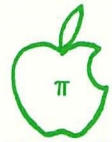


\$2

Washington Apple Pi



The Journal of Washington Apple Pi, Ltd.

Volume 6

August 1984

Number 8

Highlights

MAC SOFTWARE UPDATE
 PLAYING THE MARKET WITH STOCKSIG
 AN APPLE TELECOMM TUTORIAL
 NEW RELEASES FROM APPLE
 AND THE PIG

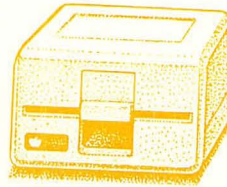
In This Issue

Officers & Staff, Editorial	3	When is a Data Base a Data Base?..Alex. E. Barnes	23
President's Corner David Morganstein	4	Playing the Market with StockSIG . . . Robert Wood	24
Job Mart	4	Apple-Oriented Telecomm. Tutorial . . . George Kinal	28
Minutes, Notes from the Office, SIGNews	5	Feeding at the Trough: Michael Hartman	32
WAP Calendar.	6	Specialized Data Management Bob Oringel	35
Membership Directory Dana J. Schwartz	7	Softviews David Morganstein	36
WAP Hotline	8	Permutation Generator in LISP Bill Wurzel	38
Hardware Helpers, Genl. Information, Event Queue.	9	Update of Auto-Repeat Dialing George Kinal	39
WAP Election Results, Classifieds	9	Apple Writer Printer Glossary Al R. Rumble	40
Q & A Bruce F. Field	10	Apple Tracks Richard Langston II	42
A Page From the Stack Robert C. Platt	12	Apple Tech Notes Richard Langston II	46
DisabledSIG News Jay Thal	16	Letter to the Editor Ludwig Benner Jr.	47
EDSIG News Peter Combes	16	Premium Softcard //e: A Review. . . Robert C. Platt	48
Low-Cost Cooling Idea George Kinal	17	Monthly Tutorial Outline	49
Macintosh Software Availability Update	18	WAP Tutorial Registration	50
Mac Mailing List Management Brooks Leffler	19	Membership Director Change Form	50
Glossary For New Mac Owners Robert C. Platt	20	Disketeria Mail Order Form	51
A Letter to St.Mac David Morganstein	22	Index to Advertisers	52

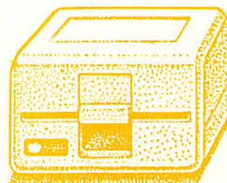
A DISK /// ON A // ?

\$199

WOW!

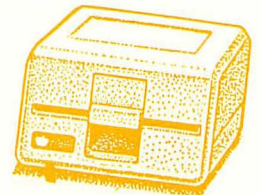
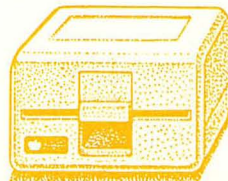


Clinton Computer had an opportunity to buy a limited number of brand new Apple Disk ///s at a very special price from Apple. We made this purchase because we have manufactured an adapter to make these Apple Disk ///s work on the Apple // Plus or Apple //e, with either DOS 3.3 or ProDOS. The adapter requires no modification to the computer, disk drive or cable. These drives will operate on an Apple // or an Apple ///.



There are many third party drives for the Apple //. Most of them have a low initial price, but are more expensive over the life of the drive because they are not widely serviced or supported. The Apple Disk ///, on the other hand, was built as an improvement over the Disk //. The Disk /// works better and quieter, it looks nicer and it can be serviced by any authorized Apple dealer. A disk controller is also available for \$69, if you need one.

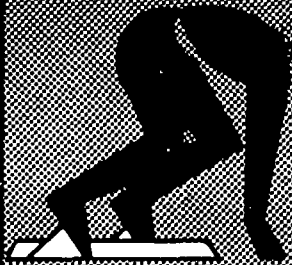
Apple Disk ///s available only at our Clinton location.
Call ahead for large quantities.



Clinton Computer

 **apple**
Authorized Dealer

Branch Ave. (Rt. 5) at
6443 Old Alex. Ferry Rd.
Clinton, MD 20735
(301) 856-2500



Set An Olympic Record

Sprint through the top selling software programs
for the Apple with

MINUTE MANUALS

Minute Manual for PFS: File/Report Graph/Write

Feel confident at your starting line equipped with the
MINUTE MANUAL for PFS: FILE/REPORT/GRAPH/WRITE.

This book explains this "easy" integrated software system for those who have one or more of the programs and for those considering buying PFS. Quick guide contains over 50 step-by-step procedures for no guesswork, no wasting time and quick reference. Many procedures not found in PFS manual like how to use an *Epson, Okidata, Prowriter, NEC, Gemini or Apple dot matrix printer*. Also contains two tutorials for business and education. The **MINUTE MANUAL** is perfect for home, school and business. ISBN 0-913131-03-2 \$12.95

Minute Manual for Apple Writer //e

THE MINUTE MANUAL FOR APPLE WRITER //e has a proven track record in getting you started word processing without the need to read computer, software and printer manuals.

The book contains step-by-step instructions for the seven basic procedures and advanced procedures. Many procedures will not be found in the original manuals, forty pages of step-by-step instructions explaining how to use Apple Writer //e with the *Epson FX/MX, Gemini 10/10X, Okidata, Apple DMP, Prowriter, and NEC 8023A dot matrix printers*. An entire chapter explains the most difficult problems of printing and formatting. The most useful computer book you'll buy this year! ISBN 0-913131-01-6 \$7.95

Glossary Disk for Apple Writer //e &][+

On your mark, get set, enter any printing code with a single keystroke.

This disk contains separate glossary files of print commands for each of the following dot matrix printers: *Epson MX/FX, Gemini 10/10X, Apple DMP/Imagewriter, Prowriter, NEC 8023A, and Okidata*. Access any print code with a single keystroke within Apple Writer //e or][+. Also contains **FREE** the alternate character set to do sub/superscripts on the Apple DMP. Also explains how to patch Apple Writer //e to use NUL code to **UNDERLINING** and **SUPERSCRIPTS** on the *Epson MX* and *Gemini* printers. Also, find out how to use your printer's foreign characters, special symbols and graphics characters in Apple Writer. \$14.95

Minute Manual for Apple Writer][+

The Apple][+ Version explains step by step the six basic operating procedures, advanced procedures, WPL procedures, and EPSON MX printing procedures.

Also explains how to enhance the Apple][+ to do word processing—lower case chip, shift key mod, 80 column board, monitor, extra memory, and more. Also contains *First User's Guide To Word Processing*. Get the Glossary Disk to get printing codes for *Epson FX, Gemini 10X, Prowriter, Apple DMP/Imagewriter, NEC 8023A, and Okidata*. ISBN 0-913131-00-8 \$7.95

Minute Manual for DB Master Sample Data Disks DB Master

Version 3 for Apple][/][+ and //e.

This book provides a straightforward and practical approach to learning and using one of the most powerful and popular data base programs for the Apple Computer. Contains practical explanations, informative tutorials and sound advice along with step-by-step instructions for creating and using a data base. Two tutorials take you through the powerful features of \$12.95 searching, sorting, report generation, and file restructuring and reblocking. ISBN 0-913131-02-4

These optional data disks contain the data used in the tutorials and allow you to work through the tutorials without creating a practice data base. \$9.95

Available at COMM CENTER, B. Dalton, Sidney Kramers (H St.), VF Assoc., Logical Choice, Towson Computer, Computers Unlimited, Westminster Computers & more, or send check + \$1 S/H to **Minuteware**, P.O. Box 2392, Columbia, MD 21045 (301) 995-1166.

Software City

OUR APPROACH

- All Products Always Discounted
- Reference Literature & Guides For Browsing
- Demo Machines
- Special Orders Our Speciality
- Gift Certificates Available
- Rainchecks For Out-Of-Stock Specials
- Comfortable Showroom Environment
- Special Corporate, Government, Educational & User Group Accounts

SOFTWARE

- Business
- Scientific
- Education
- Recreation
- Programming
- Home & Personal
- Specialized

HARDWARE

- Monitors
- Printers
- Drives
- Interfaces
- Modems
- Expansion Boards
- Cables

LITERATURE

- Books
- Magazines
- Free Product Information

ACCESSORIES & SUPPLIES

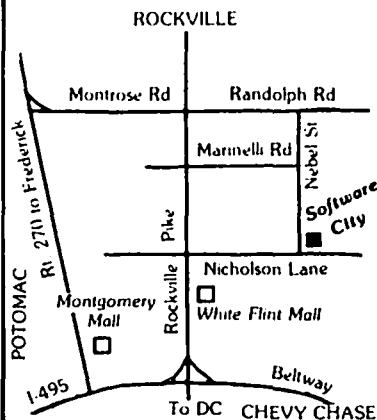
- Media & Media Storage
- PC Protection & Care Products
- Paper & Custom Forms

STORE HOURS

Mon-Fri 10-6
Thurs 10-8
Sat 10-5

468-1001

11621 Nebel Street (Extended)
Rockville, Maryland 20852



Complete coupon to be placed on Software City Special Mailing List.

Name _____

Address _____

Phone _____

Type PC at Work _____

Type PC at Home _____

OFFICERS & STAFF

President	- David Morganstein	(301) 972-4263	Arrangements	- Jim Taylor	(301) 926-7869
Vice Pres-Programs-	Tom Warrick	(301) 656-4389	Demonstrations	- Signe Larson	(703) 524-4541
Vice Pres-SIGs	- Bob Platt	(301) 223-1588	General Counsel	- Jim Burger (Burger & Kendall)	day (202) 293-7170
Treasurer	- Edward Myerson	(703) 759-5479	Membership	- Dana Schwartz	(301) 654-8060
Secretary	- Nancy Little	(301) 762-3215	Program	- Cara Cira	(301) 468-6118
Directors	- Bernie Benson	(301) 951-5294	Publicity Chairman-	Hunter Alexander	(703) 820-8304
	- Peter Combes	(301) 251-6369	Public Relations	- Lee Raesly	(301) 460-0754
	- J.T. (Tom) DeMay Jr	(301) 779-4632	Rules & Elections	- Bob Platt	(202) 223-1588
	- Bruce Field	(301) 340-7038	School Coordinators:		
	- Nancy Philipp	(301) 924-2354	Virginia	- Barbara Larson	(703) 451-9373
	- Jay Thal	(202) 244-3649		- Nancy Strange	(703) 691-1619
	- Rich Wasserstrom	(703) 893-9147	Mont. Co. MD	- Margie Stearns	(301) 657-2353
Editor	- Bernie Urban	(301) 229-3458	Pr. Geo. Co. MD	- Conrad Fleck	(301) 699-8200
Associate Editor	- Genevieve Urban	(301) 229-3458	Special Publctns.	- Betsy Harriman	(202) 363-5963
Journal Staff:			SYSOP	- Tom Warrick	(301) 656-4389
Store Distribtn.	- Ray Hobbs	(301) 490-7484	Tutorials	- Steve Stern	(301) 881-2543
Columnists:			Volunteer Coord.	- Sue Roth	(703) 356-9025
Applesoft	- J.T. (Tom) DeMay Jr	(301) 779-4632	SIG Coordinator	- Bob Platt	(202) 223-1588
DisabledSIG	- Jay Thal	(202) 244-3649	SIG Chairmen:		
EDSIG	- Peter Combes	(301) 251-6369	AppTeeseeds	- Mike Forman	(703) 241-1216
LOGOSIG	- Nancy Strange	(703) 691-1619	Apple ///	- Jerry Chandler &	(703) 790-1651
Q & A	- Bruce Field	(301) 340-7038		- Bill Hershey	(301) 588-1992
Telecomm	- Dave Harvey	(703) 527-2704	CESIG	- John Kapke/	(301) 694-5968
VisiCalc	- Walt Francis	(202) 966-5742		- Roy Rosfeld	(301) 340-7962
Review Coord.:			CP/M	- Charles Franklin	(301) 997-9138
Hardware	- Scott Rullman	(301) 779-5714	DisabledSIG	- Jay Thal	(202) 244-3649
Software	- Raymond Hobbs	(301) 490-7484	EDSIG	- Peter Combes	(301) 251-6369
Group Purchases	- Rich Wasserstrom	*(301) 654-8060	Forth SIG	- Kevin Nealon	(703) 280-1136
	*(Call Kevin at office on M,W,Th,F)		LAWSIG	- Charles Field	(202) 265-4040
Disketeria Staff:	- John Malcolm	(301) 384-1070	LISASIG	- Gordon Stubbs	(703) 750-0224
	- Dave Weikert, Joy Aso, Bob Hicks,		LOGOSIG	- Nancy Strange	(703) 691-1619
	- Ed Lang, Jim & Nancy Little,		SIG Mac	- Tom Warrick	(301) 656-4389
	- Terry Prudden, Bruce Redding,		NEWSIG	- Bernie Benson	(301) 951-5294
	- Gordon Stubbs		Pascal (PIG)	- Harry Bishop/	(703) 931-4937
New Disks	- Bob Platt	(202) 223-1588		- Jim Harvison	(301) 593-2993
Pascal Lib.	- Mike Hartman	(301) 445-1583	PI-SIG	- Raymond Hobbs	(301) 490-7484
CP/M Lib.			STOCKSIG	- Robert Wood	(703) 893-9591
Head Reading Lib.	- Walt Francis	(202) 966-5742	Telecomm. SIG	- George Kinal	(202) 546-7270
Apple Tea Coord.	- Paula Benson	(202) 546-0076			

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

ABBS (301) 986-8085 - 24 hours/day
ABBS-Buy and Sell (301) 871-7978 - 7:30 PM to 7:30 AM

Copyright 1984, Washington Apple Pi, Ltd.

EDITORIAL

Let this be a reminder that the pages of this Journal are open and available to all of the microcomputer users and members of this organization, be they Apple][, ///, Lisa or Macintosh owners; Pascal, Integer Basic, Forth, Lisp, Logo or whatever language users; Apple Writer, WordStar, Supertext or whatever word processor, etc. We provide the opportunity to all (within the bounds of current socially acceptable tenets) to use these pages for furthering the knowledge, understanding, and entertainment of our readers. We will publish most everything that is submitted to us, but we cannot publish what is not. To those who feel that there is (or might be) insufficient coverage of a specific area or computer, we say help us help

you by sending in your contributions. The rest will take care of itself. How about it, you Apple /// folks out there, and the Lisa crowd too, and let's hear more from the Mac devotees?

We would also request of our contributors, be they monthly, aperiodic or first timers, please help us by sending in your contributions early and preferably on diskette. It is that time of the year again - the Urbans are taking their annual sabbatical, and the job of getting out the next issue has been graciously assumed by Bob Platt and Cara Cira. Deadlines have a habit of arriving whether or not one is prepared. Buena suerte, Bob and Cara. ☺

PRESIDENT'S CORNER

by David Morganstein



THANKS TO THE PAST YEAR'S BOARD. One of the truly marvelous things about our organization is the enthusiasm and dedication of its volunteers. We would like to express the appreciation of all of our members, from WAP number one to WAP number 5,000+ to the Executive Board. You have served the membership well and deserve our thanks for all of the time and effort you have given.

Last month we gave special mention to two officers who chose not to run again. This month we would like to extend special thanks to Ed Myerson (and his behind-the-scenes comrade in arms, Priscilla) who, together, have shouldered the unenviable task of keeping the books straight. Ed has kept our accounting up with the growth we have experienced and instituted fiscal procedures with the future in mind. We thank them both for their time and talents.

Words of appreciation are needed for Gordon Stubbs who has served for several years as Director-at-Large. Gordon has given uncounted hours to the club as a former Head Librarian. He has spent many Friday evenings before the monthly meeting making library copies for sale when the Alf-ordered disks failed to appear on time. He has been there to offer counsel and advise. Many thanks to you, Gordon, for helping to make us what we are.

WELCOME TO THE NEW OFFICERS. The Board will have the benefit of several talented people who have in the past shown their enthusiasm by working long hours as volunteers. We welcome to official positions Tom Warrick, our SYSOP and SIG Mac chairman, and Bob Platt, new disk librarian and SIG chairman coordinator, as Vice Presidents. Their energies and guidance have served the club for several years and now they have offered to serve in yet other ways. We also welcome Nancy Little as secretary. Many of you know Nancy from the diskette table where she has helped distribute disks every Saturday for as far back as we can remember. Both Jay Thal and Tom DeMay have become Directors-at-Large. They are known to us all for their past service. Jay has helped with both EDSIG and SIGDisabled. Tom coordinates the hardware helpers and is maintaining a list of most recent version numbers for commercial products. Both have contributed many excellent articles to our Journal.

