see Tarkan the Pit Beast or the Vorgan Slime Creature, or, in fact, anything past the first two dozen rooms: That's how fast I lost interest in the whole business. Which is is shame; this game could be considered better than, say, SWORD OF KADASH (which it resembles somewhat) if the authors had been willing to invest in something as small as a BASIC compiler and some fast disk routines.

Not recommended. 

THE HOLY GRAIL: A Review

by Charles Don Hall

THE HOLY GRAIL (Hayden Software, 1985: list price about \$40) is the first in the TimeQuest series of text adventures. Versions are currently only available for 128K Apple //e's and //c's; a Macintosh version is apparently in the works.

First of all: this game is not for beginners. After wandering around for a few minutes, you'll see that the nearby region consists of three paths which end in dead ends (until you find the items needed to solve the associated puzzles), and a fourth path, which plunges straight into one of the nastiest contd.

mazes-of-twisty-passages I've seen in my life. Mapping is especially difficult as there is a real-time limit: If you haven't found an exit in X number of seconds, you're dead. Fortunately for those of us who hate to map mazes, it doesn't take too long to find an exit with a fun puzzle associated. Be warned that some exits are harder to find than others, and you'll have to map the whole maze out before you can be sure you've found everything.

After this, things get harder and more interesting. I particularly liked the puzzle associated with the hidden fortress, which, while difficult, could be solved once you figured out the internal logic of the situation. I was reminded of some of the better puzzles in Infocom's STARCROSS. I don't want to give too much away, but I will say that it is based loosely on 8088 Assembly Language. [The 8088 is the microprocessor used by the IBM PC, which this game was originally written on. In all fairness, the puzzle could not be easily adapted to the 6502 or 68000 microprocessors.]

Now to my complaints... Andy Rooney once did an essay where he discussed the saying "Build a better mousetrap and the world will beat a pathway to your door." He agreed with this, but was saddened that so few people really understood its meaning: Too many inventors think that building a better mousetrap means "painting it a different color and calling it the Official Mickey Mousetrap." That holds true here. A newsletter comes with the package; a large portion of it consists of the author's patting themselves on the back over their clever use of "real time" features. The best way to explain "real time" is with an example: In ZORK I, you can find yourself sailing down a river in an inflatable raft. The current carries you to different locations, and if there is nothing useful where you are, the "wait" command will cause time, the river, and the raft to advance. THE HOLY GRAIL also has a river, but no wait command. You must use the "real time" features, i.e., physically pace around the room waiting for time to pass and the current to carry you to the next location. This takes a while, and the river has enough useless locations to make the process boring after the second time. My philosophy: I don't need a program to force me to lie around counting my teeth and waiting for an anti-climactic event to occur. That's what I have a telephone for.

What else do "real time" features mean? I'm glad you asked. It means that the disk drive starts spinning when you're in the middle of typing a line, so that the beggar in a room 10 locations away can be moved to a different room 20 locations away. Since the program will not accept keyboard input when the disk drive is running, this is not only irritating but rude.

By my stopwatch, this game takes almost 2 minutes to load, and saving or loading a game takes about 20 seconds, which is far too long for a program of this size. About the nicest thing I can say is that it's faster than GHOST MANSION.

The parser:

TALK PRINCESS: "You can't talk princess."

EXAMINE PRINCESS: "The word examine is not in your vocabulary.

LOOK PRINCESS: "You can't look princess."

[20 other commands that don't work.]

HELP PRINCESS: [This is the only command I have

found that will let you interact with her; there is no way to discover it except trial-and-error.]

There have been worse parsers, I suppose, but this one comes nowhere close to the level of sophistication Infocom has caused people to expect. Also, the things they want us to believe are Macintosh-type windows are really only boxes drawn around text blocks. To be quite honest, I see no reason why this program needs 128K of memory to run, especially considering the amount of disk access it does.

SUMMARY: This game, while not for beginners, has some very clever puzzles and would probably be enjoyed by most seasoned adventurers. I would recommend it without hesitation were it not for the irritating "real time" features, the weak parser, and the general flabbiness of the code.

Recommended with moderate reservations; say 6.5 on a scale of 1 to 10. 

INCA FOR THE APPLE //e & //c: A Review by K. C. Mulcahy

This interactive, real-time adventure game from Hayden Software is interesting and challenging. You need 128K bytes of RAM, an 80-column card, one disk drive and a monitor. It takes almost two minutes and turning the disk over to get the game started. The initial "title screens" don't show you any interesting graphics.

After a two screen prologue, you (the "adventurer") are knocked out by your adversaries and awaken in a lifeboat. From then on, you're on your own. A shark circles your lifeboat. A condor flies around and sometimes steals things you leave behind. Earthquakes "RRRUMMMBLE". These real-time actions affect the game and keep you hurrying along. On the other hand, the programmed reactions to your commands are somewhat slow-paced and keep you from going as fast as you might want. Moreover, all these real-time interruptions take over the disk drive and you may find you've lost a letter or a word from the command you were keying in. Lesson: read the command before hitting the return key. Hayden tells you the movement commands and some special commands. You are left to figure out the other verbs that "work" on your own. The programmed responses to rejects are sometimes clever. You want to find treasures and overcome the bad guys. You can score 320 points and advance from "Pen Cleaner" through "Llama Herder", "Native Chieftain", and "Jungle Guide" to "Royal Inca".

I found the puzzles challenging. Some I may never solve unless I get hints from a better gamester than I. Some are overdone: the encounter with the ancient mariner seems far too long - eleven separate blocks to find out that you really are "lost". The journey through the cornfield, called "The Maize", is also too long. It consists of at least ten separate blocks that turn you around so that you move off or stay put at random.

One personal nitpick: I found the responses to the "look"
 contd. on pg 53

Picture Mover

by Andy Scheck

Here is a neat utility program that lets you perform some interesting graphics effects with bit images. I wrote this program originally to quickly place small (84 x 64 bit) pictures in random locations on the Apple][hi-res screen. As it stands now, the program will work with images from a single byte in size, all the way up to a full screen. *Picture Mover* is completely position independent and so should work easily with all the ampersand linkers—and has been running for months linked with AMPERCHART by the WORKBENCH on CHART'N GRAPH TOOLBOX from Roger Wagner's Publishing, Inc.

For speed, *Picture Mover* works with images on byte boundaries. It will do the best that it can at trying to place (or pull) your picture centered about any desired location on the screen. If the image would be partially off the screen, its center is moved so that the image stays completely on the screen.

The many parameters give *Picture Mover* its flexibility. The first is the address of the picture buffer in memory. This is the location to which the picture is moved from the screen or where the picture comes from when placed onto the screen. For picture saves, this address had better point to free memory (enough to hold the entire picture) because *Picture Mover* will try to write over anything—DOS, page 0, the stack, your program, itself!. For moves to the screen, the address can be anywhere (except possibly the I/O area \$C000 - \$C7FF) and will let you do things like scroll through memory — displaying it as graphics. You can also address the picture buffer at locations other than its beginning. This allows partial images to be used to give the effect of an image appearing (disappearing) from the top or bottom of the screen.

The second and third parameters are the picture width in bytes and picture height in pixels respectively. The width can range from 1 to 40 and the height from 1 to 192. To display a picture 5 bytes wide and 20 pixels high, residing in a buffer at 24576, in the center of the screen, use:

```
& 24576, 5, 20, 140, 96, 1
```

The picture's top half would be displayed with:

```
& 24576, 5, 10, 140, 96, 1
```

and the bottom half would be displayed with:

```
& 24576 + 5 * 10, 5, 10, 140, 96, 1.
```

If it's not obvious from the above examples, the fourth and fifth parameters are the screen x and y coordinate about which the picture is to be centered. Note that the y value is measured from the bottom of the screen as 0 to the top as 191—the normal way of doing things, as opposed to the 0 at the top the way the Apple wants to address it. *Picture Mover* tries to do its best to put the picture center at your

coordinates, given that the picture is required to not only be entirely on the screen, but also aligned on a byte boundary.

The last parameter is the move mode; this is the one that does all of the work. Its legal values are:

- 1 copy picture from screen into memory
- 0 clear picture area on screen (no move performed)
- 1 copy picture from memory to screen
- 2 move picture from memory and perform a bit-wise AND with the screen
- 3 move picture from memory and perform a bit-wise OR with the screen
- 4 move picture from memory and perform a bit-wise EOR with the screen
- 5 invert color bit (bit 8) on all bytes in picture area - otherwise ignore command

-1 and 1 are the standard workhorses. 0 allows a quick rectangular erase. 2, given the correct picture "mask", gives a quick arbitrary region erase. Likewise, 3 gives an arbitrary region fill, and 4 an arbitrary region invert (black to white and white to black); use this mode to display a picture and then use it again to remove the picture, all without disturbing the original screen contents. 5 is used to get double duty out of your colors; a blue car can be quickly turned green or a violet balloon can be turned orange. Also, that same violet balloon can be displayed as green, by just placing it on an even byte boundary—if it was created on an odd.

Since you have to know where your picture is coming from/going to (A) and its dimensions (width—WD and height—HT), it is a simple process to save it to disk. Just use something like:

```
PRINT CHR$(4);"BSAVE MYPIC,A";  
A;"L";WD*HT
```

An example of a Macintosh type of "pull-down menu" could be implemented by using the non-displayed graphics screen to create and save the menus, then just before dropping the menu on the displayed screen, save the contents of the screen that are about to be covered by the menu. Then using a white mask, the width of the menu but only 8 or 9 pixels high (enough to cover a single line of text), use mode 4 (EOR) while monitoring a joystick or mouse to show the menu selection. When the menu is no longer selected, just restore the original contents of the screen.

Be sure to protect your picture buffers from strings and variables by using HIMEM: or LOMEM: or just moving your program up above them.

The assembly listing uses Merlin syntax. Note also that the code is "self-modifying".

contd.

```

*****
*          MOVE PIC.RM          *
*          *                    *
*          BY ANDY SCHECK      *
*          SAT JAN 5 7:10:45 PM *
*          *                    *
*****
* RM SYNTAX:                  *
*   &"MV",A,W,H,X,Y,D        *
*
* WHERE:                      *
* A = ADDRESS OF PICTURE IN   *
*   MEMORY                    *
* W = PICTURE WIDTH IN BYTES *
* H = PIC HEIGHT IN PIXELS   *
* X = X COORD OF PIC CENTER  *
*   ON THE SCREEN            *
* Y = Y COORD OF PIC CENTER  *
*   ON THE SCREEN            *
* D = MOVE DIRECTION         *
*   D = -1 (COPY FROM SCREEN) *
*   D = 0 (CLEAR SCREEN)     *
*   D = 1 (COPY TO SCREEN)   *
*   D = 2 (AND WITH SCREEN)  *
*   D = 3 (OR WITH SCREEN)   *
*   D = 4 (EOR WITH SCREEN)  *
*   D = 5 (TOGGLE COLOR)    *
*   OTHERWISE DO NOTHING    *
*
*****

```

```

PICWB EQU 12
PICH EQU 64
PICWP EQU PICWB*7
ORAINDOP EQU $11
GRAFLOC EQU $26
SCRNWB EQU $28
ANDINDOP EQU $31
EORIMMOP EQU $49
LINNUM EQU $50
EORINDOP EQU $51
LINES EQU $93
PICLOC EQU $94
TEMP EQU PICLOC+2
FACMO EQU $A0
FACLO EQU $A1
LDAIMMOP EQU $A9
SCRNH EQU $C0
XSAVE EQU $E0
YSAVE EQU $E2
HORZCOR EQU $E5
NOPOP EQU $EA
STACK EQU $0100
SCRNWP EQU $0118
FRMNUM EQU $DD67
CHKCOM EQU $DEBE
AYINT EQU $E10C
IQERR EQU $E199
COMBYTE EQU $E74C
GETADR EQU $E752
HPOSN EQU $F411
INCRY EQU $F504
RETURN EQU $FFCB

```

* FIND LOCATION IN MEMORY. *

```

PHP
SEI
JSR RETURN
OFFPLUS1 TSX
DEX
CLC
LDA STACK,X

```

```

ADC #<BASE-OFFPLUS1 ;low byte
STA TEMP
LDA STACK+1,X
ADC #>BASE-OFFPLUS1 ;high byte
STA TEMP+1
PLP

```

*

* GET PIC STORAGE ADDRESS. *

```

JSR FRMNUM
JSR GETADR

```

*

* GET PIC WIDTH IN BYTES, *
* AND UPDATE THE CODE *
* THAT USES THIS VALUE. *

```

JSR COMBYTE
TXA
BNE WNOTZERO
ERROR JMP IQERR ;0 should not be used
WNOTZERO CMP #SCRNWB+1
BCC WIDTHHOK
LDA #SCRNWB
WIDTHHOK LDY #OFF1-BASE+2
STA (TEMP),Y ;put picwb
SBC #0
LDY #OFF2-BASE+2
STA (TEMP),Y ;put picwb-1
ADC #0 ;find picwp = picwb*7
STA XSAVE
STA YSAVE
LDA #0
STA XSAVE+1
ASL XSAVE
ASL XSAVE
ASL XSAVE
ROL XSAVE+1
SEC
LDA XSAVE
SBC YSAVE
STA XSAVE
LDA XSAVE+1
SBC #0
STA XSAVE+1
LDA XSAVE
ROR XSAVE+1
ROR
LDY #BASE-BASE+2
STA (TEMP),Y ;put picwp/2
ROL
ROL XSAVE+1
SEC
LDA #<SCRNWP
SBC XSAVE
LDY #TOOBIG-BASE+2
STA (TEMP),Y ;put scrnwp-picwp
LDY #NOTBIG-BASE+2
STA (TEMP),Y ;put scrnwp-picwp
LDA #>SCRNWP
SBC XSAVE+1
LDY #OFF3-BASE+2
STA (TEMP),Y
LDY #OFF4-BASE+2
STA (TEMP),Y

```

*

* GET PIC HEIGHT IN PIXELS, *
* AND UPDATE THE CODE *
* THAT USES THIS VALUE. *

```

JSR COMBYTE
TXA
BEQ ERROR ;0 is bad value
CMP #SCRNH+1
BCC HEIGHTHOK
LDA #SCRNH
HEIGHTHOK STA LINES ;put pic

```

contd.

```

LSR
LDY #OFF5-BASE+2
STA (TEMP),Y ;put pich/2
ROL
EOR #$FF ;take one's complement
ADC #SCRNH+1
LDY #OFF6-BASE+2
STA (TEMP),Y ;put scrnh-pich
CLC
ADC #1
LDY #OFF7-BASE+2
STA (TEMP),Y ;put scrnh-pich+1
*
*****
* GET X COORDINATE OF PIC *
* CENTER, ADJUST TO LEFT, & *
* MAKE SURE IT IS IN RANGE. *
*****
JSR CHKCOM
JSR FRMNUM
JSR AYINT
SEC
LDA FACLO
SBC #<PICWP/2 ;half the picture width
STA XSAVE
LDA FACMO
SBC #>PICWP/2 ;always 0
STA XSAVE+1
BEQ NOTBIG
BMI TOOSMALL
LDA #<SCRNWP-PICWP
STA XSAVE
OFF3 LDA #>SCRNWP-PICWP
STA XSAVE+1
BPL XOK ;always taken
TOOSMALL LDA #0
STA XSAVE
STA XSAVE+1
BEQ XOK
NOTBIG LDA #<SCRNWP-PICWP
SBC XSAVE
OFF4 LDA #>SCRNWP-PICWP
SBC XSAVE+1
BCC TOOBIG
*
*****
* GET Y COORDINATE OF PIC *
* CENTER, ADJUST TO TOP, & *
* MAKE SURE IT IS IN RANGE. *
*****
XOK JSR COMBYTE
STX YSAVE
SEC
LDA #SCRNH-1
SBC YSAVE
BCC TOOHIGH
OFF5 SBC #PICH/2
BCC TOOHIGH
OFF7 CMP #SCRNH-PICH+1
BCC YOK
OFF6 LDA #SCRNH-PICH
BNE YOK ;always taken
TOOHIGH LDA #0
YOK STA YSAVE
*
*****
* GET MOVE TYPE. *
*****
JSR CHKCOM
JSR FRMNUM
JSR AYINT
LDA FACMO
BEQ NOTNEG
CMP #$FF
BEQ NEGATIVE
NOMOVE RTS ;no move
NEGATIVE CMP FACLO
BNE NOMOVE
LDA #PICLOC

```

```

LDY #COPYLINE-BASE+2
STA (TEMP),Y ;set from direction
LDA #LINNUM
LDY #OFF8-BASE+2
STA (TEMP),Y ;set to direction
BNE NOMASK ;always taken
LDA FACLO
BNE NOTCLEAR
LDA #PICLOC
LDY #OFF8-BASE+2
STA (TEMP),Y ;set to direction
LDA #LDAIMMOP
LDY #MASKSTUF-BASE+1
STA (TEMP),Y ;set lda #0
INY
LDA #0
STA (TEMP),Y
BEQ FINDPIC ;always taken
NOTCLEAR CMP #6
BCS NOMOVE
PHA
LDA #LINNUM
LDY #COPYLINE-BASE+2
STA (TEMP),Y
LDA #PICLOC
LDY #OFF8-BASE+2
STA (TEMP),Y
PLA
CMP #1 ;copy code
BNE USEMASK
LDA #NOPOP
LDY #MASKSTUF-BASE+1
STA (TEMP),Y
INY
STA (TEMP),Y
BNE FINDPIC ;always taken
USEMASK PHA
LDA #PICLOC
LDY #MASKSTUF-BASE+2
STA (TEMP),Y
PLA
DEY
CMP #2
BNE NOTAND
LDA #ANDINDOP
STA (TEMP),Y
BNE FINDPIC ;always taken
NOTAND CMP #3
BNE NOTOR
LDA #ORAINDOP
STA (TEMP),Y
BNE FINDPIC ;always taken
NOTOR CMP #4
BNE NOTEOR
LDA #EORINDOP
STA (TEMP),Y
BNE FINDPIC
NOTEOR LDY #MASKSTUF-BASE
LDA #PICLOC
STA (TEMP),Y
INY
LDA #EORIMMOP
STA (TEMP),Y
INY
LDA #$80
STA (TEMP),Y
*
*****
* FIND ADDRESS OF TOP-LEFT *
* CORNER OF PICTURE. *
*****
FINDPIC LDX XSAVE
LDY XSAVE+1
LDA YSAVE
JSR HPOSN
*
*****
* MAIN LOOP. *
*****

```

contd. on pg 51

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I SPEAK SPANISH TO MY IMAGEWRITER

by Richard M. Rowell

I like my Imagewriter printer. It does what it is supposed to do ... it places dots onto paper somewhat as I had expected them to appear. I have another printer: a '57 Chevrolet (AKA Epson MX-80). I learned to drive/print on the latter and it was simple, partially because it offered me so few choices. But now, with the '85 sports model I can direct the printer to feed paper backward, customize the spacing between dots, ultracondense, unslash zeros (as we did in '57), and habla Español.

A few problems, however, lurk on the near horizon. The commands to make this DeLorean do what it can do are complex: a handful of ESCape codes with several CONTROL codes thrown in for flavoring. You mean if I want Français I must enter ESC-Z CNTRL-A CNTRL-@ ESC-D CNTRL-F CNTRL-@ ? I thought the French were smooth, light and subtle. And the Imagewriter does make me feel like I'm in a French restaurant ... there are at least sixteen type sizes to choose from.

This printer has begun also to inject social problems into my (previously calm) life. First, I have a friend who just bought an Imagewriter. I've been an owner longer than he has; he has never read a manual (on anything) in his life; I read printer manuals while I'm on vacation at the beach. Therefore, he is always asking questions about, "How do you make it do ... ?".

And that's only the domestic problem. Internationally the Imagewriter has caught me by surprise. For example I entered and ran Jim Kellock's foreign character set-ups from the August WAP Journal ("Set-Up for Imagewriter Foreign Character Sets"). He had everything perfect except for omitting one little CNTRL-D from the Italian character set commands. I used to have a close Italian friend. Now she won't speak to me because I use my printer for all languages except hers. (My wife is Malaysian. What'll happen when she finds out that I can send romantic notes to Nancy Muñoz in Spanish, but I can't do the same for her in Bahasa Melayu? Oh well, I have a Swedish friend who might console me if I first remember to enter a sequence of ESC-Z CNTRL-B CNTRL-@ ESC-D CNTRL-E CNTRL-@.

In an attempt to protect any readers from the turmoil that has befallen me I am including three little programs in AppleSoft BASIC that attempt to gain control over the Imagewriter printer.

The first will print out my name in sixteen different type sizes. Change line #28 to use your own name.

The second will set up your printer to use any of the available foreign character sets, and the third demonstrates the Spanish character set as an example. Again, change line #28 to try different specialized characters.

You will note the long list of REMs that I have repeated in each program (lines 10-24). The idea came from this WAP Journal. I now store frequently used subroutines as text files, then EXEC them onto my main program. Easy way to add a title box to the beginning of a listing.

And a final by-the-way: I really don't know how to stop slashing zeros. My Imagewriter manual tells me to send ESC-Z CNTRL-A CNTRL-@, but the stubborn printer keeps slashing away, 1985's style I guess.

Listing #1

```
10 REM +=====+
11 REM |
12 REM |           ImageWriter
13 REM |           Pitch
14 REM |           Samples
15 REM |
16 REM |-----|
17 REM |   (c) 1985
18 REM |   Dr. Richard M. Rowell
19 REM |   Box 8005
20 REM |   Rockville, MD. 20856
21 REM |   301 770-5260
22 REM |-----+
23 REM
24 REM
25 TEXT : HOME : CLEAR
26 D$ = CHR$(13) + CHR$(4)
27 PSLOT = 1
28 A$ = "Richard Mayo Rowell"
29 ESC$ = CHR$(27)
30 GOTO 49
31 :
32 :
33 REM *** Printing Subroutine ***
34 :
35 FOR I = 1 TO 8
36 READ B$(I),CODE(I),IN(I)
37 PRINT ESC$; CHR$(78); CHR$(15);
38 PRINT B$(I); " ";
39 FOR J = 1 TO 24 - LEN (B$(I)): PRINT "-"; NEXT J
40 HTAB 28
41 IF FLAG = 1 THEN PRINT CHR$(14);
42 PRINT ESC$; CHR$(CODE(I));A$
43 NEXT I
44 RESTORE : RETURN
45 :
46 :
47 REM Indicate Printer Slot/Port
48 :
49 PRINT "Your printer should be in ";
50 INVERSE : PRINT "SLOT/PORT ";PSLOT;; NORMAL
51 PRINT : PRINT "If not, change line #27."
52 :
53 :
54 REM *** Print ***
55 :
56 PRINT D$;"PR#";PSLOT
57 PRINT ESC$;"L005": REM Left Margin = 5
58 FLAG = 1: GOSUB 35:FLAG = 0: GOSUB 35
59 PRINT D$;"PR#0"
60 END
61 :
62 :
63 DATA Extended,110,9
64 DATA Pica,78,10
65 DATA Pica proportional,112,0
66 DATA Elite,69,12
67 DATA Elite proportional,80,0
68 DATA Semicondensed,101,13.4
69 DATA Condensed,113,15
70 DATA Ultracondensed,81,17
```

contd.

Listing #2

```

10 REM +-----+
11 REM |                               |
12 REM |                               |
13 REM |                               |
14 REM |                               |
15 REM |                               |
16 REM |-----|
17 REM | (c) 1985                      |
18 REM | Dr. Richard M. Rowell        |
19 REM | Box 8005                      |
20 REM | Rockville, MD. 20856       |
21 REM | 301 770-5260                |
22 REM +-----+
23 REM
24 REM
25 TEXT : HOME : CLEAR
26 D$ = CHR$ (13) + CHR$ (4)
27 PSLOT = 1
28 A$(1) = "Foreign Character Fonts"
29 A$(2) = "for the ImageWriter Printer"
30 A$(3) = "by"
31 A$(4) = "Richard M. Rowell"
32 A$(5) = "*****"
33 FOR I = 1 TO 5:H = 40 - LEN (A$(I)):H(I) =
INT (H / 2): NEXT I
34 SYMBOL$ = "{ [ ] } \ | @ # ~"
35 :
36 :
37 REM Title
38 :
39 FOR I = 1 TO 5
40 HTAB H(I)
41 PRINT A$(I)
42 NEXT I
43 POKE 34,5
44 FOR I = 1 TO 7
45 READ FT$(I)
46 FOR J = 1 TO 4
47 READ CODE(I,J)
48 NEXT J
49 NEXT I
50 :
51 :
52 REM Options Menu
53 :
54 POKE 33,27: POKE 32,13
55 VTAB 8
56 FOR I = 1 TO 7
57 INVERSE
58 PRINT " :I: "; NORMAL : PRINT " ";
59 PRINT FT$(I)
60 PRINT
61 NEXT I
62 POKE 32,0: POKE 33,40
63 VTAB 23: HTAB 8: PRINT "----> ";
64 GET F$: PRINT F$
65 F = VAL (F$)
66 IF F < 1 OR F > 7 THEN 63
67 :
68 :
69 REM *** Print ***
70 :
71 PRINT D$;"PR#";PSLOT
72 FOR J = 1 TO 4
73 PRINT CHR$ (CODE(F,J));
74 NEXT J
75 PRINT FT$(F):: HTAB 20
76 PRINT SYMBOL$
77 FOR J = 1 TO 4
78 PRINT CHR$ (CODE(I,J));
79 NEXT J
80 FOR J = 1 TO 4: PRINT CHR$ (CODE(1,J)); NEXT J
81 PRINT D$;"PR#0"
82 VTAB 7: CALL - 958: VTAB 11
83 PRINT "Your ImageWriter is now set up for"
84 PRINT FT$(F);" characters."
85 FOR I = 1 TO LEN (FT$(F)): PRINT "-"; NEXT I:

```

```

PRINT
86 PRINT : PRINT " (See ImageWriter manual for codes.)"
87 POKE 34,0: VTAB 23
88 END
89 :
90 :
91 DATA American,27,90,7,0
92 DATA British, 27,68,3,0
93 DATA French, 27,68,6,0
94 DATA German, 27,68,4,0
95 DATA Italian, 27,68,1,0
96 DATA Spanish, 27,68,7,0
97 DATA Swedish, 27,68,5,0

```

Listing #3

```

10 REM +-----+
11 REM |                               |
12 REM |                               |
13 REM |                               |
14 REM |                               |
15 REM |                               |
16 REM |-----|
17 REM | (c) 1985                      |
18 REM | Dr. Richard M. Rowell        |
19 REM | Box 8005                      |
20 REM | Rockville, MD. 20856       |
21 REM | 301 770-5260                |
22 REM +-----+
23 REM
24 REM
25 TEXT : HOME : CLEAR
26 D$ = CHR$ (13) + CHR$ (4)
27 PSLOT = 1
28 A$ = "Sejorita Nancy Mujoz"
29 PRINT A$;" was printed"
30 FOR I = 1 TO LEN (A$): PRINT "-"; NEXT I: PRINT
31 PRINT "using Spanish characters."
32 PRINT D$;"PR#";PSLOT
33 :
34 :
35 REM *** Print Options ***
36 :
37 REM Delete any lines between 33-36 that you don't want.
38 REM Otherwise you will get Boldface/Headline/
Ultracondensed
39 :
40 PRINT CHR$ (27);"!"; REM Boldface on
41 PRINT CHR$ (14);":": REM Headline
42 PRINT CHR$ (27);"n"; REM Extended
43 PRINT CHR$ (27);"N"; REM Pica
44 PRINT CHR$ (27);"p"; REM Pica proportional
45 PRINT CHR$ (27);"E"; REM Elite
46 PRINT CHR$ (27);"P"; REM Elite proportional
47 PRINT CHR$ (27);"e"; REM Semicondensed
48 PRINT CHR$ (27);"q"; REM Condensed
49 PRINT CHR$ (27);"Q"; REM Ultracondensed
50 :
51 :
52 REM *** Print Spanish Characters ***
53 :
54 PRINT CHR$ (27); CHR$ (68); CHR$ (7); CHR$ (0);
55 PRINT A$
56 PRINT D$;"PR#0"

```

I have these three listings as text files since I "program" in BASIC on a word processor. Give me a call and I'll transfer these files to your modem.

I am getting ready to re-assign the 107 Applesoft commands to Spanish words - using Beagle BASIC, also DOS commands to Spanish using DOS BOSS. Before I start the project, does anyone already have BASIC written in Spanish? (No use reinventing the [square] wheel.) Leave a BBS message for WP2208 or call me at 651-5801 (O) or 231-9086 (H). ☺

FIRST IMPRESSIONS: A Look at the Brother CE-50 Printer

by Glenn Harris

You've probably seen it in catalog showrooms as the Correctronic 50 or CE-50. An electronic daisywheel typewriter that you can connect to your Apple //e by adding the IF-50 external interface. A stand-alone typewriter than can now pull double duty. For the budget-conscious, it seems pretty good on the surface, but does it really work that way?

Well, yes and no. Sort of. It depends. Maybe. Let's look at the CE-50 in a little more detail.

What are the advantages of this kind of setup? The main advantage is that you actually do get both a typewriter and printer for about \$470 at current catalog showroom prices (\$320 for the CE-50 and \$150 for the IF-50 external interface). And this could be useful for some. There are times when only a typewriter will do (did you ever try to fill out a passport application with the typical word processing package?), and the CE-50 works well as a typewriter. It's got easy correction capability and one line of text memory. You press the return key and keep on typing; the memory allows the daisywheel to catch up.

The other advantage is that the CE-50, of course, puts out letter-quality stuff. None of this dot matrix hype about "near letter quality" - you might just as well be nearly pregnant!

The IF-50 accepts either parallel or serial interfaces, which can be handy. This review is based on using a parallel interface, so I can't testify how well the CE-50 plays in the "Serial Bowl".

The ribbon cartridges and correction tapes for the CE-50 are readily available for moderate prices at catalog showrooms and Sears stores. Interchangeable daisywheels are also available locally, but they seem to be more scarce. (It would also be nice if there were more typesets available.) Still, you usually won't have to rush to get to that office supply or computer store that closes at 5:00 PM. Nor will you have to wait three to six weeks for your mail order to show up.

The U.S. distributor, Brother International Corporation, appears to be responsive to users' questions. In preparing this review, I sent them a few written questions, for which some answers appear here, and I got a reply in about a week. They answered the questions I asked and did so without a lot of song-and-dance routines.

Where there are advantages, there must be disadvantages, and the CE-50 has its share. It's slow, even by daisywheel standards - the owner's manual advertises 13 CPS. Figure roughly 2 1/2 to 3 minutes per double-spaced page. You'll need patience with this one. If this is your only printer, don't volunteer to print out a stack of spreadsheets unless you're on paid overtime.

With some printers, built-in "halt" or "pause" keys will make the printer stop immediately. Not necessarily so with the CE-50/IF-50. You can push the "select" button on the interface, taking the CE-50 out of on-line mode, and it will stop after printing a few more characters. It would be nice to have a more immediate stop, but this seems to work well

enough for most situations. Note that with some, if not most word processors, you can't stop the CE-50 from the Apple keyboard. The IF-50 has a 2K buffer, and it doesn't repond to halt commands from the Apple once the buffer has been filled.

The manual for the external interface needs some improvement. It lists ASCII codes but does not identify them as such. This can be a problem with those applications which require ASCII information to run the printer. What is perhaps most puzzling here is that the CE-50, as a computer peripheral, is apparently targeted to computer rookies, such as this reviewer. But the manual was written instead for the experienced user and possibly for an engineer, an odd inconsistency.

The CE-50 does not support the underscore function. You do get underlining, but unfortunately it's one line below the text you thought you wanted to highlight. The U.S. distributor is aware of this, and they will modify the IF-50 for you by installing a redesigned CPU. The disadvantage is that they do this modification at their New Jersey headquarters, which means that you will have your printer out of service while the interface is being worked on.

The CE-50 has its own built-in margin settings. This presents no inconvenience as long as you stay within those margins. If, however, you need something larger than standard size (spreadsheets again!), you'll have to manually set the CE-50, in addition to whatever your application may require.

There are at least two authorized Brother repair facilities in the Washington DC area, so you may be able to get repair on the CE-50 without having to send it back to the distributor. Brother advises that the most common repair problem "was a minor ribbon lift malfunction related to the failure of a cam". They say that this problem was cured by a redesign of the offending cam. If you do have to send a CE-50 back to the distributor, the Brother folks advise that their hourly labor rate is \$45, and that the average repair cost for an out-of-warranty CE-50 is also \$45. Based on their mail-order service for ribbons and correction tape, allow 4-6 weeks for repairs, including shipping times.

If you need a light-duty, letter-quality printer that doubles as a correcting typewriter (or if you need a correcting typewriter that serves as a printer), and if you're on a budget like I am, then you might give the CE-50 typewriter and IF-50 interface some consideration. ☺

PANASONIC KX-P1091

by Michael O'Brien

MEETS APPLEWORKS

After reading the Consumer Reports article on printers, I attended the WAP meeting which discussed several types of printers. The Panasonic KX-P1091 was clearly identified as a very good dot matrix printer at a very reasonable price. I also purchased the inexpensive parallel interface by the Fourth Dimension. Equipped with these two pieces of hardware my Apple //e was torture-tested through various software to verify compatibility. Primarily the printer was tested with AppleWorks.

The Panasonic KX-P1091 was described as being Epson compatible. I went to the AppleWorks menu to adjust for the various Epson printers, but had undesirable results each test. Perhaps it was the interface. At last I resolved to spend the time and READ THE BOOK. In this case the task involved two books - AppleWorks and the Panasonic printer documentation. With both books within arms reach, I began to define a custom printer.

These are successful values for customizing AppleWorks and the Panasonic 1091: I set the Panasonic values at NO, NO, NO and 8.5 for the first four values (needs carriage return, accepts top-of-page commands, stop at end of page and platen width). This is primarily guess work, and in point of fact other values may work. The fifth value makes the documentation on the printer worthwhile. I accepted the default values for 10 characters per inch and 6 lines per inch. These values could have been changed by the use of special codes. How to look up the values will become obvious with the description of values for boldface and underlining.

For boldface printing I used the emphasis mode of the Panasonic. The boldface beginning code requires that the control button be depressed while the left bracket, [, is pushed, and this combination is followed by depressing the "E" key. Enter the caret, ^, and the special coding is complete. My abbreviation of this coding is CTRL [+ E. The plus sign is not entered as part of the special coding. The Panasonic manual lists CTRL [as ESC. Using my coding, the boldface is ended by CTRL [+ F. The CTRL [substitution for ESC is found in Appendix D of the Panasonic documentation. In addition to finding the special codes on the pages with descriptions and examples of the printing, Appendix F offers a quick menu for special codes. For subscript I used CTRL [+ S + 0 to begin and CTRL [+ T to end. I had no use for the superscripting function so I defined italic printing in its place. Italics begin with CTRL [+ 4 and end with CTRL [+ 5. For the underlining option I chose to have continuous underlining. This requires option two for special start and stop underline commands. To begin underlining enter CTRL [+ - + 1. The minus sign is part of the special coding. To cease underlining enter CTRL [+ - + 0.

Once the above codes have been saved as your customized printer by returning to the main screen, you will have to change the special codes to alter the printing of a word processing document. For data processing, you can define the printer option of using compressed print of 17 characters per inch by sending special characters to the printer (CTRL [+

CTRL O) under format options. For data processing it is not necessary to alter the basic printer codes already saved.

It is important to note Table 4.9 on mixing print modes. Your draft document may appear great with superscript and subscript, but in moving to near letter quality these features revert to normal print. To mix fonts, reference to this table is a must.

I continue on a weekly basis to experiment with other special printer codes and the printer options in AppleWorks. I still find this combination of hardware and software to be very satisfactory.



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"THE BUSINESS ACCOUNTANT": A Review

by Henry R. Hertzfeld, Ph.D. and Nancy M. Pindus, C.P.A.

"The Business Accountant," a product of Manzanita Software Systems, Roseville, California, is a full purpose double entry accounting system for small business use. It is designed for the Apple //e or Apple //c with 128K, at least two disk drives, a monitor and a printer. It uses the DOS 3.3 operating system. According to the manual, the system can be used on the //e with a hard disk drive that is compatible with DOS 3.3. Another version (not tested in this review), "The Advanced Business Accountant" is available and is written for the faster ProDOS operating system on an Apple //e and requires a hard disk drive. It allows greater storage capacity for records and also permits the files to be converted to Appleworks files for spreadsheet analyses of the data. The manual does not mention the program's compatibility with the //c, but a telephone conversation with a Manzanita representative assured us that it would work with a //c and a ProDOS hard disk drive such as the Quark QC-10.

The Business Accountant is sold as a complete system, consisting of a System Manager Disk and five different "modules," which are: The General Ledger, Accounts Payable, Accounts Receivable, Inventory Control, and Payroll. Any of the modules may be purchased and used separately, but the System Manager Disk must also be purchased to set up the computer and boot the individual modules.

This software package is expensive. Each of the modules is list priced at \$295, except for the Payroll module which is \$345. The System Manager is \$95, making the entire package list at \$1,620. (The Advanced Business Accountant is list priced at \$2120, for the complete system consisting of the same five modules and a manager.)

What the System Does

This set of accounting programs is meant for the small business. It requires that accounts be set up in advance with a "tree structure" numerical coding so that reports can be processed and printed by the computer in a logical fashion. It also would be advisable for the business to seek the advice of a professional accountant before using these programs because the organization, labeling, and specific content of the business' books has to be in order for the system to perform well. In addition, some small businesses (such as a consulting or real estate investment firm that is unlikely to keep a sizable physical inventory) may not need all of the system's modules.

These programs assume that the user has a working knowledge of accounting principles. The manuals do not teach accounting, and are not meant to. The system would be best suited for a professional bookkeeper to use rather than the owner of the business, particularly if all of the modules are used together. It is quite time consuming to set up the system, enter and check the data, and print the reports.

Because there are so many program diskettes (six in total), and each one other than the System Manager generates at least one data diskette, there is an awful lot of switching between

disk drives that is required to operate the system. In addition, the manuals suggest making daily, weekly and monthly backup data disks. This is, of course, a prudent thing to do, but unless the operator of the system is extremely well organized and is very careful in labeling and storing the diskettes, the margin for error through confusion is very high. In fact, if each of the modules is used every day, there would be a total of at least twenty backup data disks to keep track of. In testing the system we did not have a hard disk available. Using the hard disk would speed up the operation and eliminate some of the problems we encountered.

The system is menu driven and fairly easy to figure out. The system manager is self explanatory. On the Apple //c, the programs are automatically configured to the printer, and no adjustments outside of the menu options were necessary to get the system up and running easily. In addition to the formatted reports available through the programs, the data or instructions on the screen can be printed at any time by pressing "Open-Apple H". This feature is helpful in checking entries and in finding errors quickly.

To boot the system, you insert the System Manager disk, configure your computer on that disk (the first time you use the program only), select the module you wish to use, and then follow the clear menu of instructions on the screen. The computer will inform the user when and what disks to boot. One slightly disconcerting operation that is not hard to adjust to is that often you are instructed to use the space bar to go to the next instruction rather than use the "return" key.

The System Manager has several convenient features. It allows the user to customize invoices and other correspondence with short notes. If you wish to thank a customer for his order or to remind a client that his bill is due, you can write special notes on the invoices or bills. Another good feature is the security of the system. The System Manager allows for a number of password combinations. You can deny access to an entire module or to specified parts of a module, or you can simply ignore the password options and have open access.

Finally, the System Manager includes a routine for producing mailing labels. Essentially this is a limited data base template that allows for approximately 1,000 entries per disk (additional disks can be created). The system also permits the merging of client and vendor name and address information from the other modules. Because of the restricted space for printing standard labels (there is a maximum of 22 characters per name and address line) many abbreviations will have to be used. On the plus side, different versions of the data base can be printed by using predetermined formats - e.g. a contact list with just names and telephone numbers. Since the data base includes coding options for contact information (e.g. sales history, personal identifications, etc.), it can be used to generate separate business mailing lists for specific markets. It can also be sorted by zip code or by telephone area code, as well as standard sorts. There is room for only one address and telephone number per entry—a limit that can prove
contd.

inconvenient if the contact has multiple listings.

The formats for invoices, purchase orders, statements, mailing labels, checks, W-2 forms, etc. are preset by the program. There is no apparent way for the user to change these formats. But there is a company, RapidForms, that advertises in the manual and produces computer pin-feed forms that are designed for The Business Accountant.

The Manuals and the Sample Tutorials

The sample tutorials are the weakest part of the package. They are consistently short, do not lead the user through all possible operations, and sometimes do not even give complete instructions. (In one case, they do not mention that program disks have to be switched, although that information is displayed on the screen.) One sample data diskette is included with each module that details a few transactions for a fictitious firm. The various samples for the different modules are coordinated, but the number of data entries is small. It is adequate to get a taste of the system, but not to become thoroughly familiar with it. Because of the complexity and interaction between the modules, it would take many months of using real data to feel totally familiar with the operation.

The manuals that explain the detail behind the menus on the screen are sketchy, but clear. They do explain what goes into each entry, and they are keyed with pictures of the screen as it should look when dealing with the particular item. A very useful feature is the inclusion of a section that reproduces a sample of most of the reports the system is capable of generating.

Manzanita offers a customer support subscription service with a toll-free number and unlimited technical help. But they charge \$150 per year for this. We think this is a bit steep, particularly given the initial expense of the package and the grossly inadequate sample tutorials.

Limitations of the System

This package of programs is limited to small businesses. The company warns the user that the computer can only handle numbers up to 43 million. After that the computer will begin to round the numbers and lose accuracy. Therefore any company with assets of more than \$43 million should not use this system. Forty-three million dollars in assets is sizable for a retail store or for a manufacturing concern. But a real estate management firm or a small investment company can easily have assets of that size while having only a few employees.

We tested these programs on the Apple //c, which does not have an option of an automatic clock/calendar. This would have been very useful (and it is available on the IIe), since the accounts have to be dated. The system remembers the date that is entered when it is booted-up, but an automatic system would be preferable.

The read/write time on the modules, particularly in generating reports, is slow. Because of the way the data are organized on the disks, even using the sample data disks provided by Manzanita (remember, they have only a very small number of entries on them) involved a half-minute to minute delay for each report generated and printed-out. In

addition, similar delays are faced when switching disks, reading information, and posting to the General Ledger from another program. Much of one's time in using this system is spent looking at a blank screen. The use of a hard disk and/or the ProDOS version would hopefully alleviate this limitation.

Built into each module is a view/adjust option. At any given point the user can automatically see how much of the data disk is used and, therefore, how much room is left for additional data. This is helpful. But the capacity of the floppy disks is limited. Manzanita has provided a mechanism for expanding the capacity through the use of additional data disks for each module. However, given the number of program and data disks (including backups) the system requires, adding additional entries would significantly slow up the processing and increase the probability of error due to a plethora of disks floating on the desk and in and out of the files.

As are most accounting systems, this one is organized by account and chronologically within accounts. Data entries for different accounts and journals are posted by date, in order. Checks are written in order and by date. We found it impossible to sort information in other ways within the programs. For instance, if you wanted a listing of all checks written in a particular month over \$500 you could not get that sort from these programs. This would have to be done manually from a listing of all checks. Or, the data could be rearranged by using the option available to convert the files to DIF files and then read into a spreadsheet routine for the analysis.

The General Ledger Module

The General Ledger module is the most important component of the accounting system. This is the module that creates and prints the balance sheet, the income statement, the sources and uses of funds statement, journal detail reports, and trial balances. It is also the repository of the account codes and holds prior summary data in order to generate charts that compare accounting performance measures between different time periods.

All of the other modules are interconnected through the General Ledger. Transactions in the accounts receivable and payable modules, as well as in the payroll and inventory modules can be posted to the General Ledger, making them available for the firm's summary reports. In addition to the accounts that are set up for the company as a whole, the General Ledger allows the business to set up sub-accounts by department. For example, the firm may desire to keep track of petty cash separately for the sales, warehouse, and finance departments. By assigning sub-account numbers to the general petty cash account, the system will keep track of the detail automatically and has options to print either the detail or the summation.

But the basic function of the General Ledger is to post all of the financial transactions that occur in a given time period, usually monthly. At the end of the month, it is customary to "close" the accounts, that is, checking that debits equal credits and transferring temporary accounts to the permanent accounts. This is done automatically by The Business Accountant. But, all transactions data are lost in the process. Therefore, it is very important to print hard copy of the detailed journal report each time the accounts are closed.

contd.

Otherwise the ability to audit the books properly and to check for particular transactions is permanently lost.

Journal entries are posted to one of five journals: the general journal, the cash disbursements journal, the cash receipts journal, the sales journal, or the purchases journal. If other modules of The Business Accountant are used with the General Ledger, appropriate transactions are properly recorded in the General Ledger automatically using additional journals (e.g. payroll journal) if necessary. If you are using the General Ledger alone, these journals are sufficient to cover all normal business transactions. The system also allows for recurring entries (such as equal rent payments every month) to be posted automatically.

The capacity of the General Ledger is adequate. It will hold up to 500 accounts, 14 different account types, 99 departments, 12 months of budget data for each account, 13 months of historical data, and allow up to 1900 journal entries per month (2300 with a hard disk).

In summary, the General Ledger is menu driven, easy to use, checks to make sure entries are correct (as to debits and credits in the right places in the journals chosen by the operator and that debits equal credits), allows great flexibility in setting up customized accounts, and stores a full year plus a month of records. It will print all standard accounting statements and allows for audit trails.

The Accounts Payable Module

The Accounts Payable module keeps track of the business transactions between a company and its suppliers (referred to as vendors). You begin by entering basic information about vendors, such as name, address and payment terms. Transactions such as receipt of invoices, debit memos, and credit memos are entered as they occur. When you tell the system to pay an invoice, the checks are automatically written and required bookkeeping entries made. The Accounts Payable module keeps track of items such as: amount purchased to date from a vendor, amount paid to a vendor to date, amount currently owed to a vendor, scheduled amount of next payment to a vendor, payment date for each invoice, and discount date and amount for each invoice.

One useful feature of the system is that there are several options available for selecting invoices for payment. Selection can be manual (viewing each open invoice before selecting), specific (viewing open invoices of specific vendors before selecting) and automatic (selecting all invoices due on or before a specified date). The system also allows you to write checks manually.

Reports produced by this module include: vendor listing, payment selection report, check register, accounts payable detail report, accounts payable aging report, accounts payable cash flow report, discount analysis report, and journal detail report. It is recommended that an accounts payable detailed report be printed before monthly closing, otherwise data will be lost.

The Accounts Receivable Module

The Accounts Receivable module maintains customer information, keeps track of all accounts receivable transactions, and prepares reports and documents. To use the

module, first you enter basic customer information, such as name, address and your payment agreement with that customer. Then when you record invoices, payments, debit memos and credit memos for the customer, you just enter the transaction information and the system automatically keeps track of customer and invoice information. The module includes a number of useful features such as automatically checking customer credit limits as you are invoicing. It also calculates finance charges, and has a balance forward option which automatically applies payments to the oldest invoices.