To those who ran but were not elected we thank you for your interest and hope that we can continue to count on your help, your time and advise. Our group can only remain effective if it constantly seeks advise on its members needs and draws on volunteer efforts of the dedicated.

THE ABBS. There continues to be a very healthy discussion about the future form of our ABBS. While we have a system we can be proud of, we need to plan for expanded capability. We are pleased that Dave Harvey will be conducting some research and leading a discussion on the form the ABBS may take. As we understand it, the most likely alternatives are: a distributed system, using Apples and operating out of a series of homes; a network system using a hard-disk and a series of Apples in one location; a used mini-computer which can multitask; and renting time on a widely available communication mainframe such as the Source. Dave, and any volunteers who want to work with him, will be exploring these and other options and making a recommendation.

BUDGETING. We continue to discuss the club budget for the next year. If you have specific suggestions, please call, write or attend a board meeting to make sure your thoughts are brought to the Board's attention.

TUTORIALS. The first round of Dan Robrish's Applesoft tutorials for younger members was lightly but intensely attended. The second round of six sessions begins July 24. If you are interested, call the office to check on space availability. Visiplot and Apple Plot will be the subject of a Lee Raesly tutorial on August 11. We will restart our weekly Tuesday night tutorials this fall. Several modifications are planned and will be reflected in an updated outline to appear soon in the Journal. This series is aimed at the beginner and can be attended in whole or in part depending on your needs.

ANOTHER SUCCESSFUL GARAGE SALE. Thanks to Joe Fuchs and his legions of volunteers, we held another successful garage sale with almost 600 people in attendance. (I guess I mean successful... I couldn't sell my slightly used copy of Super Invaders for love or money.)

OUR STALWART DISK LIBRARIANS. There are a group of dedicated folks who continue, month after month, to give their talent and many hours of labor to benefit us all. John Malcolm, Dave Weikert and their able assistants provide the marvelous collection of diskettes for sale. Their work to insure adequate supplies and to distribute the disks makes it possible for all of us to obtain low-cost, valuable software for our micros. Their services raise much needed revenue for the club, revenue which permits us to grow and serve our members in other ways. Please take a minute at the next meeting to express your thanks to them for all of their totally volunteer dedication.

MEETINGS WITH APPLE SALES PERSONNEL. Last month, several Board members held two meetings with the local Apple sales representatives. Our purpose was to make a long overdue introduction and to get acquainted. The Apple sales organization is going through some changes which should be completed by this fall. We hope that our talks opened a line of communication and began a mutual effort that will benefit both WAP members and local dealers.

//C TIMING PROBLEM. We have heard that there appears to be a timing problem with the built-in serial interface on the newly released Apple //c. To gather facts about this potential problem, we ask owners of the //c to try out your interface with a modem at 300 and 1200 baud and report back to us. We are checking with the Apple sales reps to get the facts about the problem and will report back what we learn. ☞

JOB MART

HELP WANTED

Washington Apple PI needs an experienced part-time bookkeeper. Approximately 45 hours/month. Call Ed Myerson, evenings 759-5479. ☞

MINUTES

JUNE GENERAL MEETING

WAP, Ltd. met at the USUHS on June 23, 1984 at 10:00 AM. President David Morganstein presided. The method of selecting the door prize winner of the garage sale was explained. Bernie Urban was thanked for preparing the calendar which appears in the Journal. Members were reminded to respect the USUHS facility. T-shirt sales were announced, and a special T-shirt was presented to the President. Election winners were announced. Sara LaVilla and Dana Schwartz were presented plaques of appreciation. Member number 5000 was awarded a T-shirt, a disk of his choice and early entrance to the garage sale. Group purchase reported. DOS 3.2 diskette sale price of 3 for \$12 was announced. A speaker was requested for the Echo II voice board. The July program featuring two music systems was announced. Volunteers were sought to lead NEWSIG and to help revise the new members handbook. Summer tutorials were announced. A meeting with Apple sales representatives of the Eastern U.S. was reported. Questions, concerns, etc. were elicited from the members. There was some interest in creating a Physics and Scientific Education SIG. Rental services are not available at the office. A request for a booklet documenting library disks was made (the new member handbook contains some disk documentation). A new member complimented the organization of the meeting. Mac group purchase was explained. There is the possibility of a group purchase for the Apple //c. The need for a larger meeting place was discussed.

SUMMARY OF JULY EXECUTIVE BOARD MEETING

The Executive Board of Washington Apple Pi, Ltd. met on July 11, 1984 at the WAP office. Ed Myerson reported that the budget would be ready before next month's Board meeting. Major budget items were reviewed by the Board. A sampling of non-renewing WAP members will be contacted to determine their reasons for not renewing and to find out if there are member needs not being met by the Pi. The hardware helper committee reported about present services to members. The Board decided to maintain a limited supply of the 3.2 disks at the office. Article 5, Section 6 of the Bylaws which deals with censoring or expelling members was reviewed. Group buying procedures were discussed. Members will be reminded that they may provide demonstrations of hardware/software from 9-10 on meeting Saturdays. Bernie Urban announced that Jonathan Rotenberg of the Boston Computer Society is scheduled to visit the WAP office on July 13. The Urbans are leaving on July 24 for a month's vacation and would like to have all newsletter contributions sent in as soon as possible. The SIG Mac was discussed and compared with the other SIGs. SIG Mac will meet on the 2nd Saturday of the month at USUHS. The Board authorized the expenditure of up to \$100 per year for guards during SIG meetings at USUHS. Each SIG Chairman is authorized to spend up to \$100 per year for incidental expenses. ☞

NOTES FROM THE OFFICE

*** TEMPORARY CHANGE IN OFFICE HOURS ***

Please note that the WAP office will be closed on Tuesday evenings during the month of August. Other hours remain the same as listed in General Information elsewhere in this issue. Tuesday evening hours will resume on a regular basis in September.

SIGNEWS

APPLE /// SIG meets on the second Thursday of the month at 7:30 PM. The next meeting will be on August 9 at Universal Computers, 1710 Fern Street, Alexandria, VA.

APPLESEEDS is the special interest group for our younger members. They meet during the regular WAP meeting.

CESIG is the special interest group of computer entrepreneurs. They meet after the monthly WAP meeting at the club office.

DISABLEDSIG - See "DISABLEDSIG News" elsewhere in this issue.

EDSIG - the education special interest group - see the EDSIG Page elsewhere in this issue.

FORTHSIG will hold its next meeting on Saturday, August 18 at 1:00 PM in the WAP office.

LAWSIG usually meets in downtown Washington, D.C. at noon once a month. For information call Charles G. Field, Chairman, 265-4040, or Jim Burger, 822-1093.

LOGOSIG meets monthly at 12:45 after the regular WAP meeting at the Barrie School, 13500 Layhill Road, Silver Spring, MD.

NEWSIG will meet just after the regular Washington Apple Pi meeting and conducts a "drop-in" for new Apple owners on Thursday evenings from 7:30-9:00 PM in the office. They will answer questions and try to help new owners get their systems up and running.

PIG, the Pascal Interest Group, meets on the third Thursday of each month at 7:30 PM at the Club Office.

PI-SIG (formerly ASMSIG) has a new emphasis - program interface. For details of their meeting call Ray Hobbs at (301) 490-7484.

SIG Mac meets on the 1st Thursday at 7:30 PM and on the 2nd Saturday from 9:00 AM to 12:30 PM, in the auditorium at USUHS.

STOCKSIG meetings are on the second Thursday at 8:00 PM at the WAP office. See StockSIG article elsewhere in this issue. Call Robert Wood, (703) 893-9591.

Telecomm SIG usually meets after the regular WAP meeting. ☞

BBS COMMITTEE

The first meeting of the BBS Committee will be at 1:00 PM on Sunday, July 29 at Dave Harvey's home. If you would like to attend, give him a call at 527-2704 for directions.

*** ASSIGNMENT OF ABBS PASSWORDS ***

All requests for passwords to the WAP ABBS should be directed to the office. A password will be assigned to you at the time you call and will then be passed on to the SYSOP, who will enter it into the system. This process takes several days, so we ask your patience. Please do not call the SYSOP for passwords. ☞

August 1984

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2 AS Tutr #4 10AM Off SIG Mac 7:30 PM USUHS	3	4
5	6	7 Applesoft Tutorial#5; EDSIG-USUHS 7:30 PM	8 Executive Board 7:30 PM Office	9 AS Tutr.#6 StockSIG; DisabledSIG Apple ///	10	11 SIG Mac 9AM USUHS; VisiPlot 9:30AM-Off
12	13	14	15	16 Pascal SIG 7:30 PM Office	17	18 Forth SIG 1:00 PM Office
19	20	21	22	23	24	25 WAP Meeting USUHS-9 AM Screen- Writer
26	27	28	29	30	31	

September 1984

WAP

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4 Begin. Tutorial#1 7:30PM-Off; EDSIG-USUHS 7:30 PM	5	6 SIG Mac 7:30 PM USUHS	7	8 SIG Mac 9:00 AM USUHS
9	10	11 Beginning Tutorial#2 7:30 PM Office	12 Executive Board 7:30 PM Office	13 StockSIG DisabledSIG Apple ///	14	15
16	17	18 Beginning Tutorial#3 7:30 PM Office	19	20 Pascal SIG 7:30 PM Office	21	22 WAP Meeting USUHS-9AM Appleworks
23	24	25 Beginning Tutorial#4 7:30 PM Office	26	27	28	29
30						

MEMBERSHIP DIRECTORY

by Dana J. Schwartz

The next edition of the Washington Apple PI Membership Directory will be published early this fall. There will be over 3500 names listed, and with such a large number there are bound to be some unavoidable errors. In order to catch some of these problems before publication, we are listing below the WAP membership numbers of those members who will not be included. The list includes up to new member # 5078 and information received (via renewals and other communications) in our office as of July 15, 1984.

The Directory will include ONLY the following information: first and last name, home phone number, city and zipcode. There will be two lists, one sorted alpha-

betically and the other sorted by zipcode. The Directory will be distributed free of charge (one copy per membership number) only to those persons whose names appear in it. No extra copies will be made and no copies will be sold.

If the information below is incorrect, or if you wish to change your directions to the club, please fill out and return the form in the back of this issue. Changes and corrections MUST be received in the WAP office no later than August 25, 1984. Information arriving after that date will not be included in this edition of the Directory.

0021 0207 0331 0503 0790 0935 1128 1406 1723 1920 2009 2244 2561 2846 3211 3480 3590 3751 3895 4078 4281 4556 4674 4928 5070
 0027 0210 0336 0513 0796 0953 1178 1440 1730 1922 2028 2295 2563 2854 3235 3483 3600 3752 3915 4081 4285 4558 4695 4937 5071
 0069 0223 0372 0536 0825 0960 1180 1450 1753 1930 2042 2335 2585 2858 3254 3492 3619 3766 3917 4092 4288 4562 4751 4938
 0076 0233 0376 0588 0830 0967 1181 1469 1759 1936 2078 2340 2587 2898 3262 3511 3621 3773 3940 4107 4296 4564 4768 4951
 0089 0234 0407 0591 0841 0972 1194 1470 1761 1938 2088 2365 2616 2931 3312 3512 3630 3800 3944 4124 4325 4569 4791 4967
 0094 0235 0409 0596 0849 0973 1195 1489 1778 1941 2089 2386 2618 2935 3319 3520 3637 3820 3945 4157 4369 4577 4797 4971
 0107 0239 0449 0637 0854 0981 1213 1513 1820 1944 2111 2388 2619 2937 3344 3522 3674 3826 3951 4167 4378 4581 4827 4977
 0127 0250 0450 0643 0850 0983 1236 1534 1847 1946 2126 2399 2621 2944 3357 3530 3676 3844 3955 4182 4395 4603 4833 4991
 0144 0260 0451 0645 0859 1004 1286 1535 1867 1947 2150 2411 2629 3042 3371 3531 3688 3847 4000 4187 4429 4611 4846 5005
 0160 0284 0452 0649 0864 1011 1296 1556 1870 1953 2159 2421 2697 3070 3380 3548 3691 3852 4008 4205 4431 4616 4859 5009
 0169 0292 0459 0676 0866 1012 1298 1588 1876 1959 2178 2437 2715 3075 3398 3561 3714 3858 4015 4208 4474 4646 4870 5034
 0186 0293 0475 0703 0870 1024 1340 1611 1881 1968 2179 2458 2790 3096 3440 3568 3734 3863 4029 4224 4492 4649 4874 5040
 0187 0314 0480 0713 0884 1034 1342 1710 1883 1988 2197 2476 2820 3124 3453 3569 3737 3876 4057 4225 4519 4655 4875 5041
 0201 0319 0486 0741 0893 1048 1343 1718 1898 1990 2208 2492 2823 3151 3470 3574 3740 3885 4064 4239 4520 4658 4881 5046
 0202 0328 0492 0753 0898 1127 1388 1719 1913 2004 2233 2550 2832 3175 3475 3582 3744 3892 4068 4257 4551 4661 4904 5062

TRI-STATE SYSTEMS DISCOUNT APPLE SOFTWARE

	Retail	Our Price		Retail	Our Price
Lode Runner.....	34.95	25.95	The Accountant.....	129.00	89.95
Zork I, II, or III.....	39.95	29.50	ASC II Express: The Professional.	129.95	89.95
Zaxxon.....	39.95	27.50	Screenwriter II.....	129.95	89.95
Choplifter.....	34.95	25.95	Master Type.....	39.95	27.95
Kraft Joystick.....	49.95	39.95	Bank Street Writer.....	69.95	49.95
Exodus: Ultima III.....	54.95	38.95	Word Star.....	495.00	289.95
Wizardry.....	49.95	37.95	Galactic Adventures.....	59.95	42.95
Wizardry II-Knight of Diamonds.....	34.95	25.95	Home Accountant.....	74.95	56.95
Wizardry III-Legacy of Lylgaymn.....	39.95	29.95	Verbatim (10 disks) 5 1/4".....	42.00	26.95

Mail orders to:
TRI-STATE SYSTEMS
 P. O. BOX 2544
 Springfield, VA 22152



No credit card penalty!



- We accept VISA or MasterCard (include card # and expiration date), personal checks (allow 2 weeks), or money orders
- VA residents add 4% sales tax
- Include \$2.00 for shipping
- All software products on disk
- All prices subject to change without notice
- We carry a large line of discount software. Write us for our free catalog.

WAP HOTLINE

Have a problem? The following club members have agreed to help. 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. If the person called has a telephone answering machine, and your call is not returned, don't assume that he did not try to return your call - perhaps you were not home. Try again.

General	Dave Harvey (703) 527-2704 Robert Martin (301) 498-6074	Languages, contd. Forth LOGO LISP	Bruce Field (301) 340-7038 Ron Murray (eve.) (202) 328-3553 Fred Naef (703) 471-1479
Accounting Packages Accountant(Dec.Sup.) Home Accountant	Mark Pankin (703) 524-0937 Leon Raesly * (301) 460-0754	Math/ O.R. Applns.	Mark Pankin (703) 524-0937
APPLE SSC	Bernie Benson (301) 951-5294	Operating Systems Apple DOS	Richard Langston (301) 258-9865 Richard Untied (703) 241-8678 Robert Fretwell (703) 971-2621 Ray Hobbs (301) 490-7484 Richard Langston (301) 258-9865
Apple TechNotes	Lance Bell (703) 550-9064 Shirley Weaver (301) 761-2479	CP/M	
AppleWorks	Carl Eisen (703) 354-4837 J.J. Finkelstein (301) 652-9375	ProDOS	
Communications Packages and Modems-Telecom.		Paddles	Tom Riley (eve.) (301) 340-9432
Anchor Mark 12	George Kinal(7-10)(202) 546-7270 Jeremy Parker (301) 229-2578	Printers General Anderson Jacobson	Walt Francis (202) 966-5742 Bill Etue (703) 620-2103 Leon Raesly * (301) 460-0754 Joan B. Dunham * (301) 585-0989 Henry Greene (202) 363-1797 Jeff Stetekluh (703) 521-4882 Scott Rullman (703) 779-5714 Jeff Dillon (301) 434-0405 Bill Mark (301) 779-8938 Fred Feer (703) 978-7724 Scott Rullman (301) 779-5714 Bruce Field (301) 340-7038
Apple CAT II	Ben Acton (301) 428-3605	Apple Dot Matrix Daisywriter 2000	
ASCII Express	Dave Harvey (703) 527-2704	IDS 460	
BIZCOMP Modem General	Jeremy Parker (301) 229-2578 Tom Nebiker (216) 867-7463 Tom Warrick (301) 656-4389	Imagewriter MX-80 NEC 8023 Okidata	
Hayes Smartmodem	Bernie Benson (301) 951-5294	Silentype	
Omninet	Tom Vier (1-6 PM) (703) 860-0083	Spreadsheets	Leon Raesly * (301) 460-0754 Walt Francis (202) 966-5742 Walt Francis (202) 966-5742 Roy Rosfeld (301) 340-7962 Terry Prudden (301) 933-3065 Walt Francis (202) 966-5742 Leon Raesly * (301) 460-0754 Leon Raesly * (301) 460-0754
VISITERM	Steve Wildstrom (301) 564-0039	Lotus 1-2-3	
XTALK CP/M Comm.	Bernie Benson (301) 951-5294	Multiplan VisiCalc	
Computers, Specific		Spreadsheet 2.0 (MagiCalc)	
Apple //c	Scott Rullman (301) 779-5714	Statistical Packages	Jim Carpenter (301) 371-5263 Mark Pankin (703) 524-0937
Apple //e	Scott Rullman (301) 779-5714	Stock Market	Robert Wood (703) 893-9591
Lisa	Don Kornreich (301) 292-9225	Tax Preparer-H.Soft	Leon Raesly * (301) 460-0754
Macintosh	Scott Rullman (301) 779-5714 Tom Warrick (301) 656-4389 Donald Schmitt (717) 334-3265	Time-Sharing	Dave Harvey (703) 527-2704
Corvus Hard Disk	Tom Vier (1-6 PM) (703) 860-0083	Word Processors Apple Writer II	Walt Francis (202) 966-5742 Doug Daje (301) 868-5487 Dianne Lorenz (301) 530-7881 Leon Raesly * (301) 460-0754 Louis Biggie (202) 296-1280 Henry Donahoe (202) 298-9107 Neil Muncy (301) 251-9330 Cara Cira (301) 468-6118 Leon Raesly * (301) 460-0754 Joyce C. Little (301) 321-2989 Carl Eisen (703) 354-4837 Jim Graham (703) 643-1848 Peter Combes (301) 251-6369 Doug Daje (301) 868-5487 Peter Rosden (301) 229-2288 Jon Vaupel (301) 977-3054 Christopher Romero (703) 471-1949 Carl Eisen (703) 354-4837 Christopher Romero (703) 471-1949
Data Bases		Executive Secretary Format II Gutenberg Letter Perfect	
dBase II	Paul Bublitz (301) 261-4124 John Staples (703) 759-3461 Doug Daje (301) 868-5487 Dave Einhorn (301) 593-8420	Magic Window and II Peach Text PIE Writer/Apple PIE ScreenWriter II Supertext II	
DB Master	Leon Raesly * (301) 460-0754 Bob Schmidt (301) 736-4698 Normand Bernache (301) 935-5617 Leon Raesly * (301) 460-0754	Word Handler	
Data Perfect	Doug Daje (301) 868-5487	Work Juggler //e Word Star	
Data Factory	Jon Vaupel (301) 977-3054		
General Manager	Bill Etue (703) 620-2103 Ben Ryan (301) 469-6457 Jenny Spevak (202) 362-3887 J.J. Finkelstein (301) 652-9375		
InfoMaster			
List Handler			
PFS			
QuickFile II			
Expediter Compiler	Peter Rosden (301) 229-2288		
Graphics	Bill Schultheis (703) 538-4575		
Languages (A=Applesoft, I=Integer, P=Pascal, M=Machine			
A	Peter Combes (301) 251-6369		
A,I	Jeff Dillon (301) 422-6458		
A	Richard Langston (301) 258-9865		
A	Mark Pankin (703) 524-0937		
A	Leon Raesly * (301) 460-0754		
A,I,P,M	Bill Schultheis (703) 538-4575		
A,I,M	Richard Untied (703) 241-8678		
M	Raymond Hobbs (301) 490-7484		
P	Dottie Acton (301) 428-3605		
P	Donn Hoffman * (202) 966-2616		

*Calls up until midnight are ok.

HARDWARE HELPERS

If you are having hardware problems with your Apple and/or peripheral equipment, the following persons have agreed to help. It will be at the discretion of the Hardware Helper just how involved he becomes. He may only suggest things for you to do, or he may actively assist in cleaning, removing or replacing parts.

Tilghman Broaddus
Rt 1, Box 246
Mechanicsville, VA 23001
(804) 779-2553 (till 10)

Gene Cartier
6026 Haverhill Court
Springfield, VA 22152
(703) 569-8450 (till 10)

J.T. (Tom) DeMay Jr.
4524 Tuckerman Street
Riverdale, MD 20737
(301) 779-4632 (till 11)

Bruce Field
1402 Grandin Avenue
Rockville, MD 20851
(301) 340-7038 (till 10)

Lyman Hewins
Route 2, Box 26
Leonardtown, MD 20650
(301) 475-9563 (till 11)

Pete Jones
1121 N. Arlington Blvd.
N. Arlington, VA 22209
(703) 430-1606 (7-10)

Bob Kosciesza
2301 Douglas Court
Silver Spring, MD 20902
(301) 933-1896 (till 10)

Mark Pankin
1018 North Cleveland St.
Arlington, VA 22201
(703) 524-0937 (till 10)

Richard Rowell
1906 Valley Stream Drive
Rockville, MD 20851
(301) 770-5260 (7-11)
(202) 651-5816 (9-4)

Jim Taylor
16821 Briardale Road
Derwood, MD 20855
(301) 926-7869 (till 10)

Ron Waynant
13101 Claxton Drive
Laurel, MD 20708
(301) 776-7760 (7-10:30)

Dave Weikert
17700 Mill Creek Drive
Derwood, MD 20855
(301) 926-4461 (7-10 except Thurs. and weekends)Ⓢ

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 \$25.00 for the first year and 18.00 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 to 9:30 PM
Saturday - 9:30 AM to 12:30 PM (except meeting Sat)
- 12:00 to 3:30 PM (meeting Sat only)

* Please note that the office will not be open on Tuesday evenings during the month of August. Regular hours as listed above will resume in September.

EVENT QUEUE

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

Following are dates and topics for upcoming months:

August 25 - ScreenWriter - Peter Combes
September 22 - Appleworks - Walt Mossberg
October 27 -

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.) Ⓢ

WAP ELECTION RESULTS

Following are the results of the recent WAP Annual Elections:

President	- David Morganstein
Vice President for Programs	- Tom Warrick
Vice President for SIGs	- Bob Platt
Treasurer	- Ed Myerson
Secretary	- Nancy Little
Directors	- Bernie Benson
	- Peter Combes
	- J. T. (Tom) Demay Jr.
	- Bruce Field
	- Nancy Philipp
	- Jay Thal
	- Rich Wasserstrom

The results of the referenda questions are still being tallied and will be presented in a later issue. Ⓢ

CLASSIFIEDS

FOR SALE: Printer, IDS 445G Paper Tiger with graphics software, 4 print sizes, 2 lines spacing, 1-year-old printhead; includes paper tray, cover and cable. New, \$785; asking, \$350. Call Jerry, 547-9113 and leave a message.

FOR SALE: 80-column card, \$75; Z-80 card, \$70; Grappler card, \$85. Call Arnie Rosenberg at 649-6400 or 460-8093 (eves.).

FOR SALE: Dow Jones Market Microscope. Comprehensive technical analysis program. Sells for \$699. Used once. Bargain at \$350 or best offer. Call Newt Steers, 9AM-9PM, 320-5820.

FOR SALE OR TRADE: Imagewriter (new); Videx 80-column; Mountain Hardware clock. Need Epson FX. Call Burt, 686-3514 (day) or 320-4720 (eve.). Ⓢ

Q & A

by Bruce F. Field



A few months ago I had a request for a low-resolution graphics screen dump. I printed two such programs in my column and this brought two more out of the woodwork. Randy Davis wrote to tell me about a program available to dump low resolution graphics to the Gemini-10 printer (which I think is also compatible with the Epson MX-80). The program is in the public domain and is available from the Dallas Apple Corps on the March Disk of the Month. Their address is P.O. Box 5537, Richardson TX 75080.

At the risk of sounding commercial, Gerald Berkowitz has also written a lo-res dump program that works with the Epson FX 80, Okidata 92/93, the Apple DMP and Imagewriter, and others. He charges \$35.00 for single copies with discounts for multiple purchases by school districts. Gerald is at P.O. Box 515, Park Ridge, IL 60068.

Loren Engrav has asked me to pass along the following: "I have an Apple][+, an Epson MX-80 printer, and an Epson parallel interface in slot 1. In addition, I have a Hayes modem card in slot 2 and a Vision 80 card in slot 3. I noticed that occasionally the printer would drop characters and from time to time hang up. The problem is that cards in slots 2 and 3 can contaminate slot 1. The fix according to Epson, is to solder a 220 pf 50 V nonpolarized ceramic capacitor, available from Radio Shack, between pins 3 and 7 of chip 6A on the Epson parallel interface. This is a very difficult problem to diagnose for the unsuspecting."

Thanks for the tip, Loren. Actually the first thing I recommend to someone having trouble with their Apple is to remove all the peripheral cards and replace them one at a time and in various combinations until the problem reappears. This may not solve the problem but hopefully will give you a clue where to look.

A few months ago I answered a question from a reader about changing the name of the greeting program on a disk. I suggested that a disk zap program could be used to modify the name stored on track 1, sector 9. Ed Marquart wrote to remind me that the Master Create program on the System Master diskette also allows you to change the name of the greeting program.

Master Create "creates" a master disk by replacing the DOS on the disk with the master DOS image. It pauses to ask for the name of the greeting program and at this point you should type in the name of the program you really want. This is also a good way to repair a disk that has had the DOS damaged.

Q. I recently bought a detachable keyboard kit for the Apple made by Key Tec, P.O. Box 722, Marblehead, MA 01945. The kit is basically a color matched housing for the keyboard to fit into, a plate to cover the spot where the keyboard was, a 5 ft. ribbon cable, and instructions on how to perform the removal of the keyboard. After several days some technical problems surfaced in the use of the Key Tec.

1. signal interference: Upon switching on/off the power to my ventilator fan (internally mounted inside the Apple), or my printer, the last character typed is replicated a number of times from 2 or 3 to about 12 times (it seems to vary)

onto the CRT screen. Also I have noticed that my Apple seems to pick up signals from other power fluctuations (like light switches) when they are turned on/off.

2. The signal interference is a relatively minor annoyance, perhaps you can suggest a fix for it... But the second problem is more serious and very much bothersome... The Reset: The reset signal from the keyboard is not received properly. Upon turning on the Apple all keys including the Reset function properly. Furthermore upon using one of my modified disk systems, either Diversi-Dos or David DOS, everything still works fine... including the reset. However upon booting standard DOS 3.3 the reset no longer seems to function! When resetting under DOS 3.3 the keyboard "freezes" and no longer accepts any other keystrokes. In fact the whole system seems to "hang". What is happening?

A. The signal interference is probably that, as you suspected, the long ribbon cable is picking up unwanted signals. It might help to shield this by wrapping it with aluminum foil and connecting the foil to a metal part of the Apple case. If you don't need the full 5 foot length you could shorten the cable to the minimum needed. The connectors on the cable are readily available and can be squeezed on the cable with a vise if you don't have the proper tool. It is also possible to replace the cable with a shielded cable; however you will probably not be able to obtain one with the connectors in place and will have to construct your own. Placement of your existing cable may also be critical, try moving it away from your internal fan and other power lines. You might also try running a separate heavy ground wire from the metal part of the case of the Apple to the new keyboard housing. Also, make sure that the three wire plug on your Apple is properly connected to a grounded three wire outlet. If you are sure your outlet is not grounded or you are using a "cheater" plug with the pigtail lead unconnected, you can ground your Apple to a water pipe.

Although it flies in the face of all the arguments you've presented, I don't think your Reset problem has anything to do with software. The reset signal from the keyboard goes directly to the microprocessor reset pin. If everything is functioning perfectly, the Apple is running a program, or characters can be typed on the screen and it fails to respond to Reset, I think you have a poor or broken connection between the reset output on the keyboard and the Apple. There is no way that software can disable the reset signal.

Before everyone jumps down my throat on that last statement let me clarify what happens on Reset. When the Reset key (and on some Apples you also have to simultaneously press the control key) is pressed the 6502 microprocessor stops what it is doing and waits until the key is released. It then starts executing the Monitor program in one of the Apple's ROMs. All Apple][+'s and][e's have an Autostart ROM Monitor that initializes the Apple, and then checks the soft entry vector and power up byte at memory locations \$3F2-\$3F4. If these bytes do not have consistent values (i.e. when the power

contd.

is first turned on) the program looks for a disk controller card and tries to boot a disk, if no card is found it prints "Apple][" at the top of the screen and starts Applesoft. It is possible to change the soft entry vector to do other things and this is where it appears that the software controls the reset process. But in almost every case pressing Reset (and control if necessary) causes the Apple to jump to the soft entry vector. (A special case is that a few 16K RAM cards remain enabled on Reset and can cause problems.) DOS 3.3 changes the soft entry vector to jump to the DOS warmstart entry routine, so when you press Reset DOS stays connected and you return to Applesoft. If this doesn't work you may have a bad copy of DOS 3.3 or other hardware problems. A good test would be to temporarily re-connect the keyboard inside the Apple and see if this works.

electron beam on and off rapidly enough and the characters get blurred. To help prevent this and to make the characters wider, Videx displays the characters more slowly than the monitor electron beam travels, thus causing you to lose some of the characters at the edges. Adding a resistor to the video cable only changes the voltage levels and will not do anything to help with the timing. On some monitors there may be an adjustment for horizontal scan, but there isn't one on the Monitor II (at least on the outside). I would check with Videx to make sure your card is working properly and to see if they have a fix. But I am afraid you are probably out of luck.

As far as operating the Ultraterm board in slot 3 of a //e, the standard signal provided by Apple in slot 3 (I/O Select) is disabled when a //e 80-column card is installed in the auxiliary slot. Videx apparently does not use this signal. So, the Ultraterm will work in slot 3 with another 80-column card in the auxiliary slot but most standard 80-column cards, especially those designed for the Apple][, will not.

Q. Recently I purchased an ULTRA ROM Card and a VIEWMASTER-80 Card. I installed them in slots 2 and 3 of my Apple II. PR#2 turns on the ULTRA ROM. PR#3 turns on the VIEWMASTER-80. Each card functions normally individually but each disconnects the other when turned on so that I can't use the ROM GPLE in the 80-column mode. Do you have a solution for this problem?

A. No, all I have is an explanation. In general when using the Apple you can direct the output to (or get input from) only one device at a time, the 40-column screen, an 80-column card, a printer, etc. You can't for example print to both a printer and a modem in different slots at the same time. The actual details of how output and input is handled depends on the interface cards; thus for some interface cards it is possible to write a short machine language routine to fool two cards into running at the same time. I do not think this is possible however with these two cards. Both the ULTRA ROM card and VIEWMASTER-80 want to read the keyboard directly; to get both to operate together you would have to modify the program stored in the ROMs on the cards.

Q. I have a small Hello program that clears the screen, displays a list of programs that can be run, prompts the user to select which, and then RUNs the appropriate program. Why does this program make the disk drive make a brack-brack noise (the head returning to track 0) before running the program I request?