Reports produced by the Accounts Receivable system include: customer listing, invoice, customer statement, accounts receivable detail report, accounts receivable aging report, delinquent report, customer worksheet, and journal detail report. Before performing the recommended monthly closing of the Accounts Receivable system, you need to print a hard copy of the customer statements and an accounts receivable detail report.

Inventory Control Module

The Inventory Control module maintains information on inventory items (each item is called a "part") and cost. The system keeps track of the value of your inventory, the number of units on hand, the number of units received during the year, the number of units issued during the year, and any adjustments recorded. To use the system, you first enter information about each inventory item. Then you record inventory transactions and update the basic information when necessary. The Inventory Control module can be used with any of four inventory valuation methods: standard costing; average costing; first-in, first-out (FIFO); or last-in first-out (LIFO). The method is selected when you first create your inventory control data files.

Useful management reports such as the physical inventory analysis, inventory margin report, inventory transactions summary, and order recommendations report are options that can be formatted and printed automatically by the system.

In addition, the Inventory Control program produces helpful listings and documents needed for physically carrying out the company's inventory accounting. Forms produced include: parts listing, purchase orders, physical inventory worksheets, and stock status detail reports.

Payroll Module

The Payroll module is a comprehensive package which provides options to tailor the system to the particular circumstances of the business using it. The Payroll module allows information for up to 200 employees (150 or fewer are recommended) on the floppy disk system. In contrast to the other modules of the The Business Accountant, the Payroll System requires the use of four diskettes. One disk is for entering the data to conform to your company's standards (payment schedules, employee information, job codes, etc.). Another is for entering information for each pay period for each employee. Yet another disk contains the operating programs for other parts of the Payroll system, which include tax tables and government reports. And the final disk is used to process the information, generate check statements, and

contd.

also write checks on the preprinted computer forms designed to go with this system.

Basic information about employees is entered when you set up the Payroll system. Then, every pay period, time card information is entered and the system calculates earnings, deductions and taxes, as well as generates the checks. There is an option to record "handchecks" if you wish to issue bonus payment checks, checks for other payments taxed in an unusual manner, or bypass the automatic printing option and write checks manually. The Payroll module maintains information on employees' sick leave and vacation hours, employees' earnings and tax information, tax liabilities and deposits, wage and tax totals, job costing information, etc.

The system is very flexible, allowing for almost any payroll operation imaginable. In addition to routine operations, it permits such complex entries as recording an employee's time to be charged to different jobs at different rates. The system also contains federal and state tax tables which can be easily modified by the user if and when laws change. In short, the Payroll module is very complete. It can be a valuable asset to the company even if used independently of the other parts of The Business Accountant. And it is fully compatible with the rest of the modules, allowing the payroll transactions to be reported with all of the other business records.

What Type of User is Best Served by The Business Accountant?

This is a professional system. At the very least it requires formal accounting training or plenty of experience in bookkeeping. Because of the many different reports and business analysis records that can be printed for each module, a sophisticated user can analyze, evaluate, plan and organize business records to obtain a very detailed report (on a daily, weekly, monthly, etc. basis) of the company.

The system, and each module, take a large amount of time to learn, use and eventually understand. It is not a system for the tinkerer or the amateur. The owner of a business is not likely to have the time or patience to operate the system on a regular basis. Therefore, we would recommend this type of system for the small business that is able to hire a bookkeeper (even on a part-time basis). If a floppy disk system is used, because of the large number of data disks created (all labeled similarly except for dates), and if more than one or two people had access to the system, it would not be long before errors and lost data disks occurred, with frantic screams heard for many miles around.

A small retail business could use this system effectively. Depending on the size of the operation and the need for close management of accounts receivable, accounts payable, and inventory, the business should be able to use the General Ledger and the Payroll modules to generate more than enough information to keep its books in order and save time and effort over using a manual accounting system.

A small manufacturing concern would be more likely to need the Inventory Control module in addition to the General Ledger and the Payroll modules.

The service/professional firm that employs only a few people and has only a small number of clients might only need the General Ledger module to keep track of transactions

in a summary fashion and prepare financial statements.

Choice of Computer Systems

As we mentioned above, this is an expensive system. In fact, it costs more than the computer. And, if you purchase a hard disk to simplify and speed-up the operation of The Business Accountant (or to use the ProDOS version, The Advanced Business Accountant), the cost quickly multiplies. This system does deliver what it promises. But we think a more sensible option would be to consider purchasing a computer with greater speed and power such as the 512K version of the Macintosh or an IBM/IBM Clone if business analyses and business accounting were to be major uses of the computer. There are now more software packages for those machines, the price differential between the computers with expanded memories and the Apple // series with a hard disk and this software program has narrowed, and the larger computers have other business programs available (such as Jazz and Lotus 1-2-3) that are very useful and beyond the capacity of the Apple //'s. However, if you already own an Apple //e or //c with the necessary hardware, and if you own a small business within the parameters of the limits of The Business Accountant, then this set of accounting software packages will perform very well and prove useful.

The user should, before purchasing this or any other accounting package, assess his or her needs carefully. It is very likely in a small business environment that only some of the modules are necessary for the majority of the complicated accounting work required. If that is the case, then purchasing just those parts of The Business Accountant may prove to be economical and efficient. In any event, unless the user is sophisticated in accounting and tax matters, they should not purchase this type of system before consulting with their accountant. The accountant should not only be able to help the business set up its books for an automated system, but will also be able to detail the types of reports and information that will be needed to do the tax and other routine work for that particular business.

Conclusions

The Business Accountant is an impressive system. It is well thought out. It provides more report possibilities than the average small business could use, which is a good feature because there are so many different types of businesses that each can find the reports that are needed for particular applications. With an experienced operator and the overall guidance of a good accountant, the system should save time and money for the company both at tax time and at the end of the fiscal year when summary reports are required.

But, given that the very popular Apple II's are fast giving way to more powerful computers for business applications, the potential purchaser should very carefully assess the present and future needs of the company before spending over \$1,500 for The Business Accountant. If a compatible Apple //e or //c coupled with a hard disk drive is already on-line and if the company can adequately use just some of the modules of The Business Accountant, then it would be a useful purchase as it will perform all standard accounting procedures. ☺

CRAFTING A GOOD ELECTRONIC MODEL

Dos and Don'ts of Spreadsheets: Part 1

by Joseph T. Kelley © 9-28-85

Introduction

Microcomputers have become almost omnipresent in our everyday life, yet relatively few micro users have received in-depth training in their use for financial modeling. This is nowhere more true than in the business environment where their importance to the typical corporation has far outstripped the training of the people using them. Increasingly, unsophisticated users are manipulating highly sophisticated software on computers whose speed and power were only dreams a few years ago. Great care is necessary if the office micro is not to become a Pandora's box of potent pitfalls.

This article presents a brief background in the history of micros and then focuses on a particularly important application of micro technology: electronic spreadsheets. Because spreadsheets are used every day by individuals who have relatively little grasp of their power or the risks they are running by a careless use of this new "toy," a discussion is provided on the right way to develop, use, and document spreadsheet templates. Examples are used to demonstrate the ideas expressed in the text.

Background

For many years the word "computer" was associated in people's minds with notions of large physical size. Computers were often called "mainframes," a word which emphasized the dimensions of the machines then in use. With the development of integrated circuits and silicon technology, it became possible to manufacture computers that were smaller in both dimension and price. Called "minis" because originally they were smaller in computing power than mainframes, these computers became popular with users who could not afford the larger and more expensive installations required to support existing mainframes and who did not need as much computing power.

Because more people used minis than mainframes and because these people tended to have smaller programming staffs, a market developed for certain ready-made software applications, such as payroll and accounts receivable. This software allowed many relatively unsophisticated users to have the benefits of computerized applications at less cost and effort than mainframes. Much of the software used on mainframes and minis was proprietary and often was supplied by the equipment's manufacturer, who organized it in a fashion designed to implement a "lock-in" strategy: to prevent the user from acquiring a competitor's hardware or software. Because the basic architecture of the hardware and the logic of the software were kept as proprietary secrets, it was exceedingly difficult for competitors to create compatible products. Thus the market for both hardware and software had a strongly monopolistic flavor which, while it enriched those whose marketing power enabled them to offer everything under one brand name, tended to retard the overall development of computing technology.

With time, computers became available in smaller sizes

and at lower prices ("small business machines") and were received by the market place with even greater enthusiasm. The larger base of installed computers encouraged the writing of more software applications. At the same time, improvements in integrated circuits allowed these less expensive machines to compete with their larger cousins in terms of processing power. Again, it was standard manufacturing strategy to attempt to lock in customers by making it extremely difficult for competitors - real or potential - to provide any hardware or software to customers.

Beyond the issue of thinly disguised monopolistic practices, other problems existed which tended to limit the great promise that computing power has always held. While, in theory, a computer could be programmed to do just about anything; in practice, dealing with the Data Processing (DP) department (the Vatican of authorized computer ritual) could be the most frustrating element of a manager's job. A request to the programming staff for a 'wheel' to smooth production of needed information might - after much delay - result in the production of the equivalent of an octagon. If complaints were made, the response might be that the alternative was a square. Programmers became known as people who tell you why you can't have what you need - the high priests of a low cult.

The Microcomputer Revolution: Power to the People

Around 1974, the low cost and high reliability of integrated circuits allowed some venturesome manufacturers to offer kits for the home assembly of 'microcomputers,' so called because the original models had a memory capacity of about two thousand bytes and, when assembled, the machines would fit on a desk top. Further improvements in silicon technology allowed the memory size to grow to 8,000, then 16,000, then 64,000 bytes and beyond.

In 1976, Apple Computer Company rejected the received wisdom of the day and reversed the lock-in strategy. By publishing all the technical specifications for its hardware and operating systems and by providing "expansion slots" that were intended for the use of equipment made by other manufacturers, Apple encouraged third party activity that vastly expanded the usefulness of its own products. The overwhelming success of this approach has made it the standard in the microcomputer market - at least to date. Even IBM followed the trail blazed by Apple when it released its PC.

At about the same time, enterprising programmers noticed that it was possible to write some very useful applications for microcomputers, applications that had the potential of wide appeal to a mass audience. Word processing and graphics were two applications that caught the attention of many computer users, but it was the first electronic spreadsheet, VisiCalc, that bowled them over. At the time of its release, there was no program comparable to VisiCalc available on a mainframe, thus proving that a micro was not just a mainframe in a
contd.

breadbox.

Helen of Troy may have had the face that launched a thousand ships, but VisiCalc is definitely the program that sold a million Apples.

VisiCalc simultaneously proved that micros have brought something to computing that simply is not available on mainframes. For the first time, end users had a fast, efficient and simple way to do something they had struggled to do by hand. Previously the discovery of an error was a disaster because of lengthy turn-around times; but on a spreadsheet the correction could be made and the error eliminated immediately.

Electronic Spreadsheets

Almost everyone who has worked in an office has seen physical spreadsheets: intimidating rectangular arrays of too many rows and columns into which you enter numbers which don't crossfoot if you are stupid enough to double check your work. It is significant that the effort to locate an error in a physical spreadsheet can be monumental: it can take hours to recalculate all the rows and columns of a moderately large spreadsheet.

An electronic spreadsheet is an array of rows (frequently designated by numbers) and columns (frequently designated by letters). The intersection of a row and a column is called a cell. A user of an electronic spreadsheet may enter numbers, words or - most importantly - formulas into the cells. The formulas in an electronic spreadsheet can contain numbers; references to the contents of other cells; or references to a range of arithmetic, financial, logical, scientific, or statistical functions. (The precise collection of functions that a particular electronic spreadsheet possesses varies according to the spreadsheet.)

The simplicity of the description of an electronic spreadsheet belies its power. By using the arithmetic functions alone - addition, subtraction, multiplication, division, and exponentiation - it is possible to achieve potent results. For example, these basic manipulations are all that it takes to be able to calculate the "debt service factors" that are used to calculate level debt service payments (such as home mortgage payments) and loan amortization schedules. Previously, debt service factors were published in long, lugubrious tables (the finance equivalent of those dreaded logarithms, now also available in both natural and base 10 versions on most spreadsheets) and were only used by specialists.

The financial functions that are available on spreadsheets greatly multiply their power. The ability to calculate net present value (NPV) and return on investment (ROI) vastly extend the utility of these important concepts because the calculational grief is gone. In addition, the logical capabilities of most of these programs (true, false, if-then) allow the construction of highly versatile spreadsheets.

The spreadsheets described above were the basic models; current versions offer additional capabilities. The versions widely in use now (e.g., Lotus' 1-2-3 and Jazz and Microsoft's Multiplan and Excel) integrate the features of an electronic spreadsheet with other desirable functions such as graphics, file manipulation, and the ability to pass data to word

processing programs. Although these programs have added complexity (with the implication of an increased price tag) and run only on the larger micros (usually at least 256K of memory), their ability to perform tasks that are not practical otherwise, means that we can look forward to spreadsheets of even greater flexibility.

The power of an electronic spreadsheet lies in its ability to recalculate all of the formulas whenever any entry is changed. Thus, if the information (data and estimates of growth) necessary to project revenues and expenses are on a spreadsheet, it is a simple matter to change the estimate of expenditure growth from, four percent to five percent and to see immediately the impact on planned income. Referred to as a sensitivity analysis, this ability to ask and answer the question, "what if ...?" is a powerful management decision-making tool.

The Significance of Electronic Spreadsheets

Electronic spreadsheets were among the earliest micro-computer programs to use a metaphor with which a large number of people were familiar. While Apple's Macintosh has made this approach famous today, at the time it was first used in a spreadsheet it was a revolutionary concept. Much of the ease of use of a spreadsheet comes from this substitution of spatial relationships ('where' on the sheet) for logical relationships (a ragbag of variables with various relationships between them).

Beyond the metaphor, micros provide an immediacy of response that encourages quick detection of logical errors (though only if used for this purpose) and the opportunity to experiment with your data and model. It quickly becomes second nature to 'play' with the sheet; after all, if you believe that revenues have been understated, why not alter the estimate and get an early look at what income for next year is really going to be? In the good old days of mainframes, when turn-around times could be an hour, a day, even a week, just getting the errors out of a program usually took more time than was allotted for it and there were precious few minutes left to idly change assumptions and play games with the model.

Electronic spreadsheets, in particular, caught on because they looked like a familiar experience and greatly simplified the effort of using paper spreadsheets. But, beyond the substitution of an electronic spreadsheet for a paper one, the dynamic character of the electronic version has vastly increased their importance to many business. Everyday decisions are made based on electronic spreadsheet outputs that affect corporate assets, cause entries to be made in accounting systems, and, in general, affect the economic fate of the company. If those decisions are based on spreadsheets with faulty assumptions, incorrectly designed models, or improperly executed instructions, the results can be catastrophic.

The Uses of Electronic Spreadsheets

Electronic spreadsheets have an application wherever numbers are used. Virtually every financial application can benefit from the introductions of these powerful calculational and modeling tools. Specific examples of uses include preparing budgets, check account reconciliation, income tax projections, cash-flow projections, overhead allocation, job costing, cost analyses, profit forecasts, debt service tables,

contd.

comparative evaluations of the values of buying versus borrowing versus leasing equipment, estimating the impact of capital expenditures on user fees, and even tracking progress in a baseball pool.

While spreadsheets are versatile enough to find some use wherever numbers are manipulated, their most powerful use is in financial modeling: the representation of a complex economic reality by variables and the relationships between them. Typically there are variables about which assumptions are made (inputs) and variables whose values are calculated (outputs) based on the values of the input variables and the relationships. As an example, a spreadsheet that calculated debt service on a loan might use amount borrowed, the term of the borrowing, and the interest rate on the loan as input variables. Outputs might include a schedule of payments over the life of the loan and a statement about what percent of the original loan is still owed during each year of the borrowing.

Risks in Using Electronic Spreadsheets

It is the lament of the cynic that nothing is free in this world. Such a caution was never more appropriate than in dealing with electronic spreadsheets where power is increasingly bought at the price of complexity. Great care is needed if the use of such tools is not to backfire on the individuals and companies using them. Electronic spreadsheets are being used more and more by personnel who have less and less computer knowledge and who are correspondingly less likely to spot signs of possible serious errors (e.g., unresolved circular reference). More serious still, these people are using spreadsheets which are growing steadily in size and complexity; as a spreadsheet grows, it is harder and harder to spot mistakes or inconsistencies. Further, users quickly learn to push their spreadsheet to its limits where strange things have been known to happen.

The ready availability of spreadsheets in the office encourages the more venturesome employees to adapt someone else's spreadsheet to new needs; yet only a partial understanding of the logic of the spreadsheet can lead to incorrect or incomplete modification which could be the primrose path to disaster. Spreadsheets are becoming essential to the functioning of many organizations--they must be correct. Unfortunately, this requires a discipline familiar in data processing environments but generally absent from the average office.

Modeling and Sensitivity Analysis

Modeling is perhaps the most exciting use of electronic spreadsheets because it is possible to play "What if...?" with the model. Thus one can ask of the debt service schedule model mentioned above, "What if the cost of borrowing increases by one-half of one percent?" "What if the loan is for 30 years instead of 20?" "What if principal payments are deferred for two years?" In each case, the user gets an answer in a few seconds and can ask another question. This process leads to better judgments because the user has an improved understanding of the relationships between the variables. For example, in a situation where a user charge is to be determined which will recapture both capital and operating costs of a facility, a simple model shows that an error in the estimation of operating costs can easily be nine times as devastating as

the same error in capital costs. Thus, in this instance, wisdom would suggest that great care be applied to the determination of the accuracy of operating costs.

The process described above is called a sensitivity analysis because it determines which input variables cause the greatest change in output variables. Given that one has limited resources to deal with any problem, knowing where to focus your attention (on the 'sensitive' variables) is a great assist in developing models that closely approximate the reality being studied.

Being able to isolate the variables that have the greatest impact on the bottom line allows the model developer to examine the possible impact of prediction errors by testing a range of values (pessimistic, most likely, and optimistic). Further, it is relatively easy to change a number of variables simultaneously and thus more closely approximate the economic reality being modeled.

Using Your Spreadsheet More Efficiently

Electronic spreadsheets can bring tremendous increases in efficiency to many tasks, yet it is possible to be as inefficient with a spreadsheet as with paper and pencil. If the best results are to be achieved in as little time as possible, it is important to develop good working habits. To the extent feasible, plan your spreadsheets in advance. This is a piece of advice that is easier to give than to follow but it is sound procedure. At a minimum, try to set apart a section for input variables and try to manage the 'shape' of your sheet. Generally, it is more efficient to develop your model so that its 'shape' falls within a square with an upper left hand corner on the first cell of the sheet (e.g., R1C1 of Multiplan or A1 of Lotus 1-2-3) and a lower right hand corner on the main diagonal of the sheet.

In lieu of complete planning, know the potential your spreadsheet has for reorganization and its limitations. In particular, when the model you are working on has clearly become larger or more complex than you had originally intended, stop and take the time to reorganize it then--don't wait until you are done. If you don't reorganize your model as you go along, you had better know how difficult it is to restructure a spreadsheet that is approaching the limits of memory on your machine.

Generally, except for the smallest spreadsheets, it is important to use the manual recalculation feature of your spreadsheet. Since one is usually making more than one change at a time, waiting for the spreadsheet to recalculate after each cell is changed can be a major waste of time. It is much more efficient to set the recalculation to manual and make all the changes and then recalculate the sheet once. On the other hand, always remember that you are using manual recalculation. It would be embarrassing to enter a number and go to the output area of the sheet and simply copy the incorrect answer. In general, if you think you are done, go to the output area and recalculate once more. Watch to see if the answer changes. It shouldn't, but it will a disconcerting number of times.

Don't be afraid to treat your spreadsheet like a calculator. If, for example, a certain entry is the sum of three numbers, then enter the three numbers connected by plus signs. Beyond the time saved by not having to add the numbers manually, there is an additional advantage: other users might be able to
contd. on pg 51

MODIFICATION TO FORTH FLOATING POINT

by Steve Pearce

In the June 1985 issue of the WAP Journal an article by Chester Page dealt with the addition of floating point math to the FIG-FORTH language ("Fast Floating Point Forth"). Forth is a stack-oriented language which is in the public domain and available in the Pi disk library. Mr. Page's routines are a welcome addition to the language. I would like to offer a small "patch" which I think makes a great program a little better.

I found when using the floating point routines that the final screen output (i.e., when the Apple prints the result of the calculation) was annoyingly slow. It took a while to finally isolate the problem, which is in screen #2. On that screen there is a work "FAC.", which is defined as:

```
: FAC. ED2E CALL ;
```

The routine at \$ED2E is called PRNTFAC and it prints the number in the floating point accumulator (see the article). It is an Applesoft routine and lies in ROM memory. The output from this routine does not use the normal Forth screen output routines.

There is a command in Applesoft called "SPEED=" which changes the speed which the computer sends output to the screen. SPEED=0 is the slowest and SPEED=255 is the fastest. The actual speed byte is stored in location \$F1 (241 decimal). By using the SROM command from within Forth, I was able to see that this value was usually \$88. So, the solution to the problem would be to simply store a 255 in this location, by executing the command: 255 241 C!. However, this doesn't work. The area in memory from \$60 to \$FF is used by the Forth interpreter to store various pointers and work areas, and the values in this location change as the

:ASM

```

1 IOSAVE EQU $FF4A
2 IOREST EQU $FF3F
3 NEXT EQU $0848
4 PRNTFAC EQU $ED2E
5 *
6
6          ORG $300
0300: A5 F1 7          LDA $F1          ;Save $F1 contents in safe place.
0302: 85 00 8          STA $0          ;$0 is a safe place.
0304: 20 4A FF 9        JSR IOSAVE      ;Save all 6502 registers
0307: A9 01 10         LDA #1          ;Make speed its maximum value.
0309: 85 F1 11         STA $F1        ;($F1 contains speed byte.)
030B:20 2E ED 12       JSR PRNTFAC    ;Finally print contents of FAC.
030E:A5 00 13         LDA $0          ;Retrieve initial value in $F1
0310: 85 F1 14         STA $F1        ;and restore it in $F1.
0312: 20 3F FF 15      JSR IOREST     ;Restore all 6502 registers.
0315: 4C 48 08 16     JMP NEXT       ;On to next Forth instruction!

```

Electronic Spreadsheet contd. from pg 50

recognize the three numbers (where they would be less likely to recognize the total) and get an improved understanding of how the model might be changed to solve some other problem.

The real value in a model is rarely the 'answer' which you were first seeking. For example, if you have created a model

interpreter works.

From this information, it became obvious that the speed byte would have to be set from outside the interpreter by a machine language patch prior to calling the PRNTFAC routine. At the end of this article is a short machine language routine which will accomplish this. The ORG command is arbitrary, since Forth will insert the patch at the appropriate location by the CREATE command. IOSAVE and IOREST are routines in the monitor ROM which save and restore the 6502 registers, respectively. NEXT is a pointer to the next Forth instruction to be executed. All the patch does, really, is to save the registers and the value in \$F1, set \$F1 equal to one (the maximum speed value - disassemble the SPEED routine at \$F262 to see why this is so), call the PRNTFAC routine, and then restore everything prior to returning to Forth. The final solution to the problem is to create a new version of the Forth word FAC.:

```
CREATE FAC.F1A5, 0085, 4A20, A9FF, 8501,
20F1, ED2E, 00A5, F185, 3F20, 4CFF, 0848, SMUDGE
```

With this substitution, the screen output is as fast as it should be.

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"Fast Floating Point Forth", Chester H. Page, WAP Journal, June 1985, p. 55.

"Speaking of Forth: The Forth Dictionary", Bill Wurzel, WAP Journal, March 1983, p.14

"Applesoft Internal Entry Points", Call-A.P.P.L.E. in Depth: All About Applesoft, p.51.

Picture Mover contd. from pg 38

```

NEXTLINE CLC
          LDA GRAFLOC
          ADC HORZCOR
          STA PICLOC
          LDA GRAFLOC+1
          ADC #0
          STA PICLOC+1
OFF2     LDY #PICWB-1
COPYLINE LDA (LINNUM),Y
MASKSTUF EOR (PICLOC),Y
OFF8     STA (PICLOC),Y
          DEY
          BPL COPYLINE
          LDA LINNUM
          ADC #PICWB
OFF1     STA LINNUM
          LDA LINNUM+1
          ADC #0
          STA LINNUM+1
          JSR INCRY
          DEC LINES
          BNE NEXTLINE
          RTS

```

to estimate interest income, once you have done so, play with the model and learn what are the most sensitive variables. You may discover that the ability to make deposits one day earlier could substantially offset anticipated interest rate changes.

(To be continued next month.)

The View From Durham

by Chris Klugewicz

Much Mail, Unsolicited Opinion, and
Cutting Commentary, Plus a
Look Inside Inside Mac

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It's the end of September as I sit here in front of my Mac, reading mail about my August column and typing November's installment while editing the October issue of the Duke Macintosh Users Group's newsletter. Merry Christmas.

Mail from the box. Though the mail overfloweth not, a few letters materialized in Box 22171 this month (or, to be more accurate, last month). David Dunham wrote to say that he agreed with my opinions on copy protection and to mention that--contrary to my statement in the August Journal - he pays his MCI Mail bill by check. A quick call to MCI's Atlanta office confirmed my original thoughts: MCI has to have a credit card number before you can be issued an MCI Mail account. (Evidently David subscribed before this policy went into effect.) David also mentioned "DiskInfo," a desk accessory that is available for the Mac; he likes it. (Of course, the fact that he wrote it might have something to do with that opinion.) But seriously, folks, I have seen DiskInfo, and I like it, too. It's extremely useful with programs like MacPaint that don't tell you anything about your disk (or let you do anything to it) once you start them up. I don't have DiskInfo, though, so I don't know if it's "freeware" or not. If it is, please do everybody a favor and send the author the money he asks. Bob Soule sent me a copy of a letter he mailed to Apple outlining his concerns about the future direction of the Apple // series. I only wish I had enough space to quote it in its entirety; it's a great letter, and Bob has done an excellent job of pointing out the present flaws in Apple's support of the //. In addition, he lists a few possible future offerings: MS-DOS data compatibility, a new microprocessor to replace the venerable 6502, and true customer support (as opposed to Apple's present policy of "customer tolerance"). He also pleads for reasonable prices on any future upgrades- a sentiment with which I agree absolutely. Apple certainly should have learned from their Mac upgrade mistake (see below), but--call me a cynic if you will--history has a tendency to repeat itself.

Dollars and nonsense. I am about to depart on a long discussion of my favorite Apple gaffe: the Mac 128-512 upgrade. When Apple announced that they would introduce a Macintosh with four times as much memory as the original model, I was overjoyed. (Like most early Mac owners, I had grown used to the fabulous graphics and was now heartily sick of disk swaps and the ten-page limit of MacWrite.) I figured on an upgrade price of maybe \$200; after all, the chips wouldn't cost Apple too much, and they could generate a lot of goodwill by offering such a reasonable policy. As all of us early Mac owners now know, Apple was more interested in making a profit (and a rather sizeable one at that) on the upgrade than in making lots of already happy Mac owners happier: the upgrade listed for \$995. Though blatantly

ridiculous, this price was defended by Apple PR people for a good eight weeks; then Apple dropped the price by \$200 in order to save a little face. However, in that time, they managed to alienate a large number of formerly loyal Apple customers, all of whom were suddenly faced with the realization that Apple was simply another business- no different from IBM, DEC, or any other computer company. As Bruce Webster says, I'm not sure that Apple even realizes what it has lost. I, for one, still own a 128K Mac because: (1) I don't want to violate the Apple motherboard by purchasing a non-Apple upgrade, (2) I cannot afford a Hyperdrive, and (3) I refuse to pay \$695 for \$100 worth of chips. I hope Apple comes to its senses soon; otherwise, much cheaper machines such as the Commodore Amiga will send the Mac into the grave.

Random comment. Now that AppleWorks is one of the best-selling programs of all time, maybe Apple will realize that it makes other computers besides the Macintosh.

Smooth move. Apple recently announced that they would postpone indefinitely the release of Macintosh BASIC. As I said in my first column back in August, I have a beta-test copy of MacBASIC (version 0.985). It is an impressively powerful language, more reminiscent of Pascal than of BASIC, and it is *fast*. (My only complaint is that it doesn't provide complete access to the Mac user interface. However, the language is so fast--even in this beta version--that it is possible to write code to get around this limitation.) I am disappointed that Apple won't be distributing MacBASIC, and I imagine that the publishing companies who have rushed books like *Programming in Macintosh BASIC* into print are even more unhappy. One sometimes wishes that one could figure out just what Apple's corporate strategy really is.

Upon first looking into Apple's *Inside Macintosh*. (Apologies to John Keats.) I finally managed to find a copy of *Inside Macintosh*, Apple's answer to an electrical engineering textbook. Lord, but the thing is hard to follow! It's chock full of useful information (everything Apple should have told you from the start and more), but all of the sections are completely separate and there's nothing resembling an index to help you find your way around. I hope the final edition is somewhat more cohesive. (What ever happened to the clarity, conciseness, and humor of the old Apple][manuals?) I've heard *Macintosh Revealed, Vols. 1 and 2* highly recommended as a supplement to Apple's own manual, but I can't comment - yet - not having read either volume.

More thoughts on the Apple scene. Well, Steve Jobs has done what any good Silicon Valley entrepreneur does when his company gets too big and basically out of his
contd.

control: he's left Apple to form another company. I can only say that I have mixed feelings about the situation: Apple as a corporation is probably better off without the maverick Jobs, but Apple the institution has definitely lost something intangible which it will never regain. I hope that Apple without Jobs will be capable of the sort of vision and risk-taking that it was with him at the helm. Otherwise we may never see another Lisa or Macintosh.

Rumors, rumors. Those of you anxiously awaiting the Macintosh ROM/disk drive upgrade will be waiting till January (at least); there is a problem with the new hierarchical file directory code which is holding things up. If the delay surprises anyone, let me explain the concept of "vaporware"

I heard an interesting rumor the other day concerning the "Mac II" that will be unveiled in January. In order to keep things compatible with the present Mac, the new Mac will have slots, but they will be part of an "expansion chassis" which is external to the thing and will plug into - you guessed it - the serial port. The catch is that it will have a clock of its own and so will be able to run the serial port at maximum speed (over a megabit/second). (To prevent overloading of the Mac's power supply, it'll have one of its own.) The advantage to all this, of course, is that present Mac owners will be able to add one of these "expansion chassis" too. Let's just hope Apple prices it reasonably.

Also, there is an "ImageWriter II". It prints about twice as fast as the old ImageWriter, and is (of course) compatible with the Mac's graphics capabilities. The price I heard was \$595.

Caveat emptor. I recently bought myself a new surge suppressor, the P22 Power Director from Computer Accessories. It's a very attractive unit with a metal case and five lighted switches. It protects against both common- and differential-mode surges, and it has EMI/RFI filtering. I liked it so much that it was my choice for the Hardware of the Month - until I discovered that one of the switches was defective: it tended to arc when opened or closed, a fact which did not make me very happy. (Not only that, I could occasionally get one of the switches to come on when the "master" switch was turned off.) I brought it back to the store where I bought it, intending to exchange it for a new one, but the salesman (a helpful chap who also happens to be a WAP member) advised against it; the store had had some trouble with Computer Accessories surge protectors, and he didn't recommend them. To make a long story short, I walked out of the store with a different surge suppressor (a Datagard by SL Waber) and \$25--the price difference between the P22 and the Datagard. Draw what conclusions you will.

It's a jungle out there. One of the two pieces of advice I give out most often is this: **GET A SURGE PROTECTOR BEFORE YOU DISCOVER THAT YOU NEED(ED) ONE.** Power lines are nasty. Unless you've seen a circuit board that's been fried (literally) by a power surge, you can't begin to imagine what a few (thousand) extra volts can do to integrated circuitry. It ain't pretty. (In the December 1983 issue of BYTE, Steve Ciarcia gives an enlightening (no pun intended) account of a power surge he experienced.) My minimum requirements for a surge protector are: both common- and differential-mode surge protection,

EMI/RFI filtering, and a circuit-breaker or fuse to protect against simple shorts. The investment isn't large (Radio Shack has one for about \$30 that fulfills my requirements), and it just might save you a lot of money later.

In case anybody was wondering. For lack of anything to recommend, there's no Hardware or Software of the Month this time. (If there's any hardware or software that you're particularly fond of, write and tell me about it.)

And now what you've all been waiting for.

Next month will bring the first annual Plastic Diskette awards, my own small (as in "miniscule") contribution to recognizing the best and the worst of 1985 in the world of computing. Winners (and losers) will receive a personalized award with - you guessed it! - a diskette on it, suitable for framing. I am accepting suggestions for recipients - in any category whatsoever - until mid-November. Happy Thanksgiving to one and all!

Inca for ... contd. from pg 35

command hard to read. The dark letters on the light screen with too visible horizontal lines are tough on the old astigmatism. One "user friendly" thing: if you boot/reboot the wrong side of the disk, you get a clear message in light capital letters on a dark screen: THIS IS THE STORY DISK. PLEASE INSERT THE PROGRAM DISK AND SIMULTANEOUSLY PRESS THE CONTROL, OPEN APPLE, AND RESET KEYS. Now that's easy to read and helpful. WIZARDRY helps prevent the initial error by putting an extra label on the boot side.

Mapping will help you get oriented to the terrain. Unlike ZORK, reading the accompanying literature also helps. Perseverance (about all I bring to gaming) is vital. I suppose intuition and being smart would also be very helpful. The word "quit" is not in the vocabulary. You can, however, restart or restore one of up to five saved positions at any point in the game. This includes, of course, any time you have made a big mistake and find yourself dead. You can also "pause" at any time. This is a neat feature that clears the screen while you tend to chores. If you quit by turning off the computer or booting something else, you'll have to boot/reboot.

Even though I am frustrated by the puzzles, I am looking forward to many more challenging sessions. Now, how about filling the bucket with water and going to...

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SOFTVIEWS

by
David
Morganstein



APPLE // SPREADSHEETS COMPARED.

Having provided the personal computer with a justification for its existence, the spreadsheet can extend your abilities to examine alternative models and quickly consider the effects of various factors on those models. The spreadsheet can be used to balance a checkbook, print an invoice, solve non-linear equations, compute financial projections and solve a host of other numerical problems. In the past year or so, a number of new spreadsheet offerings have appeared for the Apple // owner. The table below provides information which you may find helpful in comparing various programs. (If you are wondering what happened to VisiCalc, the great-grand daddy of spreadsheets, check the \$99 FlashCalc; that's its replacement.)

By way of a quick overview, all but one package is limited to 254 rows (AppleWorks has 999). This is particularly unfortunate in light of the RAM cards now available which offer over one Meg of memory to Apple // owners. Only two packages, Multiplan and Supercalc3A, support linkages

between files, one way to overcome the maximum row limit. Only two of the packages, Supercalc3A and Mousecalc, integrate graphics into their operation. None of the programs have a Tables command, allow you create functions or offer Data Range functions. There is a definite trend toward ProDOS, used by all the recent packages.

The table does not tell the entire story. It does not indicate other features which a program might provide and which would be of value to you. For example, AppleWorks provides a data base and a word processor, in addition to its spreadsheet functions. Mousecalc is the only program that uses the Mouse for input. The table does not indicate what file formats the packages can import and export (e.g. can it read a DIF or SYLK format). There is no description of the documentation, an important aspect especially for the novice user. Frankly, folks, I got tired putting all this stuff together... All that said, I hope you will find the information useful!

	APPLE WORKS	FLASH CALC	MAGICALC (SPREAD -SHEET)	MOUSE CALC	MULTI PLAN	SUPER CALC3A
PRICE	\$250	\$99			\$95	
CAPACITY						
Rows	999	254	254	254	254	254
Max Columns	63	63	63	63	63	63
OPERATING SYSTEM	PRO	PRO	3.3	PRO	3.3/CPM	PRO
COPY PROTECTED	N	Y	N	Y	Y	Y
USE EXTRA MEMORY	Y	Y	Y	Y	N	Y
GRAPHICS						
Pie	0	0	0	0	0	1
Line	0	0	0	1	0	1
Bar	0	0	0	1	0	1
Area	0	0	0	0	0	1
Scatter	0	0	0	0	0	0
MATH						
Absolute Value	1	1	1	1	1	1
X to Y (Any Exponent)	0	1	1	1	1	1
Arccosine	0	0	0	0	0	1
Arcsine	0	0	0	0	0	1
Arctangent	0	0	0	0	1	1
Ceiling (round up)	0	0	1	1	0	0
Cos	0	1	0	0	1	1
Factorial	0	0	0	0	0	0
Floor (round down)	1	0	1	1	1	0
Logarithms	0	1	1	1	1	1
Modulo or Remainder	0	0	0	0	1	1
Natural Exponent	0	1	1	1	1	1
Pi	0	1	1	1	1	1
Powers of two	0	0	0	0	0	0
Random Number	0	0	0	0	0	1
Round x to n places	0	1	0	0	1	1
Scaling Function	0	0	0	0	0	0
Sign of Entry	0	0	0	0	1	0
Sin	0	1	0	0	1	1
Square Root	1	1	1	1	1	1
Tan	0	1	0	0	1	1
LOGICAL						
If Then Else	1	1	1	1	1	1

contd.

Is Blank	0	0	0	0	0	0
Is Error	00	1	1	00	1	1
Is Not Available	0	1	1	0	1	1
Is Number	00	0	0	00	0	1
Is String	0	0	0	0	0	1
FINANCIAL						
Compounded Future Value	0	0	0	0	0	0
Compounded Yield	0	0	0	0	0	0
Depreciation						
Straight Line	0	0	0	0	0	0
Sum of Years Digits	00	00	00	00	00	00
Double Declining Balance	00	00	00	00	00	00
Discounted Present Value	00	0	00	00	00	00
Future Value	00	1	00	00	00	1
Internal Rate of Return	00	1	00	00	00	1
Loan Payment	00	1	00	00	00	1
Net Present Value	1	1	1	00	1	1
Present Value	00	1	00	00	00	1
Number of Periods	00	1	00	00	00	00
Interest Rate	0	1	0	0	00	0
STATISTICAL						
Count	1	1	1	1	1	1
Dot Product	00	00	00	00	00	00
Linear Estimation	00	0	00	00	00	00
Mean (Average)	1	1	1	1	1	1
Median	00	0	00	00	00	00
Min/Max	1	1	1	1	1	1
Rank	00	00	00	00	00	00
Standard Deviation	00	00	00	00	1	00
Sum	1	1	1	1	1	1
Sum of Squares	00	00	00	00	00	00
Variance	00	00	00	00	00	00
Weighted Average	0	0	0	0	0	0
SPECIAL FUNCTIONS						
Linking Sheets	0	0	0	0	1	1
Choose Nth Element from List	00	1	1	1	00	00
Table Lookup	1	1	1	1	1	1
Column or Row No.	00	1	1	1	1	00
Number of Cols or Rows in Range	00	00	00	00	00	00
Value at Specified Row/Column	00	00	00	00	1	00
Cell Attributes	00	00	00	00	00	00
CALENDAR FUNCTIONS						
Current Date & Time	0	0	0	0	0	1
Date Value	00	00	00	00	00	1
Date Value Conversion	00	00	00	00	00	00
Time Value	00	00	00	00	00	1
Time Value Conversion	00	00	00	00	00	00
TEXT FUNCTIONS						
Changing Case	00	00	00	00	00	00
Comparing Text	00	00	00	00	00	00
Number of Characters	00	00	00	00	1	00
Removing Leading/Trailing Spaces	00	00	00	00	00	00
Remove Control Codes	00	00	00	00	00	00
Character Code Conversion	00	00	00	00	1	00
Repeat Text	00	00	00	00	1	00
Find Text	00	00	00	00	00	00
Extract Sub-string	00	00	00	00	1	00
Replace Text	00	00	00	00	00	00

XL/Serve (Infosphere). Although XL/Serve is of immediate interest only to the few, unfortunate Lisa/MacXL orphans, any Mac owner who has or is thinking of getting a hard disk should read this review. Now that Apple has announced their 20 Meg hard disk at a list price of \$1495, all Mac owner should be considering the tremendous advantages of working with a hard disk. The folks at Infosphere will shortly be offering a new version of XL/Serve, called Mac/Serve, containing the features described below, which will work either on the XL or the regular Mac equipped with a hard disk.

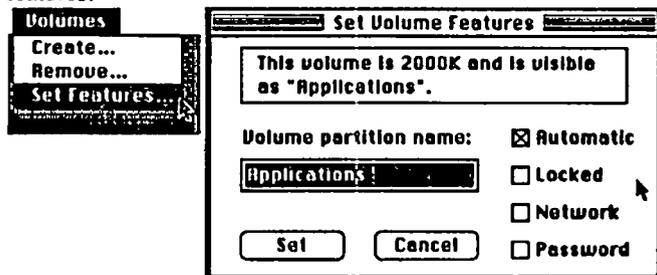
I will begin by saying that XL/Serve has greatly enhanced the usefulness of my "obsolete" XL in four ways. First, it has allowed me to partition my 10 Meg hard disk into several smaller disks, any of which can be placed on or removed from

the desk top. One result of these separate volumes is that the Finder opens and closes programs and documents with greater speed. Second, XL/Serve provides me with print spooling. That is, hardcopy output is first directed to a disk file and then to the printer. Once the disk file has received the output, you regain control of your Mac and are free to begin another task, often before the printer has even begun its work. Third, XL/Serve provides for Cache memory, storage of often reloaded pieces of code (the same function provided by the utility Turbocharger for the Mac). Cache memory reduces the amount of disk accessing the Finder would ordinarily do by retaining software in memory. Lastly, XL/Serve allows me to easily archive the files on my hard disk onto micro-diskettes. It only copies those files whose data have changed. For small businesses with several Macs, XL/Serve provides a contd.

networking system for sharing files on the hard disk and for sharing a single printer such as Apple's LaserWriter. I'll save comments on the networking capability for last.

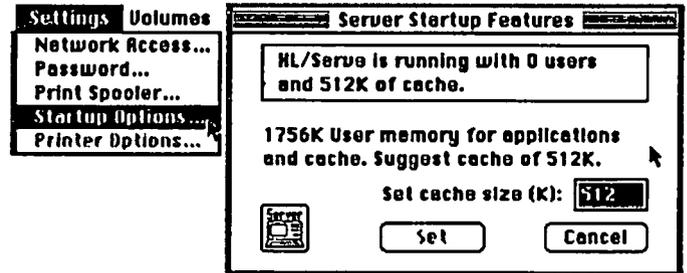
Volume Partitioning. Users of hard disks found that Finder 1.1g was intolerably slow and, as the disk filled with files, the speed of operation ground to a halt. While Finder 4.1 has improved that situation for all users (not just disk owners), the presence of hundreds of files on a hard disk still carries a big price tag in time to access. The current finder must search through all file names to locate the desired one. (There are rumors of a hierarchically structured finder that will alleviate some of this problem, but for now it remains.) XL/Serve allows you to partition the hard disk into several volumes, calling to the desk top only the ones you require at the time. I have a volume for data files, another for application programs, a third for utilities and so forth. Opening and closing a file on one of these volumes occurs pretty quickly. A big part of this time savings is due to the way the partitioning restricts the sectors over which a file may spread. Without the partition, a single file, as it expands over time, could appear in bits and pieces, all over the hard disk. By partitioning, XL/Serve helps to control the proximity of sectors associated with a single file. The use of volumes is handy when a network is used as each user can have private access to certain information stored on his designated volume while being able to share a common system and finder.

In addition to assigning a name and a size, the features of each volume can be selected. Specifically, XL/Serve can bring the volume onto the desk top automatically when you boot-up. It can lock a volume so that it can be read from but not written to or it can assign it to all users of the network. If you want privacy, a password can be assigned restricting access of the volume to those who know the password. The dialog window below is provided by XL/Serve to set volume features.



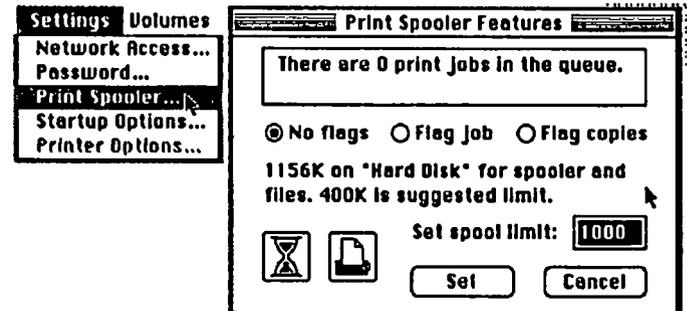
Print Spooling. Anyone who has created a long document on the Mac is aware of the amount of time required to translate the Mac's graphics into a form digestible by a printer. Apple // owners have enjoyed the benefits of print spoolers containing 64 or 128K of memory. On the Apple this amount of memory can contain many characters of output in a buffer while the printer takes its time. For the Apple's display, a single character takes one byte. A page of 60 characters by 60 lines takes 3.6K bytes. Ten pages of text fit in a buffer of 36K bytes. The graphics Mac is a different animal in as much as all output (other than draft mode) is bit-mapped. If you count pixels, you will see that hundreds of K of RAM are needed to buffer a multi-page output. Well, you might ask, if you have a hard disk, why not use some of that space as a spooler? Good idea! That is exactly what XL/Serve does. As you can see from the dialog box below,

you can dedicate as much of the hard disk as you wish for print spooling, that is, storing the information in a buffer while the printer does its thing.



XL/Serve has "suggested" 400K and I have opted for 1M. The above window is called from a utility program called the Manager. The window indicates how many print jobs are in the queue and it allows you to assign priorities to different jobs. The hourglass signifies a time delay is desired (low priority) for a print job. These two features are important to a network where many print-outs may be underway simultaneously with priorities needed for certain jobs. You may insert a "title" page which identifies the job by "flagging" it and its copies. Note, XL/Serve will not spool output directed at the Laserwriter!

Disk Caching. The disk cache feature is a time saver. As mentioned earlier, a part of memory can be dedicated (by XL/Serve) to storing frequently used pieces of code. Using the Manager (see below), you can set the amount of memory you want to dedicate to the disk cache.



On an XL with 2 Megs of memory, a large amount of memory can be selected. When the new Mac/Serve becomes available, this feature will provide only limited benefits to Fat Macs with 512K where there may not be a lot of memory to dedicate for this purpose. However, through third parties, you can now upgrade your Mac to as much as 2 Megs of memory. Whats more, I'm willing to bet that a new MegaMac will appear from Apple in early 1986. With these levels of memory available, disk caching can yield substantial time savings.

I have not done any timing tests with and without the disk caching feature on the XL but the benefits of the Turbo-Charger on the Fat Mac have been described in recent reviews. The first time a file is accessed, there is little speed up demonstrated. Upon second access, however, a factor of two in time reduction is common.

File Archiving. One headache from using a hard disk is the need to do periodic backing up of your files. Since a hard disk can quickly come to contain many person-hours of work, it is the prudent who will take the time to retain copies on microdiskettes. (I once knew a conscientious government contd.)

employee who retained, in his basement, a copy of every memo he had written or received. After ignoring numerous threats from his spouse that things had grown quite out of hand and a clean-up was required, he returned home to find that his entire collection had been "re-cycled". Turning to his spouse with a somewhat wild look he yelled, "Did you at least keep a copy of everything?") Completely re-copying the hard disk can be time consuming and wasteful since many files have not been changed.