A. I won't bother to reproduce all of your program here but I note that it consists of all standard Applesoft statements that should not cause any problem, except where you POKE 34,24 to stop scrolling when you request an input on the last line of the screen.

```
45 POKE 34,24: REM STOP SCROLL
200 VTAB 24: PRINT "WHICH ONE DO YOU WANT? ";
205 INPUT " ":A$:IF NOT LEN(A$) THEN 200
```

Q. I have what I believe is a relatively simple question that you may be able to help me with. (Where have I heard this before? BFF) I have the Videx Ultraterm video card running in slot 3 of my Apple //e, and I'm using Apple's Monitor II for my display. The display works quite well in the 40 and 80 column modes, but if I try to use the 96, 128, 132, or 160 column modes, I lose characters from both the left and right edges of the display due to overscan. Is it possible to wire in a resistor across the video phono leads to cut down on the overscan?

Location 34 controls the top of the screen window and the acceptable range of numbers that can be used is 0 to 23. By POKEing 24 you are confusing the Apple by saying that the top of the window is below the bottom of the window and when scrolling, memory gets moved around in strange ways. What is happening is that something in DOS is accidentally modified. You are lucky that nothing more disastrous happened. You should be particularly careful when changing any of the window boundaries at locations 32, 33, 34, and 35.

To get around scrolling when requesting an input on the last line I suggest that you use GET instead of INPUT. With GET you can type any single character and use that to select your program and since no carriage return is printed, there is no scrolling. ☺

Incidentally, in one of your earlier answers, you indicated that with Apple's 80 column card installed in a //e, slot 3 could not be used by another video card. The //e would ignore it, you said. I don't have an extended memory //e video card in my Apple (yet), but the documentation on my Ultraterm indicates that it has been designed to overcome this and can be used in slot 3 of a //e.

A. The overscan problem you observe is the result of a timing problem. The amount of time it takes for the electron beam in your monitor to travel from the left side of the screen to the right side is all the time allowed to display the characters. Usually only a fraction of this time is used; the remaining time becomes the borders around the text. The more characters you display the faster the signals must change in time and eventually you get to the point where the monitor can't turn the

A PAGE FROM THE STACK

by Robert C. Platt

WAP's library of software continues to grow at a rapid pace. Eight new disks premiered in July, and we are hoping to keep up our pace.

Looking for a good way to escape the heat of summer? Why not organize your Apple software collection and put together some donations to the WAP library? Remember that for each 5-1/4 inch disk you donate, we will give you an Apple][library disk in exchange. For your Mac/Lisa donations, you will get a Sig Mac disk.

MUSIC WANTED

We continue to look for song files for the ALF music board, which was the topic of the July WAP meeting. Please contact Bernie Benson or Bob Platt. Also, if you have typed-in songs for Dennis Brother's MacMusic program, we are putting together a music disk for the Mac.

A number of new co-processor boards have appeared for the Apple featuring the 68000 or 8088 chip. If you have some software to use with these boards, please consider donating it to the library. Call Bob Platt for details.

We are also looking for programs to be added to a File Cabinet disk.

Moving on to the details of our latest disks, two new Pascal disks PIG13: and PIG14: are described in Mike Hartman's column elsewhere in this issue. The remainder of this column describes our third Mac disk and five new DOS 3.3 disks for the Apple //.

DISK 153 - INVESTMENTS A

This collection of public-domain programs was assembled by the American Association of Individual Investors. The series continues on Disk 154. Most of the programs on these disks presume a knowledge of investments and simple statistics. Consult WAP's StockSIG for further background.

{153.1} LINEAR REGRESSION-R is a least squares fit from pairs of data values. You input the number of known points and pairs of x and y values. The program lists the coefficient of determination, correlation coefficient and standard estimate of error.

{153.2} PORTFOLIO.REVIEW-R by J.M.Hubner allows you to enter investment names, initial prices and number of shares. By updating your portfolio with daily closing prices and purchases/sales, the program will keep statistics on your portfolio value and tax liability. (This is one of several programs on this disk that performs this function.) Run PORTFOLIO.REVIEW.DOC-R for details.

{153.3} STOCK OPTION/COVERED HEDGE by Edward Christianson, Interface Age, Feb. 1977; Applesoft version by F. Paul Wyman - Will estimate the rate of return on various stock option positions. I'm not sure that the provision for brokerage commissions is up-to-date.

{153.4} STOCK PORTFOLIO VALUATION - Input initial price, number of shares, price and current dividend for each stock in your portfolio.

{153.5} APT.BLDG.PURCHASE - A detailed analysis of the financial factors to be considered by a prospective landlord.

{153.6} DECISIONMAKER-R - by Phil Feldman and Tom Rigg, Kilobaud, July 1977 adapted by R.H. Davies - causes you to list factors for each alternative when making a decision. You then rate each factor for each alternative on a 1 to 10 scale.

{153.7} HIRES LINE GRAPH

{153.8} VISICALC FORMULAS - An Applesoft program to list the formulas specified in a VisiCalc or The Spreadsheet template. Use PR#1 to route output to the printer. Run VISICALC FORMULAS INSTR for details.

{153.9} AAI-STOCK OPTIONS

{153.10} AAI-BOND YIELDS

{153.11} AAI-STOCK STATISTICS

{153.12} AAI-OPTIONS ON FUTURES

{153.13} AAI-T-BILL CALCULATOR - Enter dealer's quoted dividend yield, face amount, date of purchase and date of maturity. The program will then calculate the discount and bond equivalent yield.

{153.14} PFPERFORMANCE - Displays strength of stock portfolio. Modify data statements in lines 240-360 for your stock holdings. Line 210 should read:

```
210 F=365*Y+D+31*(M-1)-INT(.4*M+2.3)+INT(Y/4)
      -INT(.75*(INT(Y/100)+1))
```

{153.15} LOAN SCHEDULE - Displays an amortization table for a loan of any specified amount, interest rate and term. Change line 150 to read:

```
150 IF LEN(A$)>2 THEN IF MID$(A$,LEN(A$)-2,1)=". "
      THEN 170
```

{153.16} BUSINESS FINANCE - A monster Applesoft program to perform all of the following functions: future value of an investment, future value of an annuity, future value of savings, investment withdrawals, minimum income investments, income from investments, nominal interest rates, effective interest rates, depreciation rates, depreciated investments, year end salvage value, discounted commercial paper, loan principal, loan payment schedule, balance of a loan, and mortgage amortization. Another version of this program is FINANCE, Avelar's financial pack from A.P.P.L.E.

DISK 154 - INVESTMENTS B

This disk contains programs from the American Association of Individual Investors, an Amway record keeping system, and utility programs for the Apple Dot Matrix Printer.

{154.1} STOCK MARKET FORECASTER - Written for tape cassette I/O. Modify the program to store past market data from a disk.

{154.2} STOCK VALUATION - Another program to compute your portfolio data based upon current prices.

{154.3} LEASE COMPUTATION - Compute first term and VC leasing rates based upon length of lease and the original cost of an item.

contd.

[154.4] LIFE MANAGEMENT AND FINANCES - Calculates personal net worth.

[154.5] CHECK BOOK - (by Robert B. Shepp) Will save a check book register in an Applesoft sequential file. You can either save all records or just uncashed checks for future monthly reconciliations. Run CHECK BOOK INSTR for details.

[154.6] TREND LINE ANALYSIS - (by Bill Martin) Does a least squares curve fit and hi-res plot of data.

[154.7] DECISION MAKER II - Another program to analyze a problem into weighed factors.

[154.8] LINEAR PROGRAMMING - Finds the optimum solution to a problem expressed as a series of inequalities in multiple variables. Adjust the DIM statements to be sure that the program can handle your number of variables. (Linear programming is a well-known mathematical technique that can be used in every day life. For example, a hot dog factory will use linear programming to change the mix of ingredients based upon the current price of those ingredients.)

APPLE DOT MATRIX PRINTER UTILITIES - The first set of programs are designed to help Apple Dot Matrix and Imagewriter Printer owners. (Programs PRINTER GRAPHICS FOR APPLE and GRAPHICS TESTER may not work for the Imagewriter.) Some of the programs can be modified for other printers. Many thanks to Joan Dunham for donating them. (See Joan's article in the June 1984 WAP Journal for hard-copy documentation of this material.)

[154.9] ADM FONTS DEMONSTRATOR - This program demonstrates the characters in the 7 available sizes. The ASCII decimal code for each character is printed on the lines below the character.

[154.10] SET VERTICAL TABS - This is a utility program to set the vertical tabs for use with the Electronic Vertical Form Unit. The vertical tab control codes are used to space down the desired number of lines when the tabs have been set. The ADM will always return to the left margin on any line feed. This handy feature will store the tab positions for up to 5 forms. This is useful when working with forms or labels that are not the standard 66 or 72 lines long.

[154.11] PRINTER GRAPHICS FOR APPLE - This demo program shows a 256-member graphics character set in the ADM. It prints the decimal code (0 to 255) of the character below and the ASCII character corresponding to that code (if not a control character!) above the graphics character. Note that both this and the GRAPHICS TESTER program require POKES to memory locations used by the interface cards. There probably are some interface cards which won't like that. The serial cards used by the Imagewriter may not accept these POKES.

[154.12] GRAPHICS TESTER - A short one line demonstration of a graphics pattern.

[154.13] MASTER CATALOG PROG - This is yet another version of MASTER CATALOG available on several WAP disks (including the WAP 134 NEW MEMBER DISK). This uses MASTER CATALOG ADM and B.MAS.CAT.48K. This version distinguishes between front and back (for the two-sided users) and traps control characters that are embedded in program names. (To use the trap you store the catalog and then read the catalog back in. Control characters are replaced with blanks - see line 2575). MASTER CATALOG PROG just loads the binary subroutine file B.MAS.CAT.48K and then runs MASTER CATALOG ADM. Once the binary file is loaded the MASTER CATALOG ADM can be run repeatedly without having to reload the binary file each time. I suggest you put

these three files on a disk by themselves and make MASTER CATALOG PROG the HELLO program.

[154.14] SET APPLE MATRIX PRINTER - This asks questions about the character size wanted and then sets the printer. It selects from the 7 default character sets. It can provide bold or elongated characters. It can also change the number of lines per inch.

[154.15] DUMB TYPER - A short utility program which will print just what you enter on the keyboard. The printer will print when the buffer is full (approximately a line) or when a <cr> is sent. Because errors are not easily corrected, this is no substitute for a word processor. You can enter the ESC printer control sequences.

[154.16] HELP MY PRINTER DOESNT WORK - A program that lists file HELP.DOC which is a text file of problems and suggested resolutions. (See June 1984 WAP Journal p. 26; the Applesoft program for displaying documentation is written-up on p.46.)

[154.17] AMWAY RECORD KEEPING PROGRAMS - These programs will track orders, inventory and finances of an Amway dealership. Some of these menu-driven routines, such as the phone list, will also be useful to non-Amway WAP members. To use, RUN AM.HELLO.

DISK 155: IAC 33 - MISCELLANEOUS

This disk contains programs written solely by members of Apple-Dayton. The programs have been selected for overall quality and unique programming techniques. The disk is distributed through the IAC.

[155.1] A-D HELLO [A:08:Utility] - Club information; loader for U/MENU 4.0 and A-D NOTES READER. Written by Mason Friar. Modified by Ted Rose. Run G/RUBIK'S CUBE INFORMATION for instructions.

[155.2] G/RUBIK'S CUBE [A:22:Games] - A program that uses hi-res graphics to let you manipulate a Rubik's Cube. Doesn't tell you how to solve the cube, but gives you a selection of starting positions. Written by Thomas Cottrell.

[155.3] G/RUBIK'S CUBE HRS.CHR [B:05:Games] - Support program for G/RUBIK'S CUBE; loads the shapes for the characters used to write to the hi-res screen. A\$5256,L\$03A9.

[155.4] G/RUBIK'S CUBE CHAR DISP [A:02:Games] - A support utility that can be used to display the character shape tables contained in G/RUBIK'S CUBE HRS.CHR.

[155.5] G/RUBIK'S CUBE STRING WTR [A:12:Games] - Support program for G/RUBIK'S CUBE that can be used to enter special patterns which can then be read in and displayed by G/RUBIK'S CUBE.

[155.6] G/STAR TREK.RUN FIRST [A:08:Games] - Boot program for G/STAR TREK. Must be run first to set the memory boundaries and load all the supporting programs. Written by Steven Bowline.

G/STAR TREK [A:53:Games] - Steven Bowline has done a superb job of revising the original Mike Mayfield program into Applesoft and adding hi-res graphics. Instructions for all the features of this game are available from the program G/STAR TREK.RUN FIRST. The only trouble is the use of non-standard 3-letter commands:

contd.

NAV - activate warp engines.
LRS - long range scan of other quadrants.
PHA - fire phasers.
TOR - fire torpedos.
SHE - raises/lowers shields.
DAM - damage report.
COM - battle computer.

{155.7} U/FASTBOOT CREATE [B:06:Utility] - This program will configure an initialized 48K DOS 3.3 to load the non-resident Basic into the the 16K card as a part of the bootup process. The card is loaded approx. 5 times faster than by the system master and since the language is loaded before the greetings program is run, it can be in either version of Basic. After the FASTBOOT disk is created, transfer programs using only file transfer type routines (FID). Should be used only on disks that are blank except for a greeting program. Written by John Matthews and Jim Hopper. A\$0803,L\$04D0

{155.8} U/CATEDIT 1.0.CODE [B:05:Utility] - A catalog edit program that allows you to add titles, change names to flashing, inverse or lower case displays and clear previous titles from the catalog. Written by Jim Hopper. A\$0803,L\$03D4

{155.9} U/DISKSCAN 1.6 [B:12:Utility] - This program is an assembly language implementation of the p-System's "Bad Block Scan". Initialization is also supported with the greeting program you have pre-loaded. If you find bad blocks and reinitializing does not cure the problem, the VTOC can be written back to the disk with the bad block marked as used so DOS will ignore it on future disk operations. Written by Jim Hopper. A\$4000,L\$0A2F

{155.10} U/MENU 4.0 [B:07:Utility] - Apple-Dayton menu program loaded by A-D HELLO or A-D NOTES READER. This program is relocated between DOS and its buffers so that normal program usage will not disturb it and it can be called back at any time. Some programs require additional space which will cause the menu to fail to respond. Use the space bar to access successive pages of the catalog of programs on the disk. Written by Rick Croasdale. A\$8000,L\$05EA;48K.

{155.11} U/A-W TRANSFER [A:10:Utility] - This program is designed to communicate with a copy of itself in another Apple when both are equipped with the DC Hayes Micromodem II. The programs will take standard Apple Writer binary text files, convert them to ASCII for transmission, send from one to the other, convert back to A-W format and save the text to disk as a TEXT.---file at the receiver end. Written by John Matthews.

{155.12} U/EPSON SETUP 1.3 [A:33:Utility] - A menu-driven program to send control codes to an Epson MX-80 printer to set Condensed, Expanded, Enhanced, Double printing, etc. Includes a sample letterhead which can be modified into your own. Written by Ed and Mike Hunter.

{155.13} U/GETPASCAL 2.2 [B:06:Utility] - A program that allows the user to download files from a PASCAL/FORTRAN format disk. This assembly language update of the original GETPASCAL done in Basic by Dr. Matthews runs about ten times faster. At present, only Pascal text file transfer is supported. Written by John B. Matthews, M.D. A\$0803,L\$04B3

{155.14} U/UTILITIES NOTES [T:16:Utility] - Additional documentation on FASTBOOT, DISK SCAN, and GETPASCAL programs. Can be read using the FILE CONVERTER program. Written by Jim Hopper and John Matthews.

{155.15} E/PRESCHOOL FUNPACK [A:41:Education] - Some exercises and "just plain entertainment" presented in

10-res graphics and music for the younger generation. Some keyboard input is required. Written by Grace and Dan Fox.

{155.16} B/FILE CONVERTER 2.0 [A:18:Business] - A business utility program that will read any Apple Writer binary file or sequential TEXT file (regardless of string length). Options include screen preview (with lower case available for those with lower case adapters) and left-justified print-out. The files in memory can be saved to disk as Apple Writer or Text files. Multiple disk drives are supported and the program will run on any size Apple that can support DOS (the smaller machines may not be able to load very much text). Written by Ted Rose.