XL/Serve provides a less painful solution. It can copy only recently updated files and it can partition a file that is too large to fit on a 400K microdiskette into several pieces (which only it can reassemble back onto the hard disk.)

Networking. Since the cost to hook several Macs, an XL and several printers into a network is so inexpensive (about fifty dollars per unit plus cable to connect them), many companies with several machines may be want to do this. While no special software is required to share the printer, a program is required to establish printing priorities. In addition if one hard disk is available, a program is needed to allow all machines to access it. XL/Serve currently allows the sharing of the XL 10 Meg drive with other Macs. Mac/Serve when it becomes available will provide the same capability with a hard disk connected to a Mac. As it operates with an XL, the software allows you to assign passwords to different volumes so individual users have access to only their data. A common volume can be read-accessed so that all users can share the same set of fonts, desk accessories or applications. However, the package is not a file server and does not permit multiple users to write to the same volume. Since I have not used XL/Serve in a network environment, I can not address issues of access speed.

Summary. While Mac owners will have to wait for Mac/Serve to obtain some of the benefits described above, we XL orphans can take some small solace in the creative handiwork of the folks at Infosphere. If I have any caveats about the package, they rest in the print spooling feature. Although I have a limited understanding of the Mac's printing support software, it is clear that applications developers can set up the printing function in different ways. The consequences of this freedom is that print spooling may not save you a lot of time. I have seen substantial reduction in the time it takes to regain control while printing with certain programs, MacWrite and Multiplan, while experiencing no apparent improvement with others, Jazz. This does not appear to be the fault of the XL/Serve package but purchasers of any print spooler should be aware of this possibility. Infosphere, 4730 SW Macadam, Ave., Portland, OR 97210. Phone (503) 226-3620. Price \$195.

CRUNCH, V1.0. Before Lotus had their many-rowed, integrated spreadsheet, Jazz, in the Macintosh market-place, Paladin was pleasing Mac owners with their package. As a spreadsheet, Crunch brings you 9999 rows and 250 columns. In addition, it allows you to produce pie charts or line, bar, or area graphs, almost instantly, of any selection of cells. Further, you can query and select rows of the sheet, much as you can with a data base program which can access a single, fixed record format file.

The Spreadsheet. Crunch is unique among spread-

sheets in its use of icons to permit direct access to functions contained in menus. While the new user may need to pull-down menus and click on the selection they require, the proficient user of Crunch can point immediately to one of the icons displayed at the top of the screen. The icon bar (shown below) simplifies the selection of features such as: print, erase, fill, format cells, column width, text style, graph type or database access. If more space is required for the screen, the icon bar can be removed.



For many spreadsheet users, being able to see more entries is a distinct advantage. Crunch provides two small point fonts, Bellevue 6 and 8 point, which permit you to see as many as 31 rows of the sheet at once. You can use different fonts and type styles. However, while styles can be assigned to individual cell ranges, the selection of a font affects the entire sheet, not individual cells.

Crunch includes almost all of the functions found in Jazz and the recently-released Excel. In addition, it contains a few not found elsewhere but does lack one or two which are particularly handy. It contains a number of financial functions related to annuities which are not commonplace. It allows you to compute the sum of the product of two columns, known as the dot product. A similar capability gives the weighted average of a range of cells, where the weights are specified in a second range. With Crunch you can determine the cell with the highest or with the lowest value (not just the value but the identity of the cell) or you can perform a linear estimation by supplying two cell ranges, one with the independent and one with the dependent variable. If the function you want is not present, you can define your own and assign a name to it for easy pasting into cells, a powerful enhancement not found in many other spreadsheets.

Two operations not included in Crunch but found in competing products are: Table and Data Range. Table allows you to quickly establish a two dimensional table of entries which are functions of values in the left-most column and the top row of the table. For example, you might want a table of monthly payments for a column of interest rates and a row of principal amounts. Although you can build such a table with Crunch or any other spreadsheet through careful replication of formulas and the use of relative and absolute references; the Table operation speeds up the process and reduces the chances for error since it automatically determines the references for you.

A second, powerful operation found in both Jazz and Excel but not included in Crunch is the Data Range function. With Data Range, you can define summary statistics of one column using a second column to define the strata over which the summaries are taken. For example, say you have sales figures by department and by product line. That is, you have three columns of data, sales figures, department and product line. You are seeking a statistic, such as a total or an average, first for categories within one variable, and then for others (e.g. first for each department and then for each product). Again, this kind of computation can be done tediously by a spreadsheet like Crunch which allows you to sort the records

contd.

by each defining variable. You could first sort by department, then enter in a summation function for each department. After obtaining your totals, you would copy them somewhere. Now you have to re-sort by product and repeat the creation of the summation (or averaging, etc.) for each product. This is a lot of work! With Data Range functions, you neither sort the data nor enter the summation (or averaging, etc.) functions. Instead, you indicate the column to be tabulated, the column to be used to define the groups and the values you want included in the computation. This one cell can be quickly replicated with all the different values of the grouping variable. If you do this kind of summarizing often, you should consider alternative packages which provide Data Range functions.

You can split the display window to permit simultaneous viewing of different parts of the sheet. Up to six windows can be opened at one time and each can be resized. You can not, however, open more than one document at a time, so each window can only display a different part of the same file. One reason for splitting the screen is to allow you to easily select a long column of cells by clicking at the top of the column in one window and shift clicking at the bottom in the second window. Unfortunately, when I tried this in Crunch, the shift-click in the second window deselected the first cell selected.

Crunch allows you to establish a link between sheets so that changes in one sheet are automatically carried forward to another. This powerful tool allows you to pull together data stored in different worksheets and to revise the aggregate sheet without having to manually copy and paste the desired information.

One very unique feature is Crunch's audit function. It has been noted in articles that the drawback to the power of the personal computer spreadsheet is careless use. People build models and do not check that the formulas are correct. They assume if the computer did it, it must be right. Crunch provides an audit function that substitutes the value of 10 for every constant entry. Using Crunch's audit, you can readily see if your formulas are giving you what you want.

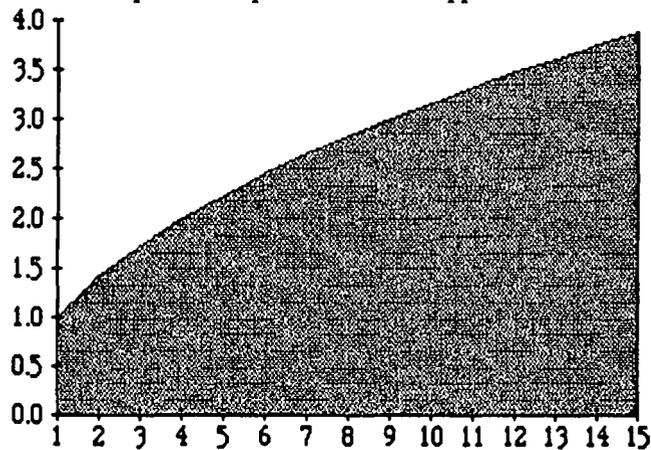
Crunch provides a whole host of useful features found in competing products. These include the ability to display fixed titles along the top row and left-most column. It contains many numeric display formats including money, commas, and setting decimal places. You can change column width in one of two ways, clicking on an icon produces a one space increase or you can type a number of spaces. Unfortunately, you can not use the easier method of dragging the column separator to make the column wider or narrower as you can in Jazz and Excel.

Click and drag when entering ranges. While version 1.0 does not provide macros, Paladin has promised they will be present in version 1.5.

Before moving on to graphics, I should mention two areas where Crunch could be improved. One disappointment I found was that absolute cell references apply to entire cell names. That is, you can not say that the cell reference to the row is relative but the column is absolute. This limitation makes the creation of tables more difficult. Second, if you currently have data in an application, you may not be able to import it into Crunch. While it supports the Clipboard and the Scrapbook for exporting a table or a graph to applications such as

MacWrite or MacPaint, Crunch does not allow you to import data either in a text form, with columns denoted by tabs or in any standard file format such as the SYLK established by Microsoft.

The Graphics Options. One of Crunch's strengths is its excellent merging of spreadsheet and graphics features into a single package. You can easily select an area of the table, a single column (or row) or multiple columns (or rows) and instantly create one of four types of charts: line, bar, pie or area. Below you see an area chart. Crunch has automatically chosen the scale and drawn the axes. Graphs can be copied into the scrapbook and pasted into other applications.



Example Area Chart

You can specify several options to tailor charts to your needs. The first level of options is shown in the window below. You can add a title, label the axes or add a legend to differentiate multiple series. The graphs can be displayed in one of three fixed sizes (unfortunately, they can not be variably re-sized). For area and bar charts, the fill pattern can be selected from among a dozen alternatives.

I did identify one small problem with the graphing function. When a window opens on top of a graph, partially obscuring the display, and is later closed, the graph is not redrawn correctly. As you can see below, the area graph shown earlier has been incompletely redrawn. By requesting that the plot be completely redrawn, a correct display will appear. A minor annoyance, but one which should be corrected.

Options

Title:

Chart Size	Plot by	Other Options
<input type="radio"/> Small	<input type="radio"/> Row	<input type="button" value="Axis..."/>
<input checked="" type="radio"/> Medium	<input checked="" type="radio"/> Column	<input type="button" value="Patterns..."/>
<input type="radio"/> Large		

Legend

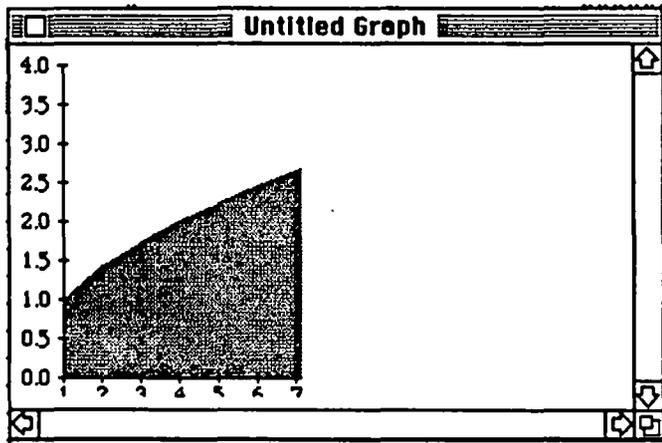
Cell Ref

Label

None

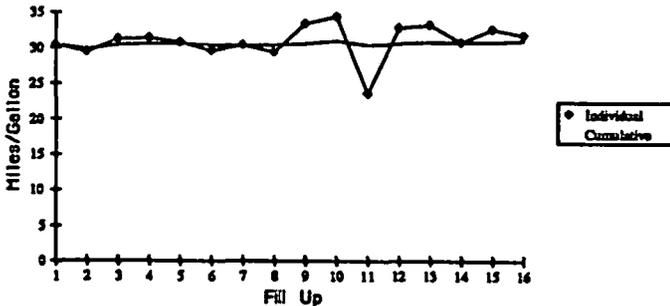
Graph Options Window

contd.



Incorrectly Redrawn Graph

The example below was drawn from two series in the spreadsheet and shows the resulting line graph which Crunch created. By including text at the top or side of a series, a label or legend can be added to the graph, as you see at the right. Although Crunch has a window for entering the maximum and minimum values for axes scaling, it would not accept a minimum of 20 for the graph you see below. As a result, I was unable to home in on the interesting range of values. I am unclear as to the meaning of the entry for a minimum value, it certainly did not allow me to define the origin point for the graph and limit the plotting range. Once you have produced a graphic you want, it can be copied into the scrapbook and pasted into another application, such as MacWrite.



Example Line Chart

The Database Functions. The data base functions are limited to sorting, searching and selecting from a single flat file. Once selected, you can perform computations on only the designated records. A transfer command allows you to reposition the selected records to any point in the data base, providing an extract function. The transfer function must be used to move the selected records together if a hard copy is desired.

Documentation & Support. The accompanying 214 page manual is beautifully produced on glossy paper. It contains both a table of contents and an index. About two thirds of the manual consists of a step by step tutorial of all of the program's features. Unfortunately, a few of the more complex examples displayed spreadsheet windows with models that were not explained, making the job of learning a bit more complicated. The last 65 pages consists of a reference section on every menu option and every function. Supplementing the

manual, you will receive a surprisingly lengthy (12 page) addendum with additions and corrections. While I only read one section thoroughly, linking worksheets, I found a couple of mistakes which were not identified in the addendum (For example, on the bottom of page 110 there is a directory window with an E11 that should be an E8).

I confess I had some trouble with a few of the examples, e.g., the worksheet linking discussion. To link worksheets, you have to create directory entries for the worksheet you are linking from and the cells in that sheet whose information you are copying. For some reason, Paladin uses the terms "file" and "worksheet" to represent two different things; although, they suggest you use the same name for both to avoid confusion. The idea is to give you the "flexibility" to assign any name you want to a worksheet you are copying from. It seems to me that the Crunch could have been written to use the name of the worksheet to represent the physical file and all the confusion would have been avoided!

By way of support, I found no phone number (let alone an 800 number) listed in the manual which could be used to obtain technical assistance.

Summary. On the plus side, Crunch provides an easy to use but very powerful spreadsheet with integrated graphics. You can link data from various sheets into a single aggregate sheet. In addition to supplying a very wide range of functions, Crunch allows you to create and name your own. Crunch is unique in providing an audit function permitting you a check on the correctness of your formulas. It offers search and select functions which may fill some of your data base needs. A query function allows you to make computations on the selected records.

On the other side of the coin, the spreadsheet operation is surprisingly slow to respond compared to other packages. By slow I mean at most a few seconds to do something which appears instantaneous in other packages, mostly an annoyance. While you can open up to six windows, they must all be from the one active file (multiple files can not be accessed simultaneously.) The next version (1.5) promises to include Macros not available in version 1.1. You can not import data from other applications. While the graphs Crunch produces are clear and well drawn, other graphing packages provide more flexibility in tailoring the appearance of the finished product. You can not create reports from the data base. The disk is copy protected and a back-up, not included, costs an additional \$20.00.

Paladin Software Corporation, 2895 Zankar Road, San Jose, CA. 95134 Price \$295.00. ☺

MAC Q & A

by Jonathan E. Hardis



Mac Section

Q: I give up. Where in Inside Macintosh are the bomb codes listed?

A: System Error Handler, page 12. Device Manager, page 40. File Manager, page 76. Disk Driver, page 12. Comparing these to the list on the tear-out card in the August/September MacMag, I find obvious, minor errors both on the card and in IM, and other groups of codes on the card which I can't find at all in IM.

Q: How do I convert a 1st Base document for use under Microsoft File?

A: File expects to see separate fields delimited by tab characters, and records delimited by carriage return characters. To convert a document to this format, you should dump it as text, and then either edit it with a word processor (text editor), or write a short Basic program to read one format and write the other. (Sorry, I'm not familiar with this in detail.)

Q: Jazz imports documents from 1-2-3, but how can I get documents back from Jazz to 1-2-3?

A: You need version 2.0 of 1-2-3, which is now shipping. This all assumes that you have a way of transferring files between your Mac and PC. (See last month's column)

Q: What does the Box Font (SIGMac Disk 3) do?

A: It allows you to draw boxes around text, as the font consists of nothing but line segments. Several of these segments placed side by side, or top to bottom, form the lines of a box. Regina Litman has a short write-up about it on page 28 of last February's Journal. You can also experiment with making horizontal lines by using the Underline style. Though spaces and tabs are not always underlined, you can underline "required blanks".

Q: What's a "Required Blank"?

A: Option-Space Bar on the Mac. In word processing, a regular blank is normally used to delimit words. Where you type one, the word processor may insert extra spaces to smooth the ragged right side of the paragraph. It is also free to start a new line there. However, a Required Blank is considered part of the word itself. It does not give the word processor freedom to pad extra space there, nor to split a line there. I find it useful when following a number by units. "4 feet" looks funny when split across lines. As does this: (202) 936-1212. Required blanks otherwise act like other blanks.

Q: Is there an on-line thesaurus available?

A: Mac*Spell*Right has one. There was some further discussion about what the best spelling checker on the Mac might be. I didn't understand the entire discussion, but some nice things were said about Hayden Speller. There was no consensus, as not everyone had the same requirements (such as the need for auxiliary dictionaries), and what worked with MS Word didn't necessarily work with MacWrite. Clearly, this is an area where you should try (at a dealer) before you buy (from the person who took the time to let you try it).

Q: How can my MacPascal program use Menus?

A: You need to use the "Inline" trap mechanism.

Q: I've heard different stories. What is meant by a "hacker"?

A: The answer may vary depending on what circles you've traveled in, but I'll do my best, based on my undergraduate folklore. Long before computers were popular, a "hack" referred to any "practical joke" which took some level of technical dexterity, and which usually contained some sort of vandalism. For example, the MIT balloon which emerged

from the 30 yard line a few years back when Yale came up to play Harvard was a hack, as would be sealing a revolving door and filling it with goldfish. As access to computers increased among students, "hack" began to take on the more specialized meaning of tricks played using those machines. These included interfering with other users, obtaining unauthorized service, and doing stunts which you supposedly would be prevented from doing.

As small computers became more respectable to the general public about ten years ago, so the terms "hack" and "hacker" became more respectable, too. Those who know the detailed inner workings of the machines well enough to play their dirty tricks were highly qualified to get good performance out of their new toys. "Hacker" became a compliment based on skill, as opposed to an indictment of naughty behavior. It is in this sense that PBS had a special entitled Hackers this fall (paid for, in part, by Wozniak).

Today, the term is still used in both contexts. Since the meanings are so different, and since the word is just slang, I would strongly suggest that you avoid using it, except to small groups where there would be no ambiguity.

Q: Is Apple guilty of poor planning? First, they don't socket the RAM chips so we have to swap boards to add more memory. Now, we still have to swap boards to get the new, socketed ROMs.

A: The RAM and the other chips were not socketed to avoid the bad experience Apple had with the ///. Any engineer or service technician will tell you that more product failures happen at the connections between parts than within the parts themselves. These failures on the chip-socketed /// cost Apple a lot of money and goodwill. So not using sockets both improves reliability and keeps the production cost down.

However, you do use sockets if there is a good reason to. The ROMs were socketed as insurance. If there was to be a major bug found in them at the last minute, the design decision was to allow for a cheap fix. This is commonly done.

Today, two years after the Mac was set for production, Apple sees the market for more changes to the machine. The machine is being sold to different people than first envisioned, and by different people at Apple as well. Better ROMs alone don't deliver all Apple wants to. By requiring a board swap to get the new ROMs, Apple keeps the number of different configurations low, tries to keep their corporate customers happy by making several improvements at once, and reduces their risk of having "extra" ROMs in the field used by competitors.

Q: Do you recommend getting a 512K upgrade now or waiting until January (or whenever) to get the ROM/Disk/Motherboard upgrade?

A: No one has ever made money by buying personal computers for speculation. No matter what you buy or when you buy it, in short order it will be superseded by something both cheaper and more functional. I personally consider the 128K machine practically useless for serious work. So if I were using the Mac in business, I, myself, would likely consider the 512K upgrade cost a legitimate operating expense.

On the other hand, by having to ask the question, you demonstrate that you have been getting along with a 128K machine and you have no dire need for more memory. I expect the upgrade package to not cost magnitudes more than the present 512K upgrade. (You are paying for the service, not the cost of the chips.) And so the choice is purely the personal one every hobbyist faces.

When the new machine upgrade comes out, I predict that there will be a period of 3-6 months during which much of the present software on the market will be found to not be completely upward compatible with the new machine. Lots

contd.

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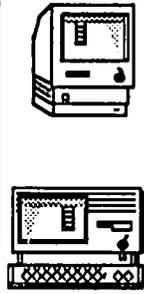
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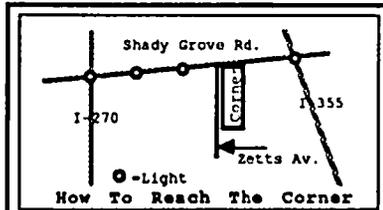
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of programmers haven't followed the good advice from Apple. (And, in particular, programs written using certain C compilers won't behave correctly with the new file system.) But this will lead to revised versions that will work better on both the old and new machines. Eventually (by next Spring or Summer), if you use the Mac for serious work, I would expect it to be very attractive to have the new upgrade in order to take advantage of the performance improvements.

Q: What is the best terminal program to use to download programs from CIS/MAUG™?

A: One of the most rugged is FreeTerm 1.7, which is found on SIGMac Disk 24. It was written for exactly this purpose. In addition, if you have a good quality phone connection and limit yourself to downloading short files, you can speed up the process by a factor of two (on CIS lines in the U.S.) to three (overseas). The extra speed comes at the expense of error correction. Any noise on the line will cause the download to fail and you'll have to start it over. (It works by telling CIS that a section of the file, called a block, was received without error even before it actually is. This reduces the delay as CIS has to wait for a response before sending the next block.) It doesn't improve speed on downloads from smaller boards. Mainstay has a program out called TurboDownload, which I think does exactly the same thing.

On a spare copy of the program, use FEdit (SIGMac Disk 21 - Pay up!) to make the following patch. Find the hex string: 41ED FD8F 43ED FEE6 203C 0000 0001 A02E. It may be at offset 1C6 in block 1C. Change these bytes to: 102D FD8F 1B40 FEE6 7006 4EBA F9F6 4E71. This patch affects only MacBinary format downloads, nothing else.

Q: How do I find the phone numbers for local bulletin boards?

A: Start by using the WAP bulletin boards. The phone numbers are in the front of the Journal. Call the office to get a password. Once on our system, you will find a large, current list of other boards in the area (and beyond).

Q: When will the Sider hard disk for the Mac be out?

A: I don't know, but advertisements of its availability were greatly exaggerated.

Q: Why do desk accessories fail to work with Smartcom II?

A: The Smartcom II disk comes with a stripped down System file. It contains everything Smartcom needs, but not everything other applications and DAs need. Hayes did this to make more space on their distribution disk for example files. To use DAs with Smartcom, or to use Smartcom with other applications under the Switcher, create a new disk for it starting with a copy of your System (Build) disk, which contains a complete System file. Apply the System Update program to it, install Desk Accessories, and then copy Smartcom II from its distribution disk to it, along with the Help file and the documents you actually use. You don't even need the Help file if you keep the manual handy.

Q: How do I get Red Ryder to work on my Lisa?

A: Scott Watson says, "I recall having several XL people tell me that a certain [version] of MacWorks was altogether foul with RR, and when they tried the newest version, the problems miraculously disappeared." By the way, the current version of Red Ryder is 6.2. (Did you send your money in yet?)

Q: With Red Ryder, as soon as the modem finishes dialing the number it hangs up. Why?

A: Be sure that you don't have any extra characters at the end of the DIAL or REDIAL commands, such as ^M (carriage return). A single carriage return is automatically appended, and any extras beyond that are an abort signal to the modem.

Q: Have any commercial Macintosh programs been written by women?

A: Elaine Hall co-wrote (with her husband) MacMuscle, which she demonstrated at WAP earlier in the year. Others, such as MacProject, Sargon III, and Consulair C were also co-written by husband and wife teams. Diane Duane has just finished a new text adventure game, Star Trek: The Kobayashi Alternative. (It won't be out until Spring.) (She is the author of two Trek novels, The Wounded Sky and My Enemy, My Ally, and a two-part Trek comic for DC coming out in Dec/Jan.) "I can say with some pride that this is one of the meanest, nastiest, most challenging text adventures anyone will have seen in a while. No, you don't cheat -- in fact (forseeing that possibility, the title being what it is) the programmers have encoded the text files and were toying with the idea of (for the IBM version at least) gimmicking the programming in such a fashion as to format the disk of anyone who tried to crack the game. I leave that to them. This game is definitely a possible-win situation. It's just gonna be a BEAST to beat. Which is as it should be.

"The game is framed as the 'supplement' to the original Maru scenario...the 'real thing' version, made to test other qualities starship captains must have...the ability to synthesize data, to cope, to keep an eye on a lot of things at once... and to keep their sense of humor in the middle of it all. People are going to be beating their heads against this game for months. I look forward to having rocks thrown at me in the street.

"It's gonna look pretty on a Mac, too. Dynamic windowing, realtime status reports, and a very smart parser. Fun fun fun!"

Q: What advantages does the Imagerwriter II have over the old Imagerwriter?

A: Descriptions of the new features appear elsewhere. But presently, the advantages mostly benefit Apple // users, not Mac users. Except for draft mode printing, where you use the characters built into the printer, the speed of normal printing is largely determined by the speed of the Mac, not the printer. With the current Imagerwriter driver, neither the faster print nor the (optional) print buffer help much for High Quality printing. But you gain about a 30% speed improvement for Standard Quality printing. Thunderscan will also work about 30% faster. When the Mac's printing software is rewritten and released, High Quality printing will be made faster, too.

Q: In the last Journal, you mentioned new software required for Thunderscan on the Imagerwriter-II. Will my old scanning module fit?

A: No. You will have to exchange it for another, and I don't think the cost is set yet. I'm sorry for the omission. Supposedly the new design is now shipping, and it will work on both printers.

Q: I'm trying to prepare a document to be sent to the LaserWriter, on a different Mac without a LaserWriter attached. Even though I'm using disks which work well on the LaserWriter machine, I can't choose the LaserWriter in the "Choose Printer" Desk Accessory on this machine. Is there any way to do so? I want to use Page Set-up.

A: No. Choose Printer does check to see if there are any LaserWriters connected. (If you have multiple Laserwriters on your AppleTalk network, say, with different paper types in them, you can assign them different names to choose between them.)

Q: Help! On my XLisa, when I boot from the hard disk, the welcome screen is visible, then maybe even the Finder menu shows before the system crashes with a Sad Mac face. Forcing the XLisa to boot from a floppy (by holding down the option key immediately after you hear the 4th and final click during the startup sequence) works fine

contd.

up to the point just before the Hard Disk icon should appear. Then it's back to Sad Mac.

A: Al Hatch provides the answer: If the Desktop file on the hard disk becomes corrupted (by a program bomb, power failure, or whatever), each time the Finder accesses the Desktop, it crashes the system. The solution is to always have on hand a disk with FEdit (or a similar program) set as the Startup application. When you boot from it, this bypasses the Finder and allows you to find and delete the offending Desktop file. (Note that Mac users could just hold down Option and Command at boot time.)

Q: When is Turbo Pascal expected for the Mac?

A: Sooner than anyone had thought. Borland has switched their schedules, and the Mac will be the second 68000 based machine that gets Turbo Pascal. (The first is the Sun workstation that it's being written on.) I don't know if this speaks well of the Mac's installed user base, or otherwise of the Amiga. Look for it around the turn of the year.

Another cheap Pascal has already hit the market for the Mac, but I know of no one who has dared to try it out. It's by TML Software (TML is Tom Leonard), P.O. Box 361626, Melbourne, FL 32936, (305) 242-1873, and costs about \$50.

Q: I want to make a letterhead in MacPaint, to be used at the top of a MacWrite document. But why does the letterhead print much lighter than the rest of the page?

A: When you use High Quality printing of a MacWrite document on the Imagewriter, each character is printed twice. You not only get the dots seen on the screen, you get extra dots placed half-way in between them. However, pictures copied over from MacPaint (which may include text if you used the MacPaint text tool) print only in Standard Quality, dot-for-dot as you them see on the screen.

You can try several tricks: Use a fresh ribbon - that should reduce the difference in contrast between high and standard quality printing. Print the letterheads directly from MacPaint - and then run the paper through again when you print from MacWrite. (This has the added advantage of allowing you to combine Paint and Write sections horizontally.) Experiment to see if MacDraw images work better. (Look in the Scrapbooks of the Paint/Write/Finder upgrade disks - that bar chart that takes time to draw is from MacDraw. Try pasting it into a MacWrite document.) I don't know if the LaserWriter would help you.

Q: Using MS Basic, I understand how to draw in a window and to use different sizes and styles of type. But how do I print on the Imagewriter in different type?

A: Sorry I couldn't figure this out while we were on the phone, but I finally found the answer. Look up WINDOW OUTPUT #file-number in the manual.

Q: What is the current situation with music composition programs for the Mac?

A: The two old favorites, MusicWorks and Concertware, keep leap frogging each other with new features. To be really up do date, check with both companies, Great Wave Software and Hayden, respectively. Concertware is soon coming out with a version that supports a polyphonic keyboard. The new kid on the block is Deluxe Music Construction Set. It advertises many advanced features (including MIDI), but Tim Smith warns that the program is both obnoxiously copy protected (it doesn't ask for the master disk - it just bombs), and it generates more pops and clicks (noise) than the competition when the Mac's sound hardware is used.

If you want to go beyond the Mac's sound hardware and have external MIDI instruments produce the notes, also look at "Total Music" by Southworth Music Systems. At the Boston show, I was amazed at what it could do. Other MIDI offerings include StudioMac from Creative Solutions (in Rockville), and a product from MusicWorks (the company,

not to be confused with MusicWorks, the program, from Hayden).

Q: When will Mac Wizardry (demonstrated by Ron Wartow at the last SigMac Meeting) be out?

A: Things have hit a little snag. Author Robert Woodhead went off to Japan thinking the program was "in the bag". It had been stable (that is, it didn't crash) for months. But after "cosmetic" changes were made, it suddenly started crashing with ID=2 bombs at random times. So he is still working on it, from Japan. When things go wrong, they really go wrong. He goes on to report, "I was playing pinball on a 1000 Yen bet (about \$4.50) when the earthquake hit. Damn thing tilted and I lost! Argh!!"

QUICKIES: Font/DA Mover Version 2.4 is out ... Look for it soon at a user group near you ... Many Word Processor / Text Editor programs run faster once the whole document is read into memory ... A fast way to get this done is to Search for a non-existent character string ... When you get a Dialog and change no settings, pushing Cancel instead of OK speeds things up ... At the meeting, one member really flamed off about the Anchor modem. Try before you buy ... Slide Show Magician is offering a \$20 update to registered owners ... A Medical Office, database system built around Omnis 3 is being developed locally; contact Program Workshop, 8315 Frosty Ct., Lorton, VA 22709, (703) 550-8012 for details ... Clinton Computer is offering a 25% discount on Apple products to all Pi members ... This is especially nice if you are shopping for a LaserWriter ... Falcon Systems is offering Pi members discounts on Hyperdrives ... The group buy price on Excel is \$239 ... As usual, thanks to the people on CIS/MAUG™ for providing information used in the column. ☺

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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 on the fourth Tuesday of each month in the same location and at the same time. MAC owners in the local area are welcome. Call Lynn R. Trusal for details.

Upcoming Programs

November 14 - Demonstration on operation of an
 Electronic Bulletin Board System
 December 12 - Program to be announced

SIG MAC Upcoming Programs

November 26 - Demo of plotter drivers for the Mac
 December - No SIG MAC meeting will be held
 because of the holidays!!

"MACPLOTS II - A Second Plotter Driver for the Macintosh"

by Lynn R. Trusal (Frederick Apple Core)

In the July 1985 issue (page 52-53) of the Washington Apple Pi Journal, I reviewed a program for the Macintosh called "Plot-It" (Mesa Graphics) that was the first commercial plotter driver available for Macintosh. I also mentioned the upcoming release of another program called "MacPlots II" [Computer Shoppe, 615 Guilford-Jamestown Road, Greensboro, NC 27409, 919-229-4843] and promised to review it in a future issue of the Journal. This article is the review of that program.

MacPlots II comes with an 82 page manual and one disk. If you return the owner's registration card, you are sent a free back-up disk. The program runs on a 128K or 512K Macintosh and is available in two versions: a business version (\$195) and a drafting version (\$295). The drafting version supports professional drafting plotters such as Hewlet Packard (HP) 7550A, 7580A, 7580B, 7585B, 7586B, and all the Houston Instrument (HI) plotters, while the business version supports Hewlet Packard 7470A, 7475A, and 8 HI plotters. Future upgrades plan to support Gould, Sweet P, and Roland plotters. Software compatible with MacPlot II includes:

MacDraw, Jazz, MacProject, Chart, MacDraft, and MacPaint. It may also be possible to plot text produced in MacWrite by use of the "clipboard" method. Only MacDraw and MacPaint support plotting directly from the program while the other programs plot from the "clipboard." MacDraw is the only program that supports the addition of color to text or charts created in other programs. Data can be "cut and pasted" into MacDraw for this purpose. Programs that create bit-mapped image files (i.e., MacPaint) do not give the same high quality output as vector-mapped files (i.e., MacDraw). Therefore, MacDraw output is vastly superior to that of MacPaint. In my article on the Plot-It program, I mentioned that Plot-It cannot plot straight diagonal lines. The resulting output yields jagged diagonal lines similar to Imagewriter output. This was because Plot-It could only plot graphics out of MacPaint. While this may be satisfactory for text needs, I did not find it satisfactory for graphics. This leads me to the MacPlots II.

The setup for MacPlots II is pretty straightforward. The manual details the dip-switch settings for HP plotters and contd.

provides the cable pin-outs for HP and HI plotters. There is no need to buy or make a special cable since the Imagewriter cable works nicely. Various dialog boxes ask you to select the particular plotter and port settings, including output port, baud rate, parity, and the number of data and stop bits. A baud rate of 2400 is recommended for HI plotters and 9600 for HP plotters. In the page setup dialog box, the paper size, scale of output, pen speed, and plotting orientation are selected. Paper size varies from 8.5 x 11" to long axis plotting with the drafting version of the software. Drawings may be scaled from 0.25 to twice the original size and pen speed may be slowed up to 80% when using drafting and transparency pens. The last series of options fall under the category of "optimization." Since the plotter plots the drawing in exactly the order it was entered, the "optimization" options allow you some control over the plotted output. A "pen change" option makes sure that all portions of the drawing to be drawn by pen #1 will be plotted first before going onto pen #2. This is useful when individual pens have been assigned colors. A "top-bottom" and "left-right" option changes the way a graph is plotted based on the plotting orientation chosen. The last option allows customizing the scaling of fill patterns and line lengths necessary when the scale of the drawing is increased or decreased from the 1:1 default option.

I tested the program by plotting a scientific graph created in Microsoft Chart and pasted into MacDraw for the addition of colored output. In MacDraw, it was possible to turn the orientation of the "Y-axis" label sideways to conform to the custom for scientific graphs. Since Chart does not support the addition of standard error bars, this was also done in MacDraw.

Cutting and pasting from Chart into MacDraw did result in one annoying problem unrelated to the MacPlots II program. When I copied a line graft to the Chart clipboard and pasted in into MacDraw, the open circles and squares marking the data points became solid. I was unable to select them in MacDraw and use the "none" fill pattern to return them to their original form. I eventually had to "cut" them out and recreate them using the MacDraw tools. Customer Service explained that not all software programmers support the "clipboard" feature in the same manner and even two "Apple" programs had caused them some problems with "clipboard" compatibility. I did not encounter this problem when a bar graph was "copied and pasted" into MacDraw.

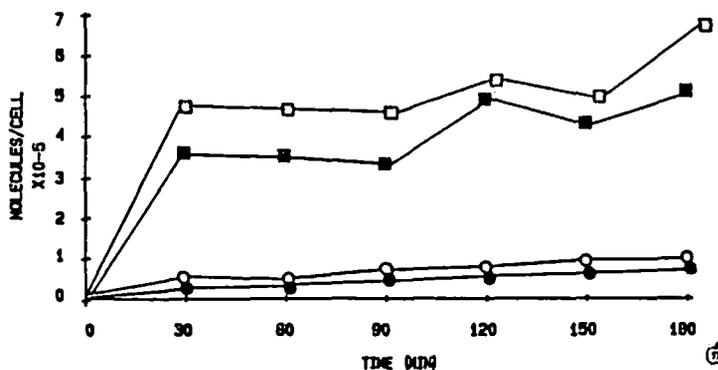
Color may be added to the graph in MacDraw by grouping a portion of the graph and pressing the "option" j followed by a color pen number. You are in reality, assigning a pen location and not a specific color. The appropriate color pen may then be placed in the correct pen holder of the plotter. This procedure is somewhat confusing but satisfactory results can be obtained with practice. It is important to note that MacPlots II does not support "clipping and white lines." In other words, some care must be exercised in the graphic layout since the "send to back" option can cause plotting problems. Items that partially cover other items will be plotted, regardless of how they look on the screen. Frankly, I did not find this a major problem. Computer Shoppe is currently studying the problem of "clipping" and it may be supported in later editions. A discussion with customer service explained

that algorithms exist but 1 M byte of memory and a 68020 CPU are needed for sufficient power to handle this problem in real time. MacPlots II does not support all fonts and some fill patterns are not satisfactory in appearance.

Once the graph is completed in MacDraw, it must be saved by using the "PICT format". With two disk drives, the MacPlots II program may be in one drive and the MacDraw program in the second drive. When the "Plot" option is chosen, a dialog box asks you to choose a file from the "clipboard" or "disk file". Once the desired file is opened, the program takes several seconds to perform "optimization" and then begins plotting. A clock-like feature in the upper left corner of the screen gives a pictorial image of the time required for plotting.

All in all, I found the plotting results of MacPlots II to be most satisfactory. I have not tried plotting out of any program other than MacDraw and have not used the "clipboard" plotting option. The manual needs some improvement and the manner of assigning colors could also be made simpler. These should be addressed in future upgrades. In closing, I would like to add that I found the personnel of the Computer Shoppe to be very helpful when I called them for help. If the person I was talking to could not answer the question, they got someone who did know the answer. I wish all software houses were as cooperative!!!

Figure 1 is a sample of the plotter output produced by MacPlots II.



MAC PROGRAMMERS' GROUP ANNOUNCES FALL SCHEDULE

The SigMac Programmers' group announces that its November 7 meeting will be on the Dialog Manager. The December 5 meeting will discuss TextEdit. Future programs will continue to focus on particular parts of *Inside Macintosh*.

The SigMac Programmers' group meets on the first Thursday of every month at 7:30 at Our Lady of Lourdes school, 7500 Pearl Street, one block east and half a block north of the Bethesda Metro Center stop on the Red Line. Meetings will be held in a classroom at the school, rather than in the cafeteria as in past meetings. Look for signs to the classroom. Everyone who is interested in programming the Macintosh, regardless of language, is invited to attend. For more information, contact Tim Buehrer at (703) 548-8971. ☺

MACINTOSH FONT NUMBERS

by William J. Jones

If you have developed, as I have, a collection of Macintosh fonts, you undoubtedly have run across instances in which you have been unable to install particular groups of fonts in the same system. The problem is that each font has its own Font ID number, and two fonts with the same number cannot coexist in one system. Duplicate font numbers arise either because various font creators have independently chosen the same number, or, more likely, because a font has been created by modification of an existing one, but without changing the ID number.

There are a total of 512 font numbers (0 to 511). Font number 0 is the System Font, which is Chicago. Font number 1 is the *application font*, which is any other font (with its own number) which is designated in the program. The default *application font* is Geneva.

According to the Official Word from Apple, font numbers are to be divided into three groups; official Apple fonts, fonts registered with Apple by software developers, and unregistered fonts. Table 1 sets out the number ranges which Apple has designated for each group of fonts. Unfortunately, a bug in the Font Mover, which was carried over into the DA/Font Mover application, prevents it from recognizing font numbers higher than 255. As a result, according to the user's manual for Quick and Dirty™ Utilities Vol. 1 (Dreams of the Phoenix, Inc., \$39.95), "people have just been choosing numbers in the range 11 to 255 arbitrarily."

The Quick and Dirty™ utility Font Manager gives you the number of each font in your system or on a disk, allowing you to renumber them to specific numbers, or assigning them randomly from among the numbers unused in an open file. The FONTastic™ font editor program (Altsys Corp.) similarly has provisions for the assignment of font numbers to newly created fonts.

The Macintosh uses the font number by translating it into a base font ID and resource numbers which vary by the size of the font. For more information on these numbers, see the various documents about fonts on SigMac disk 11, particularly the one titled MacFont Tips. The Resource Mover deals with these numbers, and not with the individual font numbers discussed here.

Table 2 is a listing of fonts from a variety of disks which indicates the font numbers assigned to them. The table omits additional sizes of Apple fonts (which necessarily share the ID numbers of the originals). Also, the Chicago 12 font on Through the Looking Glass has the same name and ID number as any other Chicago, but really is an entirely different font. It can be moved with the Font Mover for use in other applications, but if it is it should be given a new name and ID.

Table 1

0 - 127	Apple fonts
128 - 383	Assigned by Apple to software developers
384 - 511	Available for independent font developers

Table 2
Font Numbers

Font Name	Font #	Source
Chicago	0	Apple
New York	2	"
Geneva	3	"
Monaco	4	"
Venice	5	"
London	6	"
Athens	7	"
San Francisco	8	"
Toronto	9	"
Seattle	10	"
Cairo	11	"
Los Angeles	12	"
Times	20	" (Laserwriter font)
Helvetica	21	" "
Courier	22	" "
Taliesin	24	"
Boxes	9	SigMac Disk 3
Silicon Valley	30	SigMac Disk 5
Broadway	31	"
Greek 10	10	SigMac Disk 9
Greek 12	12	"
Russian	20	"
Philly	41	"
And er	181	"
Hood River	218	"
APL	242	"
GenMath	12	SigMac Disk 11
Exeter	12	"
Palo Alto	14	"
Moscow	16	"
ASCII	17	"
Santiago	18	"
ChicMath	23	"
Vectors	24	"
Ravena	50	"
Eon	6	SigMac Disk 12
Tiny	9	"
Future	10	"
cyril	12	"
CYRIL	12	"
Ophil	12	"
Music	12	"
Lothlorien	13	"
Rangers	13	"
Bubbles	14	"

contd. on pg 69

MICROSOFT ANNOUNCES OPTIMUM MEMORY SIZES FOR ITS MAC APPLICATIONS RUNNING UNDER SWITCHER

by Martin O. Milrod and Tom Warrick

Microsoft Corporation has begun bundling Andy Hertzfeld's "Switcher" program with its applications. Included with Microsoft's applications is a 21-page manual describing the preferred and minimum sizes that should be allocated for each application:

Application	Preferred Size	Minimum Size
Chart	192K	128K
Excel	304K-512K	256K
File	288K	128K
Multiplan	160K	128K
Word	160K	128K

In addition, Microsoft announced a number of cautions that should be observed by those using Switcher with some Microsoft applications. Excel and File have no known limitations.

Microsoft Chart: "When you configure Chart with Switcher, be sure to make it the first application you install. If you don't, arrows on charts may not appear in their correct positions."

Multiplan: "In Multiplan versions 1.02 and earlier, if the information stored in your Clipboard is greater than 50 cells and you see the message 'Save Formatted/Unformatted Values,' you should paste into the Scrapbook before trying to paste into the other application. Clipboards storing more than 50 cells will not transfer to the other application."

Microsoft Word: "Option-Command-shift-(period) Do not use this key sequence to select text from the insertion point to the bottom of a document. When Switcher is present, this sequence causes an emergency exit from the program.

"When you are using Excel/Word, do not use Excel's Delete command from the File menu to delete a Word document. This will cause a disk error.

"When you are using Word and the Finder in a Switcher configuration, do not delete any Word documents that you've been working with during that Switcher session. Even if you've saved and closed the Word document, you should quit Word before you delete documents that have been opened during that session."

The manual, *Using Switcher with Microsoft Applications*, is Microsoft Part No. 000-096-031. 

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MacNovice Column

by Ralph J. Begleiter

Home Utility Records

Maybe you're not yet using your Mac for any serious business jobs. But you'd like to try a project to familiarize yourself with the computer's ability to handle calculations, records and text. And you'd like to produce a good looking and useful final presentation document, too. Here's one for MacNovices: prepare a record of how your home uses gas and electricity, so you can track energy efficiency and utility costs.

The techniques used in this project will be useful later on, as you use your Mac to track business expenses, and it could even be saved as a "format" for tracking your small business utility and other recurring costs. But, for now, it's just a project to give you a chance to "play" with the techniques and to learn how to use your Mac to its limit.

You'll need some "spreadsheet" software, such as Microsoft's Multiplan, Haba's Quartet or any one of the other "number-crunching" Macintosh programs which are now available. You don't need an especially sophisticated program for this project, however, since you won't be doing anything very complex or any exotic calculations.

You'll also need a program which produces charts. Again, there are many now available. You don't need the "best available," unless you plan later to really use this capability a lot. (I used Microsoft Chart for this project.)

And, of course, you'll need those utility bill receipts you've got piled up in a drawer somewhere. They'll provide the raw material to produce the comparative analysis of your home's utility use.

First, open the "spreadsheet" program and start a new document. Call it "Utilities". This will be a simple worksheet, including only a few rows and columns.

Arrange your worksheet so you can easily enter your home's natural gas and electricity usage each month. Include rows for totals by month. And to give you a variety of views of your utility consumption, be sure to include space not only for the cost of fuel, but also for the quantity of fuel consumed. This will give you a view of energy consumption as well as home operation costs. Here's my sample worksheet:

Figure 1 - Electricity Spreadsheet

1	2	3	4	5	6	
2	Year	Utility	January	February	March	April
3	1985	Electricity (Cost)	\$42.92	\$40.12	\$35.39	\$42.06
4	1985	Electricity (KWh Hours Used)	600	550	490	560
5	1985	Electricity (Avg KWh per Day)	17.1	17.2	16.6	19.3

Now, SELECT the data from one row. Start with "electricity cost," for example. Select all the data in that row and "COPY" it into the clipboard.

Figure 2 - Select Data to transfer to Chart

1	2	3	4	5	6	
2	Year	Utility	January	February	March	April
3	1985	Electricity (Cost)	\$42.92	\$40.12	\$35.39	\$42.06
4	1985	Electricity (KWh Hours Used)	600	550	490	560
5	1985	Electricity (Avg KWh per Day)	17.1	17.2	16.6	19.3

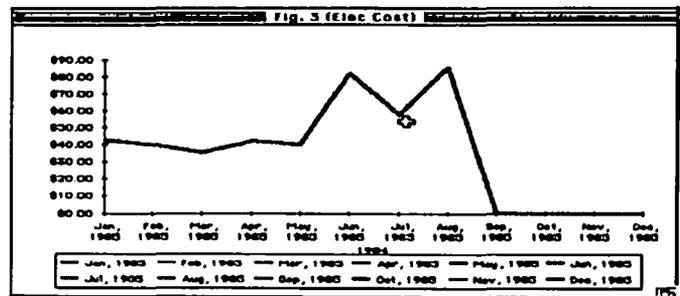
Next, QUIT your spreadsheet program and open a new document in your graphics program. (Remember that Mac's clipboard is "holding" the data on "electricity costs" while you switch application programs.)

In the "New Series" window of your charting program, position your pointer, click, and PASTE from the EDIT menu. Voila! Your "electricity cost" information appears in the list of new "values", sequentially.

Follow the instructions with your charting program to designate the "electricity cost" values according to "dates" (tell your program to chart them "by month").

Next, choose an appropriate format for your chart; in this case, a simple "line graph" is probably the right choice. Add appropriate "titles" and "legends" using the application program's instructions, and feel free to modify your chart until it's appealing to the eye and easy to understand at a glance.