{155.17} B/FILE CONVERTER 2.0.OBJ [B:03:Business] - Support program for B/FILE CONVERTER 2.0 that loads into a DOS buffer. Program is relocatable. This program must be on the same disk with B/FILE CONVERTER 2.0 for the program to run properly. A(HIMEM),L\$198 For documentation, RUN this program and then load file B/FILE CONV 2.0 INSTRUCTIONS with option 2 "LOAD SEQUENTIAL TEXT FILE", then select option 3 for screen preview or 4 for printout.

{155.18} A-D NOTES READER [A:06:Utility] - Routine called by A-D HELLO to present a screen preview of the documentation contained in A-D VOL 1 NOTES. Written by Ted Rose. [NOTE: requires B/FILE CONVERTER 2.0.OBJ to run.]

DISK 156: IAC 35 - APPLESOFT APPLE WRITER //e

This disk contains files from three sources. IAC disk 35 provides a program to help write Applesoft programs. Next are a series of utility programs donated by WAP member Rudie Slaughter. Finally, this disk features utilities by Ronald Green to help use the Apple Writer //e word processor.

{156.1} BUILD A PROGRAM - by Loren Avenson (NIAUG member). This program builds a skeleton Applesoft program to accept/convert dates and optionally the coding for a user-defined indexed sequential disk file. Run DOCUMENTATION FOR BUILD for details.

{156.2} INPUT-ROUTINE - A part of BUILD A PROGRAM used as a run time package.

{156.3} INPUT-ROUTINE-DEMO - Demonstrates the use of the BUILD A PROGRAM package.

{156.4} FILE SALVADOR - (by Rudie Slaughter) - Restores deleted files from a DOS 3.3 disk (provided that no new files were added since the deletion).

{156.5} GAME CONTROLLER TEST - Two versions for the][and //e. This two-line Applesoft program will display the current button and paddle settings. Note that the file name for the //e version is in lower case and will appear as junk characters when listed on a][+.

{156.6} MON TEST - Displays a test pattern for non-Sony color monitors.

{156.7} SONY TEST - Displays the same test pattern for Sony color monitors.

{156.8} Pentamze 2.0 (by Robert Tsuk) - An improved version of the game that was featured in Byte, Vol. 7, No. 9.

{156.9} APPLE WRITER //e INFORMATION

Included are an APPLE WRITER REFERENCE CHART, an APPLE WRITER OPERATION description, a GLOSSARY for the PKASO interface with the C. Itoh Pro Writer printer, a contd.

GLOSSARY REFERENCE CHART, a GLOSSARY USE description and print format files.

The print formats files are (with each file name prefixed by "PRT."): STANDARD PAGE FORMAT; STANDARD PAGE BLOCK FORMAT (use 10 CPI and 6 LPI); CORRESPONDENCE FORMAT (use proportional & 8 LPI); SMALL PRINT FORMAT; SMALL PRINT BLOCK FORMAT (use 12 CPI and 6 LPI); TINY PRINT FORMAT; TINY PRINT BLOCK FORMAT (use 17 CPI and 8 LPI)

DISK 157: IAC 36 ARCADE GAMES

This disk features three shoot-em-up arcade games by Albert Lesiak of the Northern Illinois Apple User's Group. All used Borderbund's Arcade Maker to generate the three machine language programs. The remainder of the disk is a theme song and title display. To leave any of these games, press Control-Open Apple-Reset at the same time.

{157.1} BEACH-HEAD - A tank-oriented game in honor of the 40th anniversary of the Normandy invasion.

{157.2} WESTWARD HO! - Try to protect your wagon train with the luck of a joystick and nine lives. Shoot the Indians before they shoot you.

{157.3} BEE CRUNCH - A two player game using paddles. The object is to score points by killing swarming bees or your opponent (who moves along the opposite side of the screen.)

SIG MAC DISK 3

Tony Anderson offers the following report on our latest Sig Mac disk.

The third Sig Mac disk contains information about the fonts provided by Apple Computer Inc, in the Macintosh dealer software upgrade of May 1984 (Finder version 1.1g) This disk comes to us through the efforts and generosity of Price M. Collins. The disk is divided into four parts:

1) A MacWrite document that contains an explanation of some of the numeric parameters associated with a font, and a listing of those parameters for all 32 fonts.

2) Five MacWrite documents that provide ASCII tables of each font. These tables show all of the characters in each font including the non-typable characters in Cairo and Chicago.

3) Six MacPaint documents:

FONT SAMPLES: A small sample of every font including the character at Hex D9 (Option-tilde), which is unique to each.

CAIRO KEYBOARD: A handy printed map to the arrangement of the keyboard when using this non-alphabetic font.

The next four files are fonts drawn in MacPaint because they can't be typed in MacWrite.

GENEVA 20
NEWYORK 20
NEWYORK 36
TORONTO 20

4) A fonts file which contains three fonts called Boxes 9, 10 and 12. If incorporated into a user's system, they will let you draw boxes around words in MacWrite. These fonts replace the equivalent-sized Toronto fonts.

\$\$\$ DISCOUNT PRICES \$\$\$

Monitors

Amdek Color 1	\$292
Amdek RGB Color II	\$420
Amdek 300A	\$155
NEC 1260 (Green).....	\$120
NEC Color (Composite).....	\$275

Modems

D.C. Hayes Micromodem II e.....	\$245
D.C. Hayes 300 Baud Smartmodem	\$215
D.C. Hayes 1200 Baud Smartmodem	\$490

Printers

Toshiba P1350	\$1500
Toshiba P1351	\$1565
NEC 3510 Spinwriter	\$1250
Okidata Micro 82 A.....	\$310
Okidata Micro 83 A.....	\$565
Okidata Micro 92.....	\$440
Okidata Micro 93.....	\$700
Prowriter 8510 A.....	\$390
Epson FX80	\$485
Epson FX100	\$670
Epson RX-80 F/T.....	\$375
Epson RX-100.....	\$535
Diablo 620	\$795
Qume Sprint 1140.....	\$1300

SAFT Standby Power (200W)	\$395
DB Master	CALL
Grappler Printer Card (Specify Printer)	\$115
Buffered Grappler Plus.....	\$165
Z-80 Card.....	\$130
Softcard Premium System IIe.....	\$340
Wordstar	\$300
Wordstar with Applicard.....	\$325
Saturn Accelerator II	CALL
Videx Videoterm	\$215
Stock Option Analysis Program (H & H Scientific)	\$250
Stock Option Scanner (H & H Scientific)	\$350
d Base II.....	\$440
Dow Jones Analyzer.....	\$290
Dow Jones Manager	\$250
LJK Letter Perfect	\$105
Visicalc.....	\$185
Microsoft Multiplan	\$180
General Manager	\$150
Screenwriter II.....	\$100
Sensible Speller	\$100
Titan 128K Ram Card	\$350
Wildcard Plus	\$125
TK Solver!.....	\$210
PFS: File	\$95
PFS: Report	\$95
PFS: Write	\$95
Koala Pad.....	\$100



VISA/MC (Add 3%), money order, certified check.
Prices subject to change. Shipping/handling \$5.
MD residents add 5% tax. Mail order only.

**CALL FOR ITEMS NOT LISTED
GOV'T PURCHASE ORDERS ACCEPTED**

RAMADA COMPUTER PRODUCTS

A Division of H & H Scientific

13507 Pendleton St.

Ft. Washington, MD 20744

Tel. (301) 292-2958

DISABLED SIGNEWS

by Jay Thal



DISABLEDSIG AUGUST MEETING
THURSDAY, AUGUST 9, 1984, 7:00 P.M.
SUBJ.: ON THE ROAD TO TRANSPARENT SCREEN EMULATION
CHEVY CHASE COMMUNITY CENTER
CONNECTICUT AVE. & MCKINLEY ST., NW, DC

At the August 9 meeting Roger Petersen and Jim Turri will present information pertaining to computer output for the blind and visually impaired.

The subject of the July meeting was the assessment of needs and the prescription of augmentive devices for children with handicaps. Mary Wilds, a teacher of orthopedically impaired students, and Karen Greszko, an occupational therapist, both with the Prince William County (VA) school system, gave the presentation.

The presentation revolved around a video-tape of one of their students working with an Apple][+ in the school. It allowed for stop-frame analysis, at different stages, so that the participating audience could try to brainstorm proposed solutions. But, one of the first problems that had to be faced was the clash of different disciplines.

Obviously, it wasn't a physical clash, but it typified one of the initial problems when persons of different disciplines get together to discuss a singular issue. The problem was that of language. As often as the cognoscenti are questioned when they speak about POKEs and PEEKs, they are equally in the dark when they hear the terms athetoid (low muscle tone), or plantar flexed (when the foot is pointed down as a ballet dancer on point).

The first decision, then, was to speak a common tongue. In that common tongue we were able to determine important things like cognitive ability, ability to discriminate between physical points (the spacing and location of switches), desire to use a head-stick for entry, and whether fatigue was a factor (in fact, physical accuity improved with time).

The subject was a six and a half year old girl who, due to cerebral palsy, has numerous physical disfunctions and deformities and unintelligible speech. But, that tells us, the layperson, what we see and hear - it does not tell us about the person. What we see and hear tells us that she will likely not become a tight-rope walker or an opera singer, but few of us would.

The real person, in fact, has high (gifted) cognitive abilities, a sense of humor, and is highly motivated. She uses a computer in her work (school) setting and one at home (a //e). So...if you only had this paragrph to go on, wouldn't you hire her?

That is what it is all about, using augmentive devices to amplify a person's strengths. In this case, using those available computers to aid her communication and enable her to enter the first grade this fall.

Well, back to the presentation. It is difficult to describe in symbols what was viewed on the video screen. Suffice it to say that the images allowed the therapists, and the engineers, and the computer

experts to brainstorm some proposals (solutions?). Out of those suggestions a synthesis will develop which, for a time, will aid communication. By "for a time", I mean when she wants and needs even more power available to her.

Among the suggestions were an ergonomic keyboard extension which would support the lower arms and wrists in a typing position; a Dvorak keyboard arrangement so that the most used letters (e,t,i,o,n,...) are most accessible with the least movement; the use of treadle switches; macros; and a scanning dictionary. (Incidentally, a //e can be readily modified to use Dvorak, and it's built into the //c.) Some will work, some may not (now), but the development will go on. Importantly, individuals with specific skills are linked together for a continuing, problem-solving, relationship. - If you like that sort of challenge, and to develop possible software and hardware solutions, you should attend the DISABLEDSIG meetings.

EASE OF ACCESS

When I joined the P1 we wondered when in the future we would reach member number 500. And for some, whose Apples have four or fewer digits in the serial number, even that seemed out of reach. Now we are over 5,000 and climbing. The office and classroom space also has to grow, as well as meet the needs of a broadening group of members.

While the newsletter has been available on disk for the visually impaired, and signers are available at our main meetings for the visually impaired, the WAP office IS NOT NOW accessible to the physically impaired. However, WAP wants to do something about that. If you are knowledgeable about CHAIRLIFTS, or OTHER DEVICES which could facilitate access to our offices, please contact me or the office. ☺

EDSIG NEWS

by Peter Combes

EDSIG Calendar

Tuesday, August 7, at 7.30 p.m.

"Human Factors in Educational Programming" - Dr. Morariu of the University of Maryland.

Tuesday, September 4, at 7.30 p.m.

"Videodiscs and Micros", Dr. Paul Riorden, USUHS.

All EDSIG meetings are held in the Auditorium, Building B, of the Uniformed Services University of the Health Sciences, on the campus the National Naval Medical Center, 4301 Jones Bridge Road, Bethesda, MD. ☺

ANOTHER LOW-COST COOLING IDEA FOR YOUR APPLE

by George Kinal

The ventilation inadequacies of the Apple][when filled up with accessory boards is well known. Removing the lid is one solution that works pretty well. The hang-on fan/switch/surge protector units also work, up to a point, but they don't move enough air past the really hot boards. A 3.25 inch square "Sprite" fan can be installed inside the case on the right side, and, if "baffled" with some duct tape, provides a fair air flow; these fans go for \$8 used. But they are noisy, and the air doesn't flow past the peripheral boards.

A few years ago, I wouldn't have dared to suggest the following solution, nor would I have wanted to do it myself to my valuable new Apple. But let's face it - Apple][s aren't such valuable items any more. So, by making a single cut and drilling two holes in the back panel, a real super air mover can be installed for under \$10.

The ROTRON "Biscuit" fan blows air out of a rectangular

opening about one by two inches. It mounts using two screws on the face of its air outlet. To install this fan on the back of your Apple, cut off about two inches of the plastic case riser that separates the opening behind slots 0 and 2. The holes for the screws should be drilled 1.75 inches down from the top, behind slots 0 and 3. This placement blows air right past the memory card and peripheral cards in slots 1 and 2. Place a cardboard baffle from the motherboard row C up to the keyboard. This will prevent air from zooming out the keyboard opening, and instead will force some air turbulence back to the cards in slots 3 through 7.

The only major disadvantage I've found is that the fan protrudes four inches behind the Apple. This may not be suitable in some cases. It is not as quiet as the hang-ons, but is quieter than the Sprite fan. The Biscuit is available (used) for \$6 (get two - minimum order is \$10) under stock no. SPL 38-24 from Meshna, P. O. Box 62, E. Lynn, MA 01904. Happy cooling! ☺

COMPUTER & ELECTRONIC FURNITURE SALE FOR CLUB MEMBERS ONLY SAVE 20% OFF LIST PRICE

Just bring this ad or your club ID to qualify.

OUR SHOWROOM IS LOCATED AT
1042 ROCKVILLE PIKE ROCKVILLE, MD.

FUTURE FURNITURE
The Complete Electronics Furniture Center

Call **340-1106**



MAC INTOSH SOFTWARE AVAILABILITY UPDATE



PRODUCT	COMPANY	PHONE	AVAILABILITY
<u>DATA BASES</u>			
Filevision	Telos Software Products	(213) 450-2424	August
Main Street Filer	Main Street Software	(415) 332-1274	Now
Habadex	Haba Systems, Inc.	(213) 901-8828	Now
Helix	Odesta Corporation	(800) 323-5423	July
PFS:File	Software Publishing Corp.	(415) 962-8910	August
Microsoft File	Microsoft Corporation	(206) 828-8080	4Q
theBase	DigiCorp	(801) 562-2227	August
1stBase	Desktop Software, Inc.	(408) 458-9095	August
<u>WORD PROCESSING</u>			
Microsoft Word	Microsoft Corporation	(206) 828-8080	October
Think Tank	Living Videotext	(415) 964-6300	Now
MegaMerge	Megahaus	(619) 450-1230	Now
<u>ELECTRONIC SPREADSHEETS</u>			
Lotus Macintosh Product	Lotus Development Corp.	(617) 492-7171	1Q 1985
Multiplan	Microsoft Corporation	(206) 828-8080	Now
TK!Solver	Software Arts	(617) 237-4000	July
<u>GRAPHICS</u>			
Microsoft Chart	Microsoft Corporation	(206) 828-8080	August
DaVinci Landscapes	Hayden Software Co.	(800) 343-1218	July
MacDraw	Apple Computer, Inc.	(408) 996-1010	September
ClickArt	T/Maker Graphics	(415) 962-0195	Now
Mac the Knife	Miles Computing, Inc.	(818) 994-7901	July
<u>DATA COMMUNICATIONS</u>			
MagicPhone	Intermatrix	(213) 985-5763	July
DataTalker/Mac	Winterhalter, Inc.	(313) 662-2002	July
Era 2	Microcom	(617) 762-9310	July
MacTerminal	Apple Computer, Inc.	(408) 996-1010	July
Dow Jones Spreadsheet Link	Dow Jones & Co., Inc.	(609) 452-2000	July
<u>OTHER BUSINESS</u>			
MacProject	Apple Computer, Inc.	(408) 996-1010	September
MacAccounting	Peachtree Software	(800) 241-2005	September
Home "Mac" Accountant	Arrays, Inc./Continental Software	(213) 410-3977	August
Desktop Calendar for Mac	Videx	(503) 758-0521	October
Dow Jones Market Manager Plus	Dow Jones & Co., Inc.	(609) 452-2000	4Q
MacCoach	ATI	(213) 823-1129	Now
The Sales Edge	Human Edge Software	(415) 493-1593	Now
Dollars and Sense	Monogram, Inc.	(213) 215-0529	August
MacFORTH	Creative Solutions, Inc.	(301) 984-0262	Now
Macintosh Pascal	Apple Computer, Inc.	(408) 996-1010	August
C Language Compiler	Software, Ltd.	(312) 975-4030	Now
<u>AND PLAY</u>			
Millionaire	Blue Chip Software, Inc.	(818) 346-0730	Now
Sargon III	Hayden Software Co.	(800) 343-1218	June
Transylvania	Penguin Software, Inc.	(312) 232-1984	Now
Professional Composer	Mark of the Unicorn	(617) 576-2760	July

All information in this list is provided to Apple Computer by the product's developer. Apple cannot warranty any third party products or their anticipated availability dates. Please contact the individual developers for further information. (Ed. Note: List was modified to include data appearing in August 6 Infoworld.)