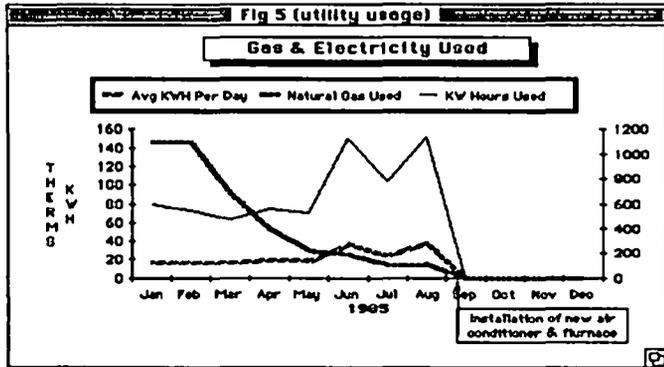
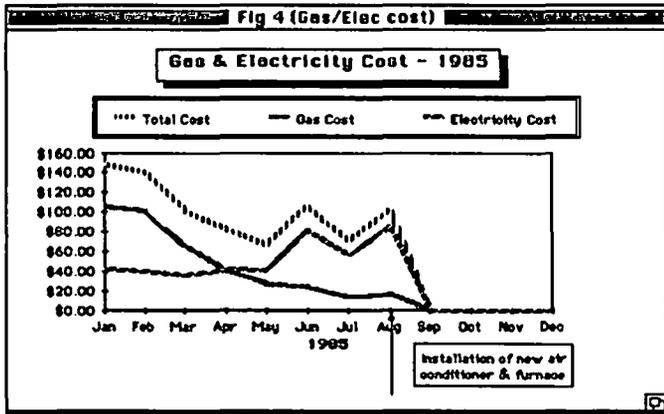
With a bit of fancying-up, using the features in your graphics program, you'll soon have a chart which looks something like this:



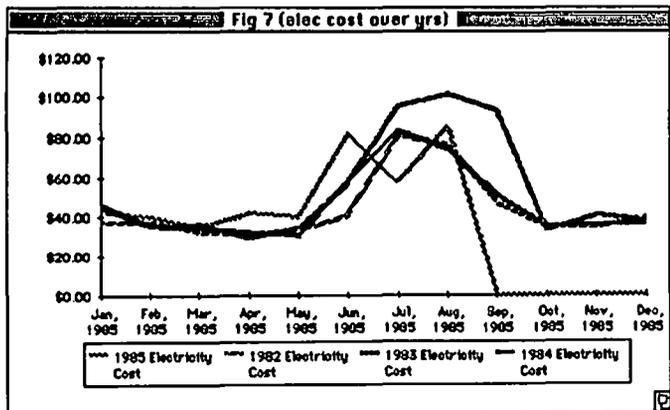
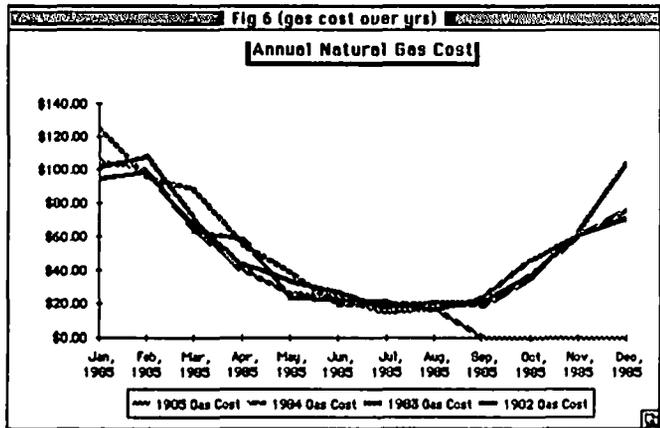
Now... QUIT the graphics program and return to your worksheet, with all its raw data. Select a new row of data, such as "electricity consumption". Repeat the process outlined above, first COPYING the data into the clipboard, then PASTING it into the "New Series" window of your graphics program.

You can place several different utility measurements on the same chart, so comparisons are easier. You might end up with a series of charts which look something like these, from which you can analyze your home's use of energy.

contd.



You might even dig out your dusty old box of previous-year financial records and do a summary of your home's utility usage over the past few years, like this:



Remember, these formats, like others you've created on your Macintosh, remain in Mac's disk memory, so you can simply add to the data periodically, without having to rebuild the chart and the worksheet each time. Simply add new columns or rows, and new data values in the charting program. Create new charts using the format of the old, or simply add more lines to the existing charts.

Once you've done the initial set-up work, the future is much easier, particularly if you update your data regularly (instead of trying to do it all at once in a tedious session).

Of course, if you are a large water consumer, you can also keep track of water/sewer costs and consumption on the same worksheet, and create a companion chart to the ones for electricity and natural gas. The same format may also be used to track gasoline consumption. You can keep track of gasoline usage per car, if you separate the data. And you can use your credit card receipts (which record gallons purchased) to monitor fuel consumption as distinct from cost.

Granted, you may not find utility usage charts on your home to be very useful, but they are interesting to look at.

Most importantly, working your way through a simple project like this will familiarize you with the features of your spreadsheet and charting programs, and will give you ideas on how to use your Mac for comparable projects at work.

Macintosh Fonts contd. from pg 66

Ham	15	"
Lineal	18	"
Wartburg	18	"
Hollywood	23	"
Runes	24	"
Chicago By Night	32	"
Pica	40	"
Cirth	48	"
Greek	64	"
Elvish	66	"
Hollywood	72	"
East Orange	74	"
Stencil	213	"
Stencil	238	SigMac Disk 16
Mars	248	"
NYItalic	200	Altsys - Fontastic
Math	201	"
Venice (12/24)	203	"
NYNights	203	"
Scan	204	"
Broadway E	205	"
Russian	206	"
Tiny	207	"
Keymap	208	"
Manhattan	150	Mac the Knife Vol. 1
Hollywood	151	"
Mos Eisley	152	"
Silicon Beach	201	Silicon Beach Software - Accessory Pack 1
Swan Song	100	Through the Looking Glass - Apple

REVIEW CORNER



by James M. Burger

SEATTLE: EXCEL SHIPPED

AS THE APPLE TURNS

So much is happening in the Apple world that it is hard to decide what to write. For a variety of reasons, I will not spend much space reviewing the newest Soap rivaling Dynasty and Dallas - "As the Apple Turns." The only comments - Without Steve Jobs there would have been no //, ///, Lisa or Mac (sure the Woz designed the //, but Jobs cajoled him into a commercial enterprise; sure Smith, Hertzfeld, etc. designed the Mac, but Jobs brought the machine to market). But, Jobs' skills do not appear to be appropriate for running a nearly \$2 billion company. Only the manner of parting - personnel raiding, lawsuits, etc. is regrettable. Overall, I am optimistic about Apple's future. To quote the usually quotable Guy Kawasaki (Apple's Software Development Czar) - "It feels like the cool rains have come and gone, rinsing the dust from the air and washing it away."

EXCEL

Since Spring Comdex I have been writing about Microsoft's proposed new super-spreadsheet product Excel. Finally, after two years of development, Microsoft shipped its release version, as promised, in September (well September 30th anyway). Gates was the keynote speaker at Apple's NorthWest Dealers Conference which I attended in Seattle, Washington. I will not attempt a review here, but save that for a full scale effort. Instead, I'll summarize by saying that, in my opinion, Excel is the best spreadsheet program available on any personal computer.

GATES NUGGETS

Bill Gates, as usual, made several interest comments. One that was no surprise - Microsoft has a greater share of Mac software than any developer on any Machine. But one that did surprise me was that all Microsoft business products (Word, Plan, Chart and File) have sold equally as well. Gates also announced some new products: Fortran which will have a full 7-7 compiler; Logo (developed outside Microsoft by the // Logo authors); and, version 2.1 of Basic, which he claims runs twice as fast as 2.0.

The future: Gates had some interesting, but naturally biased, comments on software integration. (How many of you read Pournelle's column on this subject recommended in this column last month? See September 1985, Byte) There are, according to Gates, two ways to integrate: within the Application - such as Jazz - or, within the Mac environment, e.g. Word/Excel on Switcher. In MS-DOS in the IBM operating environment you are forced to do integration in the application. But the Mac has a "much richer environment." Most Mac applications use many common interfaces (pull down menus, scroll bars, etc.) Microsoft products strive to have as much commonality as possible. Thus, Switcher comes at the environmental level unifying programs with

common user interfaces such as word and Excel; thus, a single key stroke moves Excel numbers into Word.

Gates listed some negatives of integrated applications. He feels that there are limited resources available. That is manual size, disk size, amount of code and training time. He believes that the main applications areas - number, word and data processing - should be kept separate. (I would add communicating). Gates maintains that a software house can more readily push state of the art in each separate area. He held out, for example, some tantalizing improvements in Word - auto indexing, table of contents, spell checker and thesaurus. With improved hardware (he didn't say how but one could guess - open architecture, more RAM, etc), and an improved operating system (new ROMS?), Gates sees continual "generational" changes in software. Excel, Gates claims, is the first of in depth state-of-the-art software fully utilizing the Mac interface. I would agree and believe he is right about more to come. Despite Microsoft's heavy involvement in the IBM-PC world, Gates promises his company's continued commitment to Mac.

APPLE'S NEW ADS

By the time this issue of the Journal is printed you will probably have seen Apple's new advertising campaign featuring real live users, including yours truly. For those of you interested in how it happened (the rest can quit this section and move on). The May issue of Personal Computing had an article on thought outliners. The Living Video Text people (ThinkTank 512) had given my name to the author who talked to me and eventually included a picture of me with my XLisa. In turn, the ad agency for Apple, Chiat-Day in Los Angeles, asked if I would spend an hour with them. I agreed. They video taped the session which was essentially my talking for an hour about Mac. They also taped a number of other people. That led to approval by Apple of their concept and thus the ad with me in it.

Unfortunately, I could not get them to mention my increasing involvement in computer law, that is, representing developers and publishers. I cannot remember who said - any publicity is good as long as they spell your name right (someone please write and tell me who said that). No, I'm not getting paid for doing the ad. I really believe in the Mac and use it in my work, like many of you, every day. Apple would like to hear "success" stories of Mac in the business world (not surprising, considering the competition). I can't guarantee that you will get an answer, but if you want to send in your story write to Charlotte Smith, Apple Computer, Inc., 10201 N. DeAnza Blvd., Mail Stop 23-EI, Cupertino, CA 95014. Understandably, Ms. Smith will be more interested in the story if you name a "friendly dealer" who helped you out.

contd.

CORRESPONDENCE

Thanks to reader John Alvey, who took the trouble to review my small le dictionnaire in the September WAP Journal. My regrets to all our French readers for my excesses on the French language. I have revised the little dictionary and John has graciously agreed to review it. So, for all who want a revised copy, please drop me a line at the Pi office. John also has advised me that a good French and English computer dictionary is by M Ginguay: Dictionnaire d'informatique published by Masson.

PRODUCTS RECEIVED:

Unless otherwise indicated, the products are for the Mac and the price, if indicated, is the suggested retail price.

SOFTWARE -

PBI Software, Inc., 1111 Triton, Foster City, CA 94404. **Strategic Conquest**. An absorbing tactical and strategical game, where you create armies, ships and aircraft and battle your computer, with "2 billion" possible world combinations and 1-12 levels of expertise.

Telarium. Amazon, Fahrenheit 451 and Dragon World.

Sierra On-Line. Championship Boxing; Ultima 1 (for the Atari).

INFORMATION RECEIVED:

HARDWARE -

BECK-TECH Corp., 41 Tunnel Road, Berkeley, CA 94705. **MacMEGABYTES**. 128K conversion \$849, 512K conversion \$549. Kits \$699 and \$399, respectively. ROM enhancement \$149. Memory Upgrade which brings Mac's memory to 1024K Bytes. Has own ROM enhancement to provide contiguous application work space. Claims to work with all Mac software which obeys Apple's MAC system software rules.

SOFTWARE -

Boston Software Publishers Inc, 19 Ledge Hill Road, Boston, MA 02132. **MacIndex™**. \$49.95. An automatic index preparer for authors, creates alphabetical index of each occurrence of key words or phrases; works with MacWrite. **MacPublisher II™**. \$149.95. An electronic page composer with many features.

Chang Laboratories, 5300 Stevens Creek Blvd., San Jose, CA 95129. **Rags to Riches**. \$195. Small business accounting system - general ledger, accounts payables and accounts receivable.

Mainstay, 28611B Canwood St., Agoura Hills, CA 91301. **N'cryptor**. \$39.95. Data protection application. **Disk Ranger**. \$49.95. Disk cataloger and labeler, captures both volumes and files, 50 pin-feed labels included (additional labels at \$19.95). **TypeNow**. \$39.95. Desk accessory which turns the Mac into a modern memory typewriter, gives on-screen preview before printing - for small typing jobs that are hard to do with a word processor (ever do files labels?)

MegaHaus Corp., 5703 Oberlin Drive, San Diego, CA 92121. **Megaform**. \$295. An electronic "forms processor," a graphics/spreadsheet/data -base program rolled

into one to create active forms for business.

PBI Software, Inc., 1111 Triton, Foster City, CA 94404. **Fokker Triplane**. \$59.95. Flight simulator with emphasis on air acrobatics.

Bridget Software Co., 1309 Canyon Rd., Silver Spring, MD 20904. **Graph Master**. \$34.95. Produces bar, line, pie and scatter graphs. Reads Bridget's Record Master data base file, ASCII files, or uses keyboard entry. Has data reduction and algorithms, graph overlay and stacking options, graph and data editing, etc. For 64K Apple][+, //e, //c.

BOOKS, ETC.

BECH-TECH (see above). **Facts of MAC** posters. \$19.95 each. #MP1 complete main logic board schematic and #MP2 Analog board, power supply, mouse and Keyboard schematics.

Scandinavian Computer Furniture, Inc., 14875 N.W. 77th Avenue, Miami Lakes, FL 33014. (800 557-5777). **MacTable**. \$495. Computer desk designed especially for the Mac. ☺

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MacBCPL: A Review

Chuck McMath

Although the Macintosh may be the computer "for the rest of us," it probably has as many programming languages available for it as any other computer. Macintosh owners can choose from Basic, Fortran, Cobol, C, Lisp, Logo, Assembly, Prolog, and Pascal, among others (thanks to Rich Norling for this observation). Perhaps the richness of the Macintosh environment has contributed to the many available programming milieus. At any rate, we Mac owners have an embarrassment of riches from which to choose.

One offbeat entry in this 'language sweepstakes' is a language called MacBCPL, from Topexpress Ltd., in Kensington, England. Let me assume that you have never heard of BCPL (and I have yet to speak to someone who knows exactly what the language is). To place BCPL in its proper perspective, it's necessary to trace back a bit in the history of programming languages. When the C programming language was written at Bell Labs, it started from an existing language called B. This language, in turn, was derived from BCPL. Historically, BCPL has been used for writing compilers (much as C is used for that purpose today). I suspect BCPL was available when its only competition was an assembler. In short, BCPL is very similar to C except for the lack of high-level data structures and datatypes. The only unit of storage in BCPL is the word, or 32 bits. Let me repeat that -- the ONLY UNIT OF STORAGE IS A 32-BIT WORD. This 'feature' is one of the most distinctive aspects of BCPL, and causes many of the differences between BCPL and other programs (in addition to many headaches). In other areas, BCPL is pretty standard -- or better. BCPL supports simple variables and arrays (multi-dimensional). The language also has such features as looping controls, iteration, and if-then-else constructs.

What You Get

MacBCPL comes on one non-copy protected disk, with a 200+ page reference entitled BCPL: the Language and its Structure, by Martin Richards and Colin Whitby-Stevens (which I believe is the standard reference on the language; in fact, it may be the only reference), and a slim (60 page) MacBCPL-specific reference guide. My first encounter with BCPL was one of panic -- I opened the plastic bag, took out the contents, threw away the assorted trash, and sat down to read the Mac guide. Page 4 describes the contents of the two Macintosh disks. Since I only received one disk, I panicked -- looked through the trash for a few minutes, contemplated getting another copy, etc. -- until I read the documentation more carefully and saw that the second disk contained a Basic interpreter (which I assume is a separate item).

The disk contains the following: the standard Edit and Link applications, which appear with many languages, a BCPL application (the compiler -- which you can transfer to directly from the Edit application -- a nice touch), library and header files, a disassembler, and a comprehensive example program. The sample program is one of the most thorough I've seen with any programming language. It demonstrates

the use of windows, menus, textedit routines, scrolling, file input/output, and filter procs, among other things. The trouble is, you need to use this sample much more than you should (since there isn't much in the Mac-specific book to show you exactly how to do things). In fact, that's the whole trouble with BCPL -- what is supplied is of high-quality, and useful -- a lot of attention was paid to the little things; however, what isn't supplied is frequently necessary.

The BCPL reference is a typical language reference manual - complete, but pretty dry. The MacBCPL manual is well written, goes step by step, and doesn't assume a lot of knowledge on the part of the owner. While it doesn't cover anything comprehensively, it covers everything once (with simple examples).

Description of BCPL

BCPL, in general besides having ONLY ONE DATATYPE - THE 32-BIT WORD (have I mentioned that before?), allows the declaration of simple variables, and arrays (either dynamic or static) of the basic datatype. Strings can also be declared and used as in Pascal. Variables must be declared before they are used, and can be either initialized when they are declared or can be set to a null value. Typical 'structured' constructs are supported also - counted (for) loops, repeat until/while loops, while - do loops, if-then-else, and case statements. In fact, just about any type of construct you'd want to use is available. And if that's not enough, you can declare variables inside of any of these constructs; these variables are local to that construct, and can be used as any other variable inside the construct; they go away when you leave the construct. Global constants can be declared, as well as macros (as in C header files). You can perform conditional compilation through the use of labels. A standard library contains input and output routines (allocate/deallocate storage, character, block, and file I/O).

So much for the 'generic' BCPL. On the Mac, languages are made and broken depending on the ease of access to the Mac's ROM, for in reality, no language, however fancy, is any good on the Mac unless you can program the distinctive look we all know and love. So how does MacBCPL stack up in this regard? Pretty well. Access is provided (it appears -- I didn't test EACH routine...) to most of the ROM routines, both Toolbox and OS. For those few routines that don't have an interface defined, you can either write one using the existing ones as a guide, or construct an interface -- an example is provided. I wouldn't worry, though. I wrote a few sample programs that didn't ever need to use more than their in'erface files.

Trouble In Paradise

So, you say, this language sounds great. Where's the catch? The problem in using BCPL has to do with (can you guess?) the ONLY DATATYPE BEING THE 32-BIT WORD. This 'unique' scheme forces the BCPL programmer to go through a few contortions when passing parameters to Mac
contd.

routines (and as you Mac programmers have noticed, I'm sure, we spend a lot of time passing parameters to routines). Whereas the code to call routine SetRect in Pascal looks like this (tRect is of type RECT):

```
SetRect(tRect, 10, 10, 120, 200);
```

in BCPL, this same line would look like this:

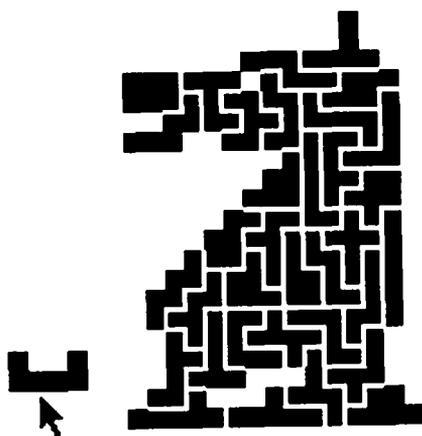
```
SetRect(tRect << 2, 10, 10, 120, 200)
```

The reason for the << is that in BCPL the variable tRect would be declared as an array of 2 elements (8 bytes). Since SetRect only wants 4 bytes, we need to shift the contents of the array left 2 bytes. If you didn't do this either one of two things would happen (speaking from experience): 1) nothing, or 2) address error (ID=02). The problem with this adjustment is that some ROM calls don't seem to need this shift, while others definitely need it -- only trial and error can tell. In addition, getting to just about any of the Pascal-like records defined in Inside Macintosh is difficult. You need to extract the appropriate bits using a bit-selection mechanism that is part of BCPL. This holds for such necessary things as the portRect for the current Window, and all grafPort parameters. As you might suspect, you spend a lot of time counting how far something is offset from the start of a record -- and this sort of thing should NOT be necessary in 1985. Besides, in my opinion, programming on the Mac is so involved, you want to free your mind from focusing on the implementation

of your language in order to concentrate on unlocking the power of the Mac. That's the main failing of BCPL, and it pains me to admit that, because as far as production quality goes, Topexpress Ltd has its act together, from a very understandable manual, to a fairly fast compiler, even down to a nice 'fault' routine that you can call which displays a dialog box with your message, and Continue/Quit buttons (so many other languages could use nice little touches like these).

Winding Down

So what's the bottom line? BCPL is a language that's like a party game -- you drag it out every now and then to show it off, but you don't use it on a day to day basis. And that's sad, because I wanted to recommend it; but no matter its price, it's not a bargain. BCPL shows its age when compared to other Mac languages available today; and with languages such as Modula Corporation's Modula-2 interpreter or TML Systems' \$49.95 Pascal compiler as competition, BCPL clearly suffers. Unless you plan to write non-Maclike programs using your Macintosh, or intend to write a compiler, or unless you like counting byte offsets to determine where in a data structure some variable resides, I can't advocate your purchasing BCPL. ©



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A STORY ABOUT VALUESOFT

by George R. Hohmann

The legal-size envelope appeared in my mailbox on June 26, and I read it over dinner. "Here's the Mainstreet Filer upgrade you've been waiting for - the new ValueSoft MANAGER," said the headline on the brochure.

Golly, they were right, I was indeed hoping that somebody would upgrade Mainstreet Filer. I had become exasperated with Filer's uninformative prompt screens and, most of all, the disk swaps launched each time I used the protected program. They hooked me in the second paragraph: "Mainstreet Software has ceased operation . . ."

While I washed the evening's dishes I thought of the implication: I might somehow lose my \$125 investment in the Filer program if something catastrophic happens and I need factory help. As I turned it over in my mind, it became clear to me that if I didn't go with ValueSoft's new Manager, I would be left in the dust. So when the evening's chores were done, I went back to the brochure.

"It's much easier to use - and a lot more powerful - than your old Filer program. Best of all, upgrading to the ValueSoft Manager won't require you to re-enter your data." The brochure's headlines read like a dream come true: "The Manager Files It All", "Manager Handles the Mail", "Get the Total (and Subtotal) Picture", "Order Today and Save \$40.00", "10 Day Money Back Trial".

The brochure pointed out that although Manager was advertised in MacWorld for \$89, I could take advantage of "a limited one-time offer" and get it for just \$49. The brochure went on to promise me the new program "will be shipped within 2 weeks of receipt of your order." This was a very important promise, because the firm said I should send them my original Filer disk. Hmmm. While they had my Filer disk, I could not use any of my Filer data . . .

Two weeks without a database program did not seem like a big problem, because I had been planning to take a few vacation days around the Fourth of July. I figured I'd send my original Filer disk and my check right away, and shortly after I returned from vacation, the new Manager program would arrive. After all, I thought to myself, just think of the added benefits I would receive with the new Manager!

I sent in my order on June 27, went on vacation a week later, came back to work on July 9 and on July 16 - the day ValueSoft promised I would have my new program - the postman brought a letter from California instead of a package.

"I was pleased to learn of your recent order from our organization," ValueSoft President Gerald D. Eschen wrote. "It is always a pleasure to welcome new customers to our company. Your response to our mailing has been exciting and all orders are being processed in the order received. We anticipated shipment this week; however, one of our quality assurance testers, in the final stages of testing, discovered a small bug which required some additional fine tuning. We now anticipate shipment the week of July 22. We value your confidence, and will always do everything possible to provide you with the finest software products and service."