MAILING LIST MANAGEMENT WITH THE MACINTOSH

by Brooks Leffler

Mailing list management is what led me to a computer in the first place. I own a kite shop and have a retail mailing list which is now at 3200 names and growing by 100-150 per month.

I fully intended to get the tried and true //e - but was seduced by the Mac instead, even though on the 26th of January, mailing list management was a long way off. I've been using it for the books, and for lots of print advertising, but the list is the big job. So when filing systems became available recently, I jumped - too quickly, as might have been predicted.

I have now had three weeks of intensive experience with list management on the Mac, first with Habadex and more recently with Main Street Filer. I should emphasize that this review pertains only to mailing list management, as I have had neither need nor time to test other capabilities of the software. For any serious mailer, Habadex is not the answer. Main Street Filer, on the other hand, is terrific.

Habadex is published by Haba Systems, Inc. It is being promoted primarily as a hi-tech Rolodex, with phone dialing capability through an optional (and not yet available) adaptor, but it also provides for the reordering of the file eight different ways, printing of lists and labels, and limited mail-merge. All data must be on the disk with the application, which puts the outside limit at about 500 names per disk. List is \$200.

Main Street Filer is published by Main Street Software. It is a data base management system which uses a 4-way file ordering system instead of sorting, while providing for range/match selection criteria for each field. Data may be kept on the same disk as the application, or on separate disks. The publisher claims that the system will handle up to 65,000 records with up to 36 fields of up to 40 characters each. List is \$250.

Both programs have taken full advantage of the Mac's talents with regard to data entry. Record design is all done with the mouse. Both systems provide a basic name/address format as a starting point, allowing you to customize the screen by moving fields around, adding or deleting. Haba allows you to drag the box for each field into the location on the screen that seems most logical to you, but you're stuck with their generic names for fields, such as "Note #1". Main Street sets the screen format for you, but allows you to name the field, to order fields as you wish, and to specify fields to be skipped on initial data entry.

Both systems use similar techniques for designing reports, whether they be columnar lists or labels. With Habadex, you drag fields to the position you wish, whereas with Main Street, you do the whole design by clicking on options.

Since the keyboard in both programs is used primarily for data entry, and the mouse for nearly everything else, efforts have been made to avoid the ping-ponging from keyboard to mouse that might be expected, although neither program is consistent on this.

Both systems are fast in data entry and retrieval, and both are easy to get the hang of. Documentation varies. The Habadex manual is very easy to read and

conversational, if a bit patronizing to "the rest of us", but skimps on specifics. MSF's manual is much more complete, but written in such a sterile manner that I was put off by it until I needed it for reference. For example, sample screens in the book show fields named "Field One", "Field Two", etc., instead of examples like "Name", "Address".

But the task that separates the two packages into Professional List Manager and glorified Rolodex is printing. With Main Street, you can fully specify spacing and print quality, and the stuff comes out (even in high-speed draft quality) with a very professional appearance, better in my opinion than most computer labels. You can even have them in hi-res Chicago 12 if you want them! The only problem I've had with MSF printing is in the centering of columnar reports, but for mailing list management, that's not critical, and I haven't worked with it enough to know whether that glitch is in me or the program.

With Habadex, you get draft quality type and haphazard word spacing - no choice, take it or leave it. For the first time on the Mac, what you see is much superior to what you get. Worse yet, Habadex seems to have been designed to print only on 8 1/2" x 11" paper, and every label on the market that I've found is mounted on pages either 6" or 12" long. So if you go precisely by the Habadex manual, one of two strange things will happen. Habadex will re-size the spacing you've given it so as to space the labels evenly down the page, and/or Habadex will adjust spacing between labels at the end of the page so the next page will start at the same place. Either way, you end up with names and addresses which are printed out of sync with the labels!

Six phone calls, one letter, and many yards of paper later, the best guidance I have gotten by Haba is (a) that the 11" page problem was "built into the machine", and (b) that I could have custom labels made on 11" paper! At that, I took Habadex back for a refund - as luck would have it on the day Main Street Filer arrived.

The only confusing aspect of working with MSF is that the main menu screen (with the inevitable redundant "Welcome" message) appears without modification at several levels of penetration into the program. You see it when first opening the application; you see it after opening a specific file; and you return to it after using each subroutine. The only way you can find out where you are is to pull down the Apple menu to "About Filer", which tells you which file you're working, how many records reside therein, and how much memory is in use. All that should appear on the main screen.

Another point worth mentioning is that the application itself and the system folder occupy 332K of memory on the master disk, which means that most files will have to be put on a separate disk. In my case, I have chosen to separate my list into volumes by zipcode, in the absence of a hard disk.

Working with multiple disks can be done with only the internal drive, but at the cost of an extraordinary amount of disk swapping. Copying individual records, for example, takes one disk swap per record. So, after one week of using the system, I bought a second disk drive. It's a whole different world. Now I have the list management system I've been looking for. ☺

GLOSSARY FOR NEW MAC OWNERS

by Robert C. Platt

Apple users are constantly creating new acronyms and buzz words. This brief glossary should guide the newcomer through SIG Mac meetings as well as conversations with other WAP members. A revised version of this glossary will appear in our next New Member Reference Book, so I welcome your comments and corrections.

ABBS - Apple Bulletin Board System. A computer program which allows users to call via a modem and store or retrieve messages or computer programs. To date, no ABBS program has been written for the Mac.

Application program - Software that performs a specified task such as a spreadsheet program. Data files created by specific applications usually have distinctive icons. Opening such files automatically starts up the associated application.

Architecture - The structure or actual physical organization of a computer circuit which determines its behavior.

BASIC - Beginner's All Purpose Symbolic Instruction Code, a programming language widely used on microcomputers. Two versions are available on the Mac - MacBasic and Microsoft Basic.

Bit-mapped image - A computer screen display method where each dot on the screen corresponds to a binary digit in the computer's memory. The value of the digit determines whether the dot is on or off.

Bus - A group of wires which connect a microprocessor with memory and input/output circuits. The Macintosh's bus can move 16 bits of data at the same time.

Clipboard - A separate file on each disk that stores information copied or cut while working in an application.

Compiler - A program which translates a high level language, such as BASIC, into machine instructions.

CPU - Central Processing Unit. The CPU in the Mac and Lisa is the Motorola 68000 chip.

Cursor - A position indicator, which shows where you are on a video screen. On the Mac, the shape of the cursor symbol changes depending on its context.

Desk accessory - A small program that can operate at the same time as a Mac application program. (e.g. alarm clock, note pad, calculator and control panel.)

Desktop - The image on the Mac screen that is produced by the Finder to show disks and their contents.

Disassembler - A program which converts machine language into a higher level language, such as assembly language.

Dragging - The processing of pointing the mouse at an object, then moving the mouse to a second location while keeping the mouse button pressed.

Event - An occurrence which must be processed by the Mac. Events include: pressing or releasing the mouse button, typing on the keyboard, or inserting a disk.

Event Manager - A program in the Mac's operating system that processes events according to their priority, thus allowing the Mac to shift its attention between several different activities that appear to be running concurrently.

Font - A set of characters of a specific typeface and size. Fonts are stored in the system file and can be added or deleted by the Font Mover application.

Forth - A "stack oriented" microcomputer programming language.

Heap - A portion of the Mac's RAM memory where temporary data and desk accessories are stored.

I/O - Input/output, the process of moving data to or from the computer.

I-beam - A cursor shape displayed by the Mac when editing text.

Icon - A small graphics symbol that represents an application, function or file.

Handle - A pointer to an object to be processed by the Mac operating system.

Journaling - A process for recording a program's output and activity for later analysis or reproduction. The Guided Tour disks are examples of this technique.

LISA - Local Integrated Software Architecture, the name of Apple's first series of 68000 based computers.

Localizing - The process of making a generic program specific to a particular country or language.

Macintosh, Charles - Scottish inventor of a water-proof rubberized fabric, used in mackintosh rain coats.

McIntosh, John - Discoverer of the McIntosh apple in 1796. A misspelling of his name became the moniker for a popular new microcomputer.

Modem - A circuit which converts the Apple's internal digital information into sounds which can be transmitted over telephone lines.

Pascal - A high level programming language invented by Niklaus Wirth, a Swiss computer science professor, who believes that programs should consist of well-defined data structures and well-structured procedural steps.

Power strip - An electrical device with multiple sockets for plugging in your Mac and peripheral devices. Power strips usually include a master on-off switch and a voltage filter to protect against spikes caused by thunderstorms, etc.

Prompt - A special symbol which the computer displays when it is waiting for the user to respond. For example, the flashing vertical bar marking the insertion point in MacWrite is a prompt.

Public domain software - Programs which may be copied without further permission from or royalty payments to the author.

contd.

Quickdraw - A routine in the Mac's ROM that displays and manipulates video graphics.

RAM - Random Access Memory. Integrated circuits which store and recall information.

Resource Manager - The part of the Macintosh's operating system through which an application accesses various resources, such as fonts, menus and icons.

ROM - Read Only Memory. Integrated circuits which have information permanently recorded. This information is not lost when the computer is turned off. The Mac has a 64K ROM that hold much of its operating system and user interface.

Scroll - To change the video display by moving information out at one end (usually the top) to make room for additional information at the other end (the bottom).

Scroll bars - The bottom and right edges of Mac windows, when if shaded, can be used to control which portion of a larger region will be displayed through the window.

SIG - Special Interest Group. SIG Mac is one of many WAP groups which cover Mac-related topics. For example, the Pascal Interest Group discusses Mac-Pascal.

Spreadsheet program - A program which permits data to be entered on a video screen and then to have additional data displayed based upon defined relationships. For example, Multiplan.

Template - A set of formulas and relationships used to program a spreadsheet application to fulfill a particular task, such as computing income tax returns.

Trap - A special instruction available on the Motorola 68000 that shifts execution from a user program to the Mac's operating system.

UCSD p-system - An operating system developed at the University of California San Diego. The p-system is popular because the same system is available on a wide variety of microcomputers. Rumors of its availability on the Mac by the end of the year abound.

USUHS - Uniformed Services University of the Health Sciences, located at 4301 Jones Bridge Road, Bethesda MD (between Wisconsin and Connecticut Aves.)

Utility - A program which performs a standardized housekeeping task, rather than serving a specific user application.

Volunteer - WAP's most treasured asset. Please become one.

WAP - Washington Apple Pi, the second largest Apple User Group in the world.

Window - An independently controlled region on the video screen, that represents a set of data or activity.

Write-protect tab - A plastic slide in the corner of a floppy disk case that can prevent data from being written on the disk. &

BACK TO SCHOOL SALE

C. Itoh ProWriter II	530.00
"Hot Dot" 180 CPS ...	460.00
180 CPS, 132 column ..	645.00
Color, 180 CPS	550.00
Okidata Microline 92	410.00
Epson RX-80	269.00
RX-80 F/T	325.00
FX-80 F/T	455.00
FX-100	690.00
LQ-1500 (Parallel) ...	1200.00
Grappler +	120.00
Buffered Grappler +	170.00
PKASO/U.....	120.00
Print it! Interface	175.00
Thunder Clock	120.00
ShuffleBuffer (64K)	250.00
ShuffleBuffer (128K)	325.00
Printer Stand: short--20. long--25.	
Hayes Smartmodem 1200 w/Terminal	
Program & CCS SERIAL card ..	640.00
Prometheus Promodem 1200 w/Terminal	
Program & CCS SERIAL card ..	540.00
CP/M CARD, CP/M 3.0, Guides ..	280.00
SuperSprite Graphics Pkg. ...	320.00
NETWORX Filtered Power Tree ..	54.00
Taxan Amber Monitor	130.00
Videx Function Strip	50.00
TG Track Ball	35.00
Wico Joysticks (3-way Deluxe).	30.00
Koala Pad Touch Tablet	80.00
Micro-Sci Disk Drive, A2	225.00
Quentin Disk Drive	215.00
FingerPrint (MX, RX Series) ..	45.00
(FX Series)	52.50
Verbatim diskettes	
SS/DD --21.00/10 --190.00/100	
DS/DD --30.00/10 --290.00/100	
Head Cleaning Kits	1.75
In stock word processing, utilities,	
and game specials:	
Epson Printer Utility (condensed,	
italic, boldface, etc.) ...	25.00
Record Master (Complete Data Base	
System)	45.00
The Artist	55.00
Super-Text 40/80 (II, II+)	55.00
Visidex	145.00
Desk Top Plan II	130.00
Frogger	20.00
Mouskattack	20.00
Lunar Leeper	17.00
Apple-Oids	18.00
Firebug	17.00
Creature Creator	27.00
Summer Games	30.00
Infocom's SEASTALKER	30.00

This ad is written a month in advance. Since prices are subject to change, please call for current pricing. We attempt to meet all advertised prices.

COMPUTER DEN Ltd.
11716 KEMP MILL ROAD
SILVER SPRING, MARYLAND 20902
301-649-6868

Call for an appointment or to order
Sunday - Thursday, 10 A.M. - 9 P.M.
July & August --- Closed Sunday
Free delivery to Crystal City
UPS shipping \$4.00 extra
Quantity Discounts Available

A LETTER TO ST.MAC

by David Morganstein

July 7, 1984

Matt Yuen, Assoc. Editor
St. Mac
7250 Laurel Canyon Blvd.
North Hollywood, CA 91605

Dear Matt,

I would like to disagree strongly with the point of view presented in your July St.Mac editorial. Specifically, you state that it is not important to know who is to blame for the slow beginning in software development and release. Second, you suggest that Mac owners should do nothing about the dearth of software but sit back and wait.

I believe that before something can be done about it, we must understand why the development has been slow. (This is a bit more constructive than merely finger-pointing to identify who is to blame.) Regardless of your suggestion that the consumer sit back and wait, Macintosh owners are going to be concerned about continual postponements and delays in the release of new software. Potential owners are going to wait until they see the light at the end of the tunnel. I think the biggest reasons for the time and effort required to develop Mac software are fairly clear and, to be candid, only Apple can change this.

Perhaps the readers of St.Mac would be interested in the details of developing software for the Macintosh:

1. First, the developer must invest in a Lisa computer with a megabyte of memory and a hard disk (preferably with 10 megs of memory). Until the availability of MacWorks this past month, you also had to invest in a Macintosh if you wanted to see your software run in the Macintosh environment. The total capital outlay to the developer (even at the exceptional discounts offered by Apple) was in excess of \$6,500. This is not a lot of money to a software firm such as Microsoft, but it is a great deal to an individual developer. Compare this with the cost to develop software for the //c, the Commodore 64 or the IBM PC. Given the relatively small number of Macintosh owners, the individual developers, the ones who wrote most of the 10,000 programs for the Apple][, may not be rushing in droves to make such an investment. (I believe that Apple has indicated that about 1,000 potential developers have made a first step by obtaining either a Lisa or a Mac.)

2. After you have the equipment, you must learn enough about both the Lisa Pascal Workshop and the Macintosh operating system to begin interfacing your program to the environment. The strong point here is that Apple has provided the developer with an incredible array of utilities to speed the process and to insure uniformity between applications. While this approach has many positive benefits, the drawback is that it will take several man-months of effort to digest the reams of rough draft documentation explaining how to use the routines. This effort represents an even greater investment of resources for a developer.

I am very interested in knowing whether software development will ever be possible directly on a Macintosh, and if so when? I do not mean Microsoft BASIC programs which cannot draw on the Mac's ROM routines. I mean the ability to write complete, stand-alone pro-

grams which do not require royalties to be paid to language suppliers. Again, compare these road-blocks with the experience of the Apple][, where developers were able to use any of a half-dozen languages to bring out their own special product.

3. Certain aspects of the Lisa Pascal Workshop require more extensive programming than would be necessary in other Pascal environments. One example of this is the SANE routines for performing arithmetic operations. Every single arithmetic operation, such as addition and multiplication, must be re-written as a procedure call. This means a lot of translation to programs which have been developed using other Pascal systems. While there are no doubt good reasons for this situation, it will cause additional time and effort in the development of Mac software. Unfortunately, this is exactly the kind of effort that Wirth was trying to avoid when he developed Pascal.

Personally, I am very enthusiastic about the Macintosh and the direction that Apple is taking. I have little doubt that it has the orientation of the personal computer of the future. The initial response of the public appears to be overwhelmingly positive. We in the Washington Apple Pi have welcomed several hundred Mac owners into our users group and are trying to cull together bits and pieces of information to help them get more from their equipment.

However, having the right idea at the right time may not be enough. To say that the competition is very keen is most certainly an understatement. The future success of the Mac or any personal computer lies in its ability to perform tasks that current and potential owners want - that means software. Since I have already been told by one developer that he has decided to lay off his Mac programmer and halt development until better documentation is released, I am concerned about impediments that stand in the way of new product development.

Let me suggest a few things which might speed the appearance of Mac software. First, a somewhat more readable, final version of the Macintosh documentation would help software authors. Second, when useful utilities are released, such as the two Supplement disks which became available in June, supporting documentation would make it easier for developers to learn how to use the programs without extensive trial and error efforts. I hope that Apple is moving ahead as quickly as possible in the preparation of a development environment within the Macintosh which would reduce the capital investment needed to write Mac programs. Further, I hope the ability to develop in other languages will soon be possible so that many existing programs can be translated into the Mac's amazing operating system.

Most Sincerely,

David Morganstein, President
Washington Apple Pi

WHEN IS A DATA BASE REALLY A DATA BASE?

by Alexander E. Barnes

Near the end of the October meeting on data bases somebody made the statement that the products discussed were not really data bases. Up until that point I had thought maybe I was the only one who realized that. An article in the July issue of the Journal (WHAT YOU WANT FROM A DATA BASE PROGRAM) again, by inference, raises that issue.

Gertrude Stein who was wise enough to know that "a rose is a rose, is a rose, is a rose" would also probably have realized that what an eager vendor calls a data-base is not necessarily a data-base. The vendors zeal for alighting on THE buzz-word of the decade is not seriously deterred by a rigorous adherence to the use of the most accurate term. Does the term "file handler" have any of the pizzazz of "data base". Heck, you might just as well expect Right-Guard commercials to use "armpit" instead of "under-arm".

The American National Standards Institute (ANSI) of the National Bureau of Standards, and the Committee on Data Systems Languages (CODASYL) have been dealing with the problem of what is a data-base for over a decade. In the mid-seventies they had hoped to develop a universally accepted standard as they had done with FORTRAN and COBOL. The definition of a standard was published and is still a benchmark document today. It is known as the CODASYL model. However, with the rapid evolution of theory and practice, two other models have received equal acceptance. They are known as "hierarchical" and "relational" models. The CODASYL model has become frequently referred to as the "network" model.

What, then, distinguishes a data-base system from a file manager? A data-base system works with a collection of files. A file manager works with one. That is a simplification. Nevertheless, I believe it is the essential distinction between the two. Of course file managers added multiple-file handling to their capabilities. But in such a case the user would still approach his data as if it were in separate files. The data-base user, however, looks at his data as if it were coming from one pool, independently of whether or not it resides in one file.

A simple example clarifies this. Suppose you have a billing system and one of your customers moves. In a file management system you make a pass through the file and change his address each time it appears, perhaps going through hundreds of records and making a dozen changes for each item to be billed to the affected customer. In a data-base system that customer's address would appear only once in a customer table and would have only one record for each customer, ie: tens instead of hundreds. Bills are produced by linking a billing record to a customer record.

The most obvious benefit of the data-base system in the example above is that the computer has to do far less work. But the most important advantage is the elimination of data redundancy. In the circles in which I travel, data redundancy is about as popular as ring-around-the-collar and foot odor. While saving space is an important benefit of the elimination of data redundancy, of far greater import is the elimination of data inconsistency.

In the file manager environment, it often happens that since the customer's address resides in different

places in the file, it is different in some of those places. In a properly designed data-base this won't happen.

To summarize: The features mentioned in last month's article are good features which can be found in both file management or data-base systems. Don't believe it's a data-base system just because a salesman calls his product that. It is a data-base system if and only if it links multiple files to eliminate data redundancy. &

NEWS ROUNDUP

by

Robert C. Platt

If Time can have its people section and Newsweek its Newsmakers department, surely the WAP Journal should have its own computer-celebrity oriented feature.

Marc Rotenberg hosted a reception at the Public Interest Computer Association, 122 Maryland Ave NE, to announce a new learning center to assist non-profit organizations to learn how to use computers. Mark Vermilion, Director of Apple's Community Grants Program was the featured speaker. Apple is playing a key roll in funding the center. The reception featured a demonstration room with a variety of computers, including two Macintoshes. The Mac drew the largest crowds with demonstrations of MacWrite, MacPaint and MacTerminal. WAP and the Mac made a number of converts (and hopefully a few new members.)

Active LAWSIG member, Kenneth A. Wasch's dream came true at the June C.E.S. in Chicago. Ken has been working for a long time to form a Software Publishers Association, and the group has been finally launched with Doug Carlston as President and Ken as Executive Director. One of the first issues to be addressed by the new group is software piracy. Membership information is available from Ken at 202-364-0523.

WAP's publication program is expanding. Faced with the depletion of WAP's inventory of green New Member Reference Books, a new edition is in the works. It will feature three volumes describing club services, information on the // and ///, and information for Mac and Lisa owners. A second project features reprints of WAP Journal articles on Pascal. Please call me at 223-1588 if you can volunteer to help with either project. &

PLAYING THE MARKET WITH STOCKSIG

by Robert Wood, Stockmeister

Over the past three years the stock and commodity markets have become a major application area for personal computers, as demonstrated by the 300 or more commercial programs advertised to help you make money in this area with your personal computer. In fact, there probably are more programs available for the stock and commodity markets than any other purpose with the exception of games and educational programs.

There also are more than a dozen specialized financial data bases available, on line or on disk, for the same purpose. In addition there are half a dozen magazines, dozens of books, and several associations at the national level all devoted to computerized investing.

The motivation for all this activity is simply to make money playing the market. However, the proliferation of software and data bases, and the accompanying compatibility problems make it anything but simple. Nor are the objects of all this attention, the stock and commodity markets themselves, easy to analyze. The ultimate purpose of the effort is to forecast the price action of the market or individual stock, whether long term or short term, with a profitable degree of accuracy and reliability. The hazards of forecasting have been well and frequently demonstrated.

The STOCKSIG was formed in the Fall of 1982 to help its members cope with these complexities by sharing information and experiences and to evaluate the wide range of available alternatives through a joint effort. This article will discuss the major problems facing the computerized investor, for which the STOCKSIG can provide some help and encouragement.

Software is the most important element in computerized investing, and the selection of programs is the first step in developing an investment system. There are three major categories of market software. The least exciting of these is called portfolio management and its function is to simplify the record keeping of financial transactions. Such record keeping is required for tax purposes and for good financial management. For anyone with twenty or more market transactions a year, a portfolio manager is very useful. Their cost ranges from \$45 to \$500 and there are perhaps 100 different programs available. Accordingly the selection of a suitable portfolio manager program can be a difficult task. Needless to say, not all of the programs are very good. Your local computer store does not keep market software in inventory so you can't get a demonstration from them, but you may get some useful advice from the STOCKSIG.

The most important category of market software is technical analysis, and there are an estimated 200 programs of this type ranging in cost from under \$100 to over \$2000. Technical analysis programs emphasize market timing and use a variety of mathematical and statistical methods for forecasting future prices of stocks, the market indices, options or commodities. The methods include moving averages, exponential smoothing, oscillators, time series analysis, trend lines, momentum indicators, Black-Scholes models, probability functions, charting and plotting, with sometimes a little astrology thrown in. Evaluating this pile of software and making a few selections is not simple.

The third major software category is fundamental

analysis which focuses on long term investing by analyzing the financial and operating fundamentals of particular companies and industries. It considers the past history of such elements as earnings, price-earnings ratios, growth rates, book value, dividends, and return on capital. The best that can be said for this form of analysis is that it will lead to the slow loss of money. However, it is very popular with novices and those with an aversion to mathematics.

Data bases are another important consideration and there are about a dozen financial data bases which specialize in stock, bond, option and commodity data. These are accessible via modem and contain extensive historical files in addition to current data. However, there are significant differences between the various information services, in terms of contents and operation. Data bases also involve compatibility problems as we shall see. Their selection requires careful consideration, and assumptions can be costly. The cost is not just wasted money but more importantly the time and effort expended in the process of discovering that you have made a poor selection.

Hardware is a problem only in regard to modem and printer and their compatibility with any given program and an on-line data base. For example, the Dow Jones Market Analyzer program will interface only with the Dow Jones Information Service, and a Hayes Micromodem II. However, the Dow Jones Information Service does not include some of the most important market data such as advances and declines, up volume and down volume, or the Standard and Poor indices.

In contrast, the Anidata Market Analyst program uses a Hayes Micromodem II to interface either with the financial data base of CompuServe or the Warner Computer System information service which has excellent and very extensive current and historical data files.

There are other compatibility problems resulting from the absence of any standard for datafile format. Every individual program uses its own unique file format and many will use an unique DOS. It is unlikely that any single program will provide all of the analytical features that you want. As a consequence you will probably have to maintain as many different and redundant data files, as the number of programs you use. This may be as many as half a dozen.

One way out of this is to limit yourself to a single integrated system of programs and data base, such as Computrac. At \$1900 plus \$200 a year that may seem a little expensive and it still limits you to one system, although it is a very extensive system consisting of several dozen analytical and portfolio management programs.

In evaluating software the normal approach is to test how well it performs as a piece of software, in terms of documentation, ease of learning, simple operation, error trapping, speed, clarity of displays, organization, and other program operating characteristics. However, in the case of software which performs a decision support function there is a higher dimension for evaluation; how well does the program contribute to analysis, forecasting, decision making and profit, with the emphasis on forecasting and profit making? For the market investor or trader the only really germane question is, will the price of the stock go up, down, or fluctuate narrowly sideways? If the

contd.

program does not help address that question, directly or indirectly, it isn't of much value. Everything else is a waste of time.

In most cases those who write reviews of stock market software are more expert in programming than in the market. They usually look at the program as an item of software and do not even attempt to assess its ultimate utility and value, in terms of its contribution to profitable investing and trading.

For the really active trader there are a dozen different systems which will put you on line in real time with the stock and commodity markets. These systems provide an information service similar to the terminals on brokers desks. They communicate via FM radio side band, telephone line, or satellite and your own dish antenna. The cost ranges from \$250 to \$2000 per month, depending on the features and the number of markets accessed.

While this article has focused on major problems involved in computerized investing, it should be emphasized that there are powerful, and in fact dominant and decisive, advantages to be gained by means of the personal computer. These advantages are best discussed on a program by program and case by case basis.



The purpose of this article has been to outline the considerations involved in using personal computers for investing in the stock, commodity, and financial markets. The STOCKSIG has considerable collective experience covering the kinds of questions which this article has raised including specific market software and data bases, and we encourage all interested members of the Pi to join with us for fun and possible profit.

The STOCKSIG meets on the second Thursday of each month from 8:00 p.m. to 10 p.m. at the Pi office in Bethesda. The classroom meeting room is excellent for our purposes with an Apple //e, a chalkboard, a Vugraph projector, and room for about 25 people. Our usual format starts with an open discussion analyzing the current market in terms of technical analysis and fundamentals, as well as short and long term timing. This is followed by a feature presentation and demonstration on a major item of market software, or stock market indicator. Active participation is encouraged and interested market players are invited.

FREE SHIPPING


 SUMMER SPECIAL

 MITAC DISK DRIVE (100% APPLE COMPATIBLE, SHUGART 390) ~~169~~ **149**
 16K RAM CARD ~~40~~ **36**
 EPSON FX80 PRINTER ~~525~~ **459**
 EPSON MX80 F/T PRINTER ~~409~~ **359**
 APPLE JOYSTICK(AUTO CENTER'G) ~~22~~ **17**
 APPLE JOYSTICK(REGULAR) ~~16~~ **12**
 DIABLO 620 PRINTER(floor sample) ~~1095~~ **690**
 MITAC HIGH RES. AMBER MONITOR(20 MHZ) ~~119~~ **90**
 ZENITH 12" GREEN MONITOR ~~89~~ **85**
 VERBATIM DATALIFE SS/DD DISK (10 PACKS IN PLASTIC BOX) ~~24~~ **23**
 MEMORY CHIPS FOR IBM(4164, 200 NS, SET OF 9) ~~55~~ **44**
 TEAC FD 55B DS/DD 320KB DISK DRIVE FOR IBM ~~189~~ **159**

 MICRO STAR COMPANY
 P. O. BOX 2307
 COLUMBIA, MD 21045
 (301) 730-7172

 Terms: Add \$1.00 handling fee per order. MD residents add 5% tax. Personal or company checks allow 2 weeks to clear. COD accepted by M.O. or cashier check only(add \$1.65 COD charge).Prices are subject to change without notice. Q'ty is subject to availability. MC & VISA customers add 3.5% surcharge. Manufacturer or MSC warranty provided.



TYSONS CORNER CENTER'S
HomeInform
 Information on Store Names, Sales, Events, Restaurants, Theatres, Gifts, Metrobus Schedules and Much More
 Computer Access Number
(703) 893-0874

ACCOUNTING

The Accountant	67
The Accountant 5.0	88
AR/AP/GL/PR (Cont.)	ea. 165
AR/AP (BPI)	ea. 260
Church Management	325
General Accounting (BPI)	260
Home Accountant	51
Inventory Control (BPI)	260
Payroll (BPI or Broderbund)	260
Tax Advantage	48

COMMUNICATIONS

ASCII Express Pro	88
Data Capture 4.0	44
P-Term Pro	88
Visilink	175
Visiterm	72
Z-Term Pro	102

DATA BASE

DB Master	150
Dastar (req. CP/M)	195
dBase II (req. CP/M)	325
Incredible Jack	122
PFS: File	85
PFS: Graph	85
PFS: Report	85
Visidex	175
Visifile	175

EDUCATION

Algebra 1, 2, 3, 4	ea. 28
Algebra 5, 6	ea. 34
Alphabet Beast & Co.	24
Alphabet Circus	21
Basic Skills	14
Body Awareness	34
Bouncing Kamungas	21
Cause & Effect (red/blue)	34
Cognito	28
Compumath/arithmetic	34
Compumath/decimals	34
Compumath/fractions	34
Facemaker	24
Fact & Fiction Tool Kit	28
Fact or Opinion (red/blue)	34
Foreign Languages	14
Game of the States	28
Grandma's House	24
Gertrude's Puzzles	31
Gertrude's Secrets	31
Hands on BASIC Prog.	54
KinderComp	21
Learning w/Fuzzywomp	21
Lucky's Magic Hat	28
Mastering the College Bds.	119
Mastering the SAT	102
Mastertype	28

Math Blaster	34
Math & Social Studies	14
Match Maker (specify)	28
Micro Habitats	28
Micro Mother Goose	28
Moptown Hotel	28
Mr. Cool	21
Number Farm	21
PSAT Word Attack Skills	34
Rocky's Boots	34
SAT Word Attack Skills	34
Speed Reader II (Davidson)	48
Spellicopter	28
Sticky Bear ABC	28
Sticky Bear Basket Bounce	28
Sticky Bear Numbers	28
Sticky Bear Opposites	28
Sticky Bear Shapes	28
Terrapin Logo	68
Trickster Coyote	28
Typing Tutor	20
Typing Tutor III	34
U.S. Geography	28
Wizard of Id's Way Type	24
Word Attack	34
World Builders	23