OK, I thought, I can live with that. No use getting a

program with bugs in it. Let 'em fine tune it.

When the week of July 22 ended, they still must have been fine tuning, because I had no program - no old, decrepit Filer program and no new, streamlined Manager program.

I'll admit I had a twinge of nervousness when Mr. Eschen sent that July 11 letter, but anxiety really began to grip me as the month of August rolled around. I broke down and called ValueSoft. The fellow at the other end of the phone was very pleasant. "What's your zipcode?" he asked.

"26554."

"Oh, yea, George Hohmann. . .," he said, reading out my address. "You're on the list to ship today by UPS Second Day Air. You'll get your program the day after tomorrow."

"Wow, thanks a lot," I replied.

"Thanks for being so patient," he said.

And two days later, sure enough, the UPS truck pulled up with the long-awaited package. I could hardly contain myself as I unpacked it and filled out the Warranty card. I did wait 'til after work to start reading the instruction manual. Ahh, the binder was classy. Neat color graphics. And a good-looking instruction manual, too.

With a fresh cup of coffee beside me, I settled into my favorite easy chair that night and began to read the manual. But Page 3 pulled me out of my chair and made my stomach churn.

"Before You Begin," the page was titled. "What You'll Need," was the subtitle. And then this list:

- A Macintosh (128K or larger)
- An external disk drive
- A printer (if you want to print data)
- The Manager disk
- Extra disks for storing data

I had everything except the external disk drive. Oh, an external disk drive! Don't they cost four or five hundred dollars? "Yea, they list at around \$495, but I can get you one for about \$400," my favorite Apple dealer told me the next day. "But you don't want to buy one just now."

"What?" I asked, amazed that my trusted dealer would try to discourage a sale. "Yea, you dont wanna buy one just now, because they're going to come out with a double-sided disk drive."

I thanked him for the frank advice. Later in the day I went back and read the original mailing ValueSoft had sent me. I went back and read the full-page MacWorld ad. In fact I read everything I had ever seen by ValueSoft about their Manager program: you guessed it, not a hint anywhere about the need for an external drive.

I booted up the Manager once and looked at the icons, before I packed all of the material for storage. I am now waiting for the new external double-sided disk drives to come out, so I can buy one and use the Manager. Meanwhile, I have borrowed an old, decrepit, poky Mainstreet Filer program from my dealer. It chugs along and although it is cumbersome, Filer gets the job done.

Best of all, it's paid for.

☺

USING WORD WITH THE LASERWRITER

by Leon Moore

Wow, what a combination! A new Mac, a 'full-feature' word processor, several groups that advertise time available on LaserWriters and a bicycle racing club that needs a newsletter. Well, it sounds good and in fact it works reasonably well. But there are a few things waiting to surprise you. Having done two newsletters using the Mac, Microsoft Word (version 1.0), an ImageWriter to proof the text and a LaserWriter for the final copy; here are a couple of things that may help others.

The newsletter is reasonably short. Only 8 to 12 pages. Normally it is done in three columns on 8 1/2 by 11 pages. MS Word should allow you to do this electronically (translate as 'a lot quicker than cutting and pasting paper'). It would seem reasonable to run the proofs on the ImageWriter, get it right (two or three times) and only use the LaserWriter for the final copy. The first time the newsletter was typed with a New York font for headlines and text. This text was taken to a LaserWriter operator expecting this wonderful machine to turn the ImageWriter pages into beautiful prose. I spent a long afternoon working with Earl Douglas to convert the text to Times and Helvetica and finally to reformat everything before producing the final copy on the LaserWriter. Lesson Number One for the neophyte - 12 point New York does not occupy the same amount of space as 12 point Times and Helvetica.

With all this newly reformatted copy, one would expect to see on the Mac's screen and from the ImageWriter, exactly what was on the sheets produced by the LaserWriter. What you see and what you get were close to, but not the same as produced by the LaserWriter. The material from the LaserWriter was about 5 lines per column or about 15 lines per page (remember 3 columns per page) longer than what was produced by the ImageWriter. Lesson Number Two for the neophyte - what you see is not what you get. Unless, you have clicked 'Tall Adjusted' on 'Page Setup' from the 'File' menu. Then what you see on the Mac's screen and what you get on the ImageWriter will closely correspond to what is produced by the LaserWriter (except in quality).

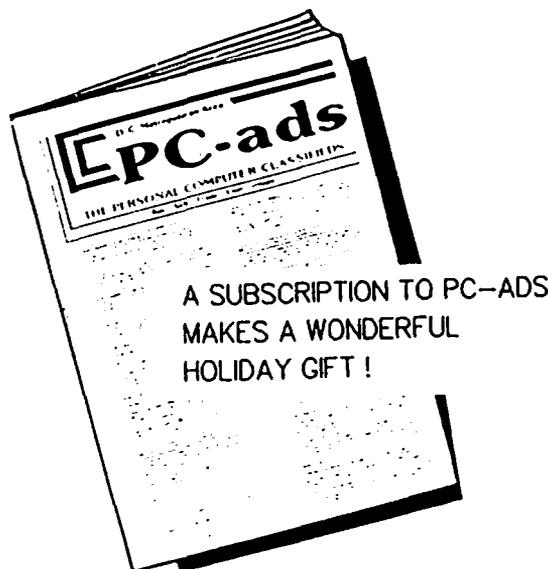
For the next issue, I didn't consider myself a neophyte. Having been through the 'trial-by-fire' one could expect to produce a 12 page newsletter from the LaserWriter in less than an hour. To do a three-column page, the LaserWriter 'thinks' for about three minutes before it produces the page. This time, Times and Helvetica (borrowed from software at work) were installed on a master copy of Word. All the text had been proofed on the ImageWriter and fit 'just right'. The LaserWriter began immediately (after the three minute wait) to produce a copy that corresponded line for line and character for character to the ImageWriter proof. Only two details were missing. The right half of the third column was chopped off by the LaserWriter and what had been a half inch margin on the left was now five-eighths inch. In other words the LaserWriter was producing the text 20 to 30 percent larger than it should and the page was off-center one-eighth inch to the right. Mr. Douglas and his father immediately diagnosed

the problem. With MS Word, one can delete text a number of ways. One of the 'undocumented features' of the word processor appears to be the 'select and delete with the backspace key' bug. For what it is worth, Microsoft's Technical Service (206-828-8089) won't admit this one occurs. The Douglas' claim to have sent Microsoft disks demonstrating the bug. Lesson Number Three for the neophyte - don't select and delete text with the backspace key if you want you Mac's screen and your ImageWriter to reproduce text in the same way as the LaserWriter. To work around this 'undocumented feature' all the text had to be saved as 'Text Only' and completely reformatted.

Finally, after another three hours work, with only a couple of time-outs for a terrific thunderstorm in Kensington (Lee could you hear the thunder?) another issue was quickly produced. The LaserWriter copies corresponded line for line and character for character to the ImageWriter proof, except for being off-center 1/8 inch to the right. Microsoft's Technical Service suggests if you want to prepare copy for the LaserWriter that you have the person with the LaserWriter install the LaserWriter driver in place of the ImageWriter driver on a working copy of Word. Use this disk for text preparation, switch to a working copy of Word with the ImageWriter for proofs and switch back to the working copy with the LaserWriter for the final copy on the LaserWriter. Wow, this is quicker than cutting and pasting paper? I wonder what Lesson Number Four for the neophyte will be? ☺

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LETTER TO THE EDITOR

Dear Editor,

The following letter was recently sent to Videx, Inc.:

"Yesterday, I called your organization and was referred to Walter, who I was told is your technical specialist. I described the problem I had had with my Videx Videoterm™ board over a long period of time. The best way to characterize the problem is that when we boot up our Apple][+ and then call up the 80-column display by typing PR#3, the display comes up as is expected. After a period of about three or four minutes a series of (())'s appear on the screen on one side and then on the other down several lines, and they seem to vibrate. If one pushes the return several times, the pattern on the left and then on the right will reappear. We are also getting stray @'s and missed characters when printing a program that my son has programmed in the 40-column mode.

Until about a year ago when we bought a Macintosh, we did not have a printer and so we never really had any need for clean copy from our Apple or had paid much attention to the (('s on the 80-column display. Now that my son is in college and taking Advanced Basic and Pascal, he really needs access to the Apple for serious business.

I called your office and spoke about all of this with Walter, who I must say was interested in my problem, and after I told him the whole story, he said that I should pack up my board and send it back for testing, repair or replacement without any charge. I could not believe what I was hearing and hastened to repeat that I bought the Apple and the board about three years ago (checked my records and it was in May 1982). He said that did not matter--it was the policy of your company to handle problems of this nature in this manner. He gave me an RMA # and said that it should be printed on the outside of the package so that when it was received it would be handled promptly. This is really the kind of service and support of one's product that is the exception rather than the rule.

I should add that our son, who is now twenty, and his parents are partners in a small software mail order business, and we try our best to accommodate each and every customer. However, your policy surprised me beyond imagination, based on several bad experiences we have had with several software publishers. More than once I have called software firms to inquire on behalf of prospective customers or purchasers who had inquired about some application for a particular program, or about its compatibility with some firmware, and have ended up with comments like, "We don't know" or "We don't have time to research this trivial question", or the like.

Let me tell you that the next time I hear of anyone who needs any firmware for the Apple, or for that matter software like Desk Calendar™, MacGammon™ or MacVegas™ for the Mac, you can be sure that I'll recommend a Videx product.

..... Thank you again and I wish you continued success in the microcomputer field. You should know that firms like yours are the exception, rather than the rule. I am taking the liberty of sending a copy of this letter to the Washington Apple Pi, Ltd., the top users group in my opinion, with a membership of over 5000, to post or cite in an upcoming issue of their monthly journal if they wish."

Joel H. Broida, Computer Ware Unlimited

Copied from The Wall Street Journal, dated August 15, 1985.
(Bob Wilbur WAP#4708)

'Arf! Arf!'

(By Peggy Edersheim, Staff Reporter of The Wall Street Journal)

Richard Streeter's bytes got bitten by an "Arf Arf," which isn't a dog but a horse.

Mr. Streeter, director of development in the engineering department of CBS Inc. and home-computer buff, was browsing recently through the offerings of Family Ledger, a computer bulletin board that can be used by anybody with a computer and a telephone to swap advice, games or programs - or to make mischief. Mr. Streeter loaded into his computer a program that was billed as enhancing his IBM program's graphics; instead it instantly wiped out the 900 accounting, word processing and game programs he had stored in his computer over the years. All that was left was a taunt glowing back at him from the screen: "Arf; Arf! Got You!"

'Hackers' Strike Again

This latest form of computer vandalism - dubbed for obvious reasons a Trojan Horse - is the work of the same kind of anonymous "hackers" who get their kicks stealing sensitive data from government computers or invading school computers to change grades. But instead of stealing, Trojan Horses just destroy all the data files in the computer.

Trojan Horse creators are nearly impossible to catch - they usually provide phony names and addresses with their programs - and the malevolent programs often slip by bulletin board operators. But they are becoming a real nuisance. Several variations of the "Arf! Arf!" program have made the rounds, including one that poses as a "super-directory" that conveniently places computer files in alphabetical order.

Operators have begun to take names and addresses of electronic bulletin board users so they can check their authenticity. When a computer vandal is uncovered, the word is passed to other operators. Special testing programs also allow them to study the wording of submitted programs and detect suspicious commands.

Interfacer Beware

But while Al Stone, the computer consultant who runs Long Island-based Family Ledger, has such a testing program, he says he didn't have time to screen the "Arf! Arf!" that bit Mr. Streeter. "Don't attempt to run something unless you know its pedigree," he says.

That's good advice, because the computer pranksters are getting more clever - and nastier. They are now creating even-more-insidious programs that gradually eat away existing files as they are used. Appropriately enough, these new programs are known as "worms." 

DISKETTERIA DISPATCH

by Jim Little

We have more new disks this month - five for Apple // owners (after the six issued last month), and three for Macintosh owners.

Fred Edwards has compiled Disks 165 and 166 and submits the following descriptions:

WAP DISK 165: Happy Holidays

This disk replaces Volume 103 (Merry Christmas). All of the programs on that disk are included here as well as several new programs. All of the programs have been 'proofed' to the best of our ability and, with two exceptions, they are in Applesoft Basic. With the exception of the two Integer-Music programs which are indeed music only, all others are either Lores or Hires graphics, and several also include music subroutines.

There are four main programs on the disk which are linked in such a way that running any one of them will cycle through all of the programs in that category. These programs are:

THE CHRISTMAS PROGRAM
THE HANUKKAH PROGRAM
THE NEW YEAR PROGRAM
THE BIRTHDAY PROGRAM

At any time during the course of running one of these main programs you can move to the next program by pressing the ESC key or go to the WAP Menu program by pressing the M key. Each of the programs will print a text message when you have seen and/or heard it all. At that point pressing the ESC key will move you on to the next one. For those of you who are into simple programming, the text message is in lines 100-120 of each program and may be changed to whatever you want. All of the programs listed below under the main programs can be run on their own, either from the WAP Menu or by simply typing RUN (NAME).

THE CHRISTMAS PROGRAM

Xmas Tree	Xmas Morn Tree
Santa Claus	Xmas Card
Fireplace	Xmas Scenes
Xmas Eve Tree	Tree Carols
Reindeer	Xmas Kaleidoscope

THE HANUKKAH PROGRAM

Menorah

THE NEW YEAR PROGRAM

Happy New Year	New Year Kaleidoscope
----------------	-----------------------

THE BIRTHDAY PROGRAM

Birthday Cake	Birthday Kaleidoscope
---------------	-----------------------

MISCELLANEOUS (must be run individually)

Joy to the World-Int: An Integer Basic music routine.

Deck the Halls-Int: Another Integer Basic music routine.

Trim A Tree: Uses paddles.

WAP DISK 166: Charts and Graphs

The WAP disk library has not, to date, offered many programs to produce charts and graphs. This is now being rectified with the three programs described below. There are a number of commercial programs available which permit much more complexity but this disk will serve to introduce you to the area and considering that they are, in the main, written in Applesoft, they produce a wide variety of charts and graphs which should meet most of the needs of the casual user. The disk, as supplied, does not have enough blank sectors to serve as a data storage disk. Users with two disk drives may designate Drive 2 as the data storage drive and use an initialized disk for storage. Single drive users should use an initialized disk in Drive 1 when saving or loading data. As always we URGE you to make a copy of the disk before you use it.

{166.1} MICROGRAPH - The original program on which MICROGRAPH is based appeared in Softalk magazine for January 1983 (pages 111-119). It was called 'BASIC-GRAPH' and is still, in the original form, popular on the WAPABBS. MICROGRAPH is an expanded version whose most important addition is the inclusion of a printer routine to permit 'dumping' a graph. The program permits the user to enter up to 16 data points and 16 titles, edit the entries, save the data to disk as a text file, load previously saved data from disk, graph the data as either a bar chart or a pie chart, and print the chart either as the chart only or as a data table plus the chart. Instructions are included and may be printed.

{166.2} PIE CHART - Permits the entry of up to 10 data values and associated titles. The user can also enter a chart title and sub-title, select the starting angle of the chart, choose between 'line' label mode and 'block' label mode, select 1 of 5 colors for each data point, choose location of 'data storage' drive, and 'screen dump' the chart to a printer with a suitable interface card. Data files are saved to disk as 'text' files. A 'data edit' capability is not included. Instructions are included and may be printed.

{166.3} SOFTGRAPH - This is both the most complex and most professional of the three programs. It is based on a four part series in Softalk magazine (Jan-Apr 1983) and was written by David Durkee. It should be noted that a printer routine has been added to the program and that this routine is not described in the instructions. The special printer codes are in lines 710-720 of the menu program. If you find you need other codes enter them on or between these lines.

CAPABILITIES: Up to 18 data values are permitted per data set. A value may be up to eight characters long, either positive or negative, and either integer or decimal. A data table may contain up to four data sets of 18 values and associated labels. Labels are limited to eight characters per label although the 'pie chart' routine permits 'doubling' to get a sixteen character label.

In the 'bar/line' mode you may choose automatic labeling by months or days or choose a 'numeric' and increment it automatically.

The pie chart mode charts one data set at a time and percontd.

mits sorting by either value or label. A rotational choice is offered to put the chart either above or beside the labels.

The bar/line mode will chart from 1 to 4 data sets per chart and permits the user to mix bar and line on the same chart. Four grid densities may be chosen and any part of a data set may be selected for charting. Choice between color and black & white is offered.

The data editor is both powerful and inclusive.

Sample data files for pie chart and bar/line modes are included on the disk as is a bar chart sample. A very detailed instructions file is included and may (should) be printed.

Three International Apple Core disks are offered this month. WAP Disk 167: (IAC 40) is a Basic-based Pilot language disk. Pilot is an instruction language where the computer "talks" to the student. Answers may then be compared with the instructors listed replies, and the programming then may branch as desired to correct wrong answers. While this Public Domain version is not super-fast, it works and indeed the demonstration that it does work is the disk itself. Rather than the usual text print out of documentation, this program leads the user through the command list, corrects wrong answers by review and reinforcement. For the price, how can you go wrong?

WAP Disk 168: IAC 41 & 47 is an experiment. It contains Applewriter utilities. We have placed the][+ on one side of a double sided disk and the //e on the other. An extra notch has been cut into the disk to do this.

These changes to AW are meant to help the user with the Epson MX series or the C. Itoh Prowriter (NEC 8023 is similar) with the Graphtex Plus printer card. One set of files provides a simple introduction to AW II. Additional files explain how to footnote and format the text on the monitor screen. WPL Multiprint is taken from the May 84 WAP Journal as an example of customizing AW II. Documentation is on the disk. When you make the changes on your Applewriter please note that these modifications are to be done on a COPY only. This modifies the 3.3 versions and not the Pro-dos Applewriter.

WAP Disk 169 is a "donation-ware" terminal program "EVE v2.1" for the][+ and //e users with a Hayes Micromodem. It operates at 300 baud, and should work with the compatible equipment now on the market. It does not work with the Transmodem 1200 (the one I use). Included in this system are file transfer programs, extensive error checking for file transfer, and automatic storage for incoming text. Many of the commands have built in safety features. Quitting with information in memory automatically saves the contents. Its nice to be protected against goofs. On the other hand if you have a full memory and want to throw it away, there is a fast dump too. It's the reset key. Poof and its gone.

As a bonus, loading this disk patches the DOS 3.3 so that the "verify" command is gone and in its place is "type". It works like this: type filex. The text file called filex is displayed on the screen. If you initialize a disk with this patch in place, the new disk will also include the command. Pay \$30 to the author if you decide to keep the program.

Disk 103 will be withdrawn at this time to the archives. Fred Edwards new disk replaces the contents of "Merry Xmas".

SigMac Disk 26: American Sign Language Fonts

"It is estimated that fourteen million people in the United States are hearing impaired. Nearly two million can be classified as deaf. The purpose of the documents and software on this disk is to provide the interested user with a new set of communication tools. Used for self teaching or in a formal educational setting these tools provide a method of learning and practicing the skill of communication with the American Sign Language Alphabet. These communication skills are easy to learn and use." RICHARD L. SMITH, creator of the fonts and Basic program on this disk.

These fonts are fun! Who could have imagined this use of the great Macintosh fonts capabilities. This diskette includes:

- A Discussion of Fingerspelling and How Fonts were Made.
- ASL Fonts in Five Point Type Sizes (14,18,24,36 & 48).
- A BASIC Program for Learning to Read Fingerspellings.

SigMac Disk 27: Cyclan Development System

The Cyclan Development System is a complete assembly language development system. This is copyrighted software, and the owner of the software requires that you license its use. The fee is very modest. \$10.00 for an assembly language system is dirt cheap. Please abide by this license arrangement so others will create more great software like this.

SigMac Disk 28: World Mapping Programs

(programmed and commented by Fred Espenak)-

WORLDMAP generates a world map using a straight-forward cylindrical projection. This gives you a cartesian coordinate style map where longitude and latitude form the abscissa and the ordinate axes, respectively.

GEOMAP plots the world coordinates on an orthographic projection. This gives you a global view of one hemisphere of our planet, just as it would appear from space.

Both programs allow you to choose the origin of the resulting map as well as the scale. You can even select the resolution of the map by choosing from any one of three input data files: WRLDAT.0 (low resolution - 20K), WRLDAT.1 (medium resolution - 36K) or WRLDAT.3 (high resolution - 86K). Of course, if you program in BASIC and have need of a different mapping projection, you can use WORLDMAP and GEOMAP as examples to write your own map projection program (Please send me a copy!). If you have special data you wish to display on a map, you're welcome to modify WORLDMAP or GEOMAP to plot this additional information. Whether you're a programmer or not, you can always convert your generated map into a MacPaint document and add additional details and labels from inside MacPaint. ☺

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- () November 5 - WELCOME TO THE WORLD OF APPLE - () December 3
- () November 12 - HOW TO USE YOUR APPLE SOFTWARE - () December 10
- () November 19 - POPULAR APPLICATIONS FOR YOUR APPLE - () December 17

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. You are strongly urged to bring your Macintosh.

- () Monday, November 25 and December 2
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The following "non-regular" tutorials are being offered on Saturdays at the office. Attendees should bring their computer, monitor, disk drive and suggested program disks. (Monitors are available for the first five registrants for the Apple // tutorial. Call office.)

November 16 - AppleWorks Enhancements (//e & //c) - Jay Jones. 9:00 AM - Noon. Bring AW program and blank formatted ProDOS disk.

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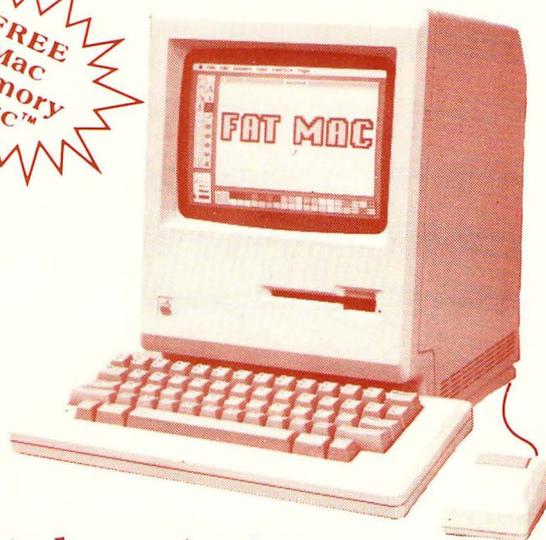
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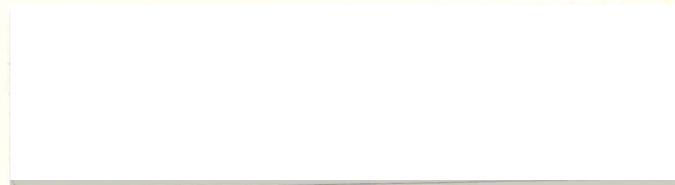
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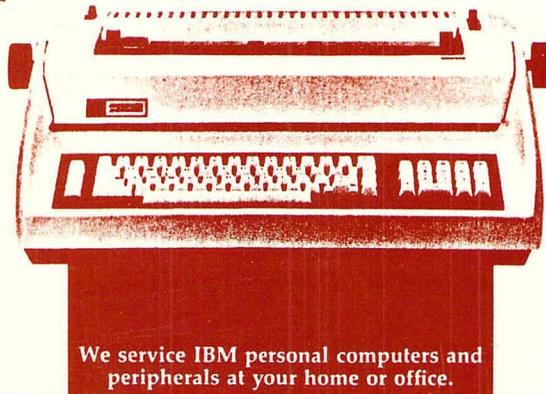
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