LEISURE

Adventure In Time	21
A.E.	24
Arcade Machine	41
Beyond Castle Wolfenstein	24
Blade of Blackpoole	28
Castle Wolfenstein	21
Checkers	34
Chess 7.0	48
Computer Ambush	43
Computer Baseball	29
Computer Gin Rummy	21
Computer Quarterback	29
Cosmic Balance	29
Cranston Manor	24
Dark Crystal	28
Dark Forest	21
Deadline	34
Decathlon	24
Enchanter	34
Epidemic	25
Galactic Gladiator	29
Hi-Res Golf II	24
Infidel	34
Jump Jet	21
Kabul Spy	24
Knight of Diamonds	24
Mating Zone	21
Napoleon's Campaign	43
Odin	34
Old Ironsides	28

Planetfall	34
Prisoner II	23
Pursuit of Graf Spee	43
Queen of Phobos	24
Questron	36
Randomn	24
Run for the Money	28
Sargon III	34
Seastalker	28
Shattered Alliance	43
Sherwood Forest	24
Sneakers	21
Sorceror	34
Southern Command	43
Starcross	28
Suspended	34
Tigers in the Snow	29
Time Zone	68
Transylvania	24
Tubeway	24
Ultima II	42
Ultima III	41
Ulysses	24
War in Russia	58
Warp Factor	29
Witness	34
Wizard and the Princess	23
Wizardry	34
Zork I, II, III	ea. 28

SPREADSHEET

Calcstar	132
Flashcalc	71
Magicalc	107
Multiplan	153
Practicalc II	51
Supercalc	132
Supercalc II	195
Visicalc	175
Visitrend/Visiplot	71
Visischedule	107

UTILITY/GRAPHICS

Apple Mechanic	20
Apple Plot	27
Applesoft Compiler	137
Banner Magic	17
Budge's 3-D Graphics	27
Complete Graphics System	55
Data Plot	41
Disk Organizer	21
Disk Recovery	21
DOS Boss	17
Double Take	24
Doubletime Printer	102
Editrix	51
E.P.F.	55
Fontrix	51
Frame Up	20

Graphics Solution	102
GraForth	51
Grafrinx	44
Hi-Res Secrets	85
Merlin	44
Multi-Disk Catalog	17
Munch-a-Bug	28
Picture Builder	18
Printographer	34
Pronto DOS	20
Routine Machine	44
Special Effects	28
Speedstar	92
Super Disk Copy	21
The Artist	55
The Bug	34
Utility City	20
Zoom Graphics	34

WORD PROCESSING

Addressbook/Mail List	34
Bank Street Speller	48
Bank Street Writer	48
Correctstar	132
Format II	102
Homeword	48
Letter Perfect	102
Magic Window II	107
PIE Writer	102
Print Shop	34
Sensible Speller	85
Screenwriter II	88
Spellstar	102
Super Text Professional	119
Super Text Home/Office	85
Word Handler	55
Wordstar (req. CP/M)	260

MISCELLANEOUS

Micro Barmate	28
Micro Cookbook	28
also	
Appetizers	9
Soup & Salads	9
Desserts	9

DISKETTES

5 1/4" SS/SD WABASH	17.50/10
3 1/2" for the Macintosh	45.00/10
(BASF or Maxell)	

Ordering Instructions

Specify II+ /Ile/Iic	
Maryland residents add 5% sales tax	
Shipping and handling \$3 per order	
No charges or COD's	
Prices subject to change	
Call for items not listed	

DISCOUNTS!

5 1/4" DISKETTES & STORAGE

- DOUBLE-NOTCHED DS/DD DISKETTES, EACH **1.65**
- DOUBLE-NOTCHED DS/DD DISKETTES, 100 **155.00**
- HARD PLASTIC STAND-UP 10-DISKETTE LIBRARY CASES **2.75 EACH**
4 FOR 10.00
(specify color choices: beige, black, blue, green, grey, red, yellow)
- SMOKED PLASTIC JUMBO-SIZE FLIP-TOP 75 DISKETTE FILE CASES **18.00***

PRINTERS

- GEMINI 10-X DOT MATRIX PRINTER **279.00***
- DELTA 15 DOT MATRIX PRINTER **549.00***
- RADIX 200CPS DOT MATRIX PRINTER **669.00**
- QUADJET COLOR INK-JET PRINTER **595.00***
- TRANSTAR 120 LETTER QUALITY PRINTER **449.00**
- SILVER REED 550 LETTER QUALITY PRINTER **495.00***
- STARWRITER A-10 18CPS LETTER QUALITY PRINTER BEST BUY!! **549.00***
- TOSHIBA 1340 DOT MATRIX AND LETTER QUALITY COMBINED **795.00***
- PROWRITER DOT MATRIX PRINTER **349.00***
- OKI-DATA MICROLINE 92A DOT MATRIX PRINTER **419.00***

PRINTER INTERFACES AND ACCESSORIES

- STANDARD PARALLEL INTERFACE CARD **49.00**
- GRAPHICS PARALLEL INTERFACE CARD **75.00***
- FINGERPRINT PUSH-BUTTON GRAPHICS INTERFACE CARD **119.00**
- PRINT-IT PUSH-BUTTON GRAPHICS INTERFACE CARD **159.00***
- MICROFAZER GENERAL PRINT BUFFER **149.00***
- PRINTER STAND **14.00**

*Denotes new price or item

SPECIAL!!!!
5 Megabyte hard disk
with controller
ONLY 749.00!!!!*

FLOPPY DISK DRIVES

- FOURTH DIMENSION DISK DRIVE **199.00**
- MITAC DISK DRIVE **189.00***
- DISTAR SLIMLINE DISK DRIVE **179.00***
- LASER SLIMLINE DISK DRIVE **174.00***
- STANDARD DISK CONTROLLER CARD **65.00**
- NAV DISK CONTROLLER **59.00***
- DOUBLE-SIDED DISK DRIVE **279.00***
- SMART CONTROLLER FOR DOUBLE-SIDED DRIVES **79.00**

MONITORS

- GORILLA 12-INCH MONITOR, GREEN **98.00**
- SYNCO 12-INCH MONITOR, AMBER **89.00***
- AMDEK COLOR I+ LO-RES COLOR MONITOR **295.00**

MODEMS

- INTERNAL APPLE II 300-BAUD MODEM (WITH SOFTWARE: \$152.00) **109.00**
- PRO-MODEM 1200 **389.00***
- SIGNALMAN MARK XII **279.00**

GRAPHICS DEVICES

- POWER PAD + STARTER KIT **119.00***

VIDEO & DISPLAY EQUIPMENT

- DIGITIZER **299.00***

- B&W CAMERA **195.00**

GAME I/O DEVICES

- TWIN PORT GAME I/O EXTENDER **29.00**
- SINGLE PORT GAME I/O EXTENDER **18.00**
- TG GAME PADDLES **31.00**
- ADAM & EVE GAME PADDLES **29.00**
- SAMPSON JOYSTICK **29.00**
- HAYES MACH II JOYSTICK **37.00**
- HAYES MACH III JOYSTICK **45.00**

SLOT EXPANSION

- 16K RAM CARD **49.00**
- MEMORY MASTER IIE 64K RAM & 80-COLUMN CARD **145.00**
- MEMORY MASTER IIE 128K RAM & 80-COLUMN CARD **195.00**
- MICROTEK II+ 128K VISICALC AND MEMORY EXPANSION **219.00**
- CCS 7710 SERIAL INTERFACE CARD **117.00**
- SERI-ALL SERIAL INTERFACE CARD **149.00**
- 80-COLUMN CARD (VIEWMASTER) WITH SOFT-SWITCH **139.00**
- Z-80 PLUS CARD (CPM FOR APPLE) **115.00**
- FAST Z-80 CARD (APPLICARD) **245.00**
- TIMEMASTER II CLOCK/CALENDAR CARD **109.00**

SPECIAL PERIPHERALS

- EPS EXPANSION KEYBOARD (INCLUDES EXTRA MODULE) **290.00**
- COOLING FAN WITH SURGE PROTECTOR **39.00**

WE CAN SPECIAL ORDER MOST SOFTWARE AT DISCOUNT PRICES

UPS shipping, \$4.00 per order plus \$6.00 per printer or monitor

APPLE II 8 84

FILL OUT THE FORM BELOW TO RECEIVE OUR FREE CATALOG.

NAME: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____
 TELEPHONE: (_____) _____



(202) 363-1313

V ASSOCIATES

6327 WESTERN AVE, NW/WASHINGTON, DC 20015

AN APPLE-ORIENTED TELECOMMUNICATIONS TUTORIAL

by George Kinal

1. INTRODUCTION - Forms of Computer Communications

Usually when the Telecomm SIG sponsors a WAP meeting on the subject, we have some of our illustrious and experienced members give an introduction along the lines of "what telecommunications is good for." I won't do that here, assuming that you have already been motivated to consider equipping your Apple for communications.

I'm dealing here primarily with communications using telephone lines. Many of the same techniques also apply to connecting two computers right next to each other, as well as to communications over radio (usually amateur radio) connections.

Computers communicate with each other using several established sets of "rules of the road," called protocols. Most communication between or to/from large mainframe computers, especially those made by IBM, employs synchronous transmission (you will also hear the terms "Bi-Sync", SNA, and SDLC in this connection). IBM terminal protocols which operate synchronously include the 3270 and 3780 series. If you have a need to make your Apple communicate in such a system, it is possible but expensive; Apple is now selling an interface unit which makes Lisas, Macs, and Apple II's look like a 3780 terminal. The remainder of this article will not have any relevance to synchronous communications, since 95% of microcomputer communications is not synchronous but asynchronous.

I won't attempt to describe what asynchronous means. Suffice it to say that all common interfaces and modems in the personal computer world are asynchronous. Even in this "async" world, though, different protocols can be used for various purposes. When you call up a bulletin board, or The Source or CompuServe, you are operating in what is called "free-wheeling" ASCII. These services can be called using nothing more than a portable "dumb-terminal" such as the Texas Instruments Silent 700. You type a character on the keyboard and it gets sent. The remote computer sends a character and it gets printed on the monitor or on a piece of paper. One commonly used improvement on this approach is the XON-XOFF protocol. You all know how Ctrl-S stops the listing of a program. Well, in most systems, the Ctrl-S is the so-called "XOFF" character, which means "stop sending". The matching "resume sending" character, called "XON", is Ctrl-Q. Then, there is a class of protocols which are used to perform verified file transfer. By file transfer is meant the sending of a disk file on one computer to a disk on the other computer. Verified means that the accuracy of the data is checked on each block, and if it is not perfect, another attempt is made. Verified transfer is not essential for text, but is important for programs, including "binary" files. Ward Christensen developed a protocol, appropriately called the Christensen protocol, which is in widespread use for verified transfer. In fact, in order to download files from CP/M bulletin boards, this protocol must be used. It is also called the "MODEM" or the "XMODEM" protocol, since these are names of the CP/M programs which use it. There are communications programs on the market that use other verified transfer protocols; some of them are better in some ways than Christensen's, but they are all incompatible with one another.

2. "WHAT DO I NEED ?"

Your Apple does not come with a telephone cord/plug (unlike some computers on the market). In order to turn it into a communications machine, you need three things (in general):

- A MODEM
- AN INTERFACE CARD
- COMMUNICATIONS SOFTWARE

I said, "in general." The Apple III, the 16/32 bit Apples, and the new IIc come with serial interfaces already built in; only the IIc, II+, IIe need an interface card. Even that blanket statement has exceptions, because the three elements mentioned can be combined in various ways. The most common exception (sort of) is the kind of modem introduced by Hayes, the Micromodem, which combines the "actual" modem with a built-in interface. Most interface cards have some very rudimentary program included as a firmware ROM on the card, so you can communicate without separate software. Furthermore, a few manufacturers have designed their modems and accompanying software to interface through the game port, so although there is an interface, there is no interface card. Still, you will find that most Apple users with a complete 300 and 1200 baud setup will have all three of the elements I mentioned. Incidentally, you should be careful about compatibility among these three elements. As with most computer-oriented applications, it is generally good advice to choose the software first. Then, be sure that the interface and modem you choose can be accommodated by that software.

3. THE MOST COMMON EXAMPLES

The biggest problem with writing this part is that whatever I say, it will be obsolete within a year. Both the Mac and the IIc are likely to have a big influence on the overall picture of Apple-oriented communications, and will affect software and hardware popularity. The following pertains mostly to the Apple II and III family.

A. Modems

The modem converts the digital signals from the computer into audio tones that can be sent over a telephone line (and, back the other way). The most popular modems fall into three categories:

SINGLE BOARD MODEMS/INTERFACES

D.C. Hayes invented this kind of modem, and the Hayes Micromodem II is still a big seller. It is a 300 baud modem with the usual "smart" features such as dialing, and is usually sold with the Smartcom software package. (A single board modem plugs into one of the Apple II, IIe slots, usually slot #2).

The Novation Apple Cat is functionally very similar to the Micromodem, and does not have a separate "coupler" box outside the computer. All sorts of optional accessories, such as a printer port, tone decoder, BSR controller, telephone handset, etc. are available. This modem operates in the usual 300 baud mode, as well as a half duplex "202 type" 1200 baud (warning - this mode is only useful for communicating with other

contd.

Operant Systems

--- HARDWARE ---

PRINTERS---

Epson FX-80 (160 cps, tractor/single sheet, graphics)...	459
FX-100 (wide carriage version of the above).....	689
RX-80F/T (100 cps tractor/single sheet, graphics) 329	
LQ-1500 (200 cps, fantastic letter-quality mode) 1125	
Okidata 92 (160 cps, graphics, BEST print for price)...	429
93 (132 column version of above).....	665
Toshiba 1340 (144 cps draft, BEST letter-quality matrix)...	799
Texas Instruments TI-835 (150 cps draft, 35 cps NLQ)...	795
IOS Prism-80 (200 cps, color/sheet-feed options avail)...	999
Gemini 10X (120 cps, tractor/single sheet, graphics)...	289
15X (wide-carriage, same features as Epson MX)...	410
C.Itah F-10 Starwriter (40 cps daisywheel, best for \$!) 1049	
A-10 (18 cps version of the above).....	559
Transtar 130 (18 cps daisywheel, Diablo compatible)....	575
120 (14 cps daisywheel, as above).....	415
NEC 7710 (55 cps daisywheel, built like a tank).....	1795
Diablo 620 (25 cps daisywheel).....	839
Quee Sprint 11/40 (40 cps daisywheel).....	1349

MODEMS---

Hayes Micromodem JCe (tone dialing/speaker/Smartcom I)...	239
Smartmodem 300 (300 baud, RS-232, direct-connect) 210	
Smartmodem 1200 (300/1200 baud, as above).....	495
Novation Apple-Cat II (w/ Comware; 1200 baud capable)...	235
Smart-Cat 300 (RS-232, direct-connect).....	175
Smart-Cat 300/1200 (as above).....	389
Microcom ERA 2 (300/1200 baud card with software).....	319
Zoom Telephonics Networker (300 baud card w/software)...	149
US Robotics Password (300/1200 baud, auto-dial/answer)...	335
Anchor Automation Mark 12 (300/1200 baud, RS-232).....	269
Volkmodem (300 baud, RS-232).....	59

DISK DRIVES---

MicroSci A2 drive (100% Apple-compatible Shugart 390)...	235
Rana Systems Elite One drive (40 track, 163K).....	259
Elite Two (40 track, double side, 326K).....	389
Elite Three (80 track, double side, 652K).....	449
TEAC Thinline drive (40 track, 100% Apple compatible)...	259
Davong, Corvus, and Corona Winchester drives..... (call)	

CP/M & 6502C SYSTEMS---

Applicard (6 Mhz Z-80, 64K to 192K RAM, 70-col video)...	249
Microsoft Softcard JCe (Z-80, 80 col & 64K on one card) 325	
Softcard (includes CP/M 2.2 and MBASIC).....	225
DR Gold Card (6 Mhz, 80-col, 64-192K, CP/M 3.0, CBASIC) 345	
ALS CP/M Plus System (6 Mhz Z-80, 64K RAM, CP/M 3.0)...	275
Titan Systems Accelerator JC (3.6 Mhz 6502C processor)...	425
Speed Demon (6502C high-speed coprocessor).....	239

MONITORS---

Amdak 300G (12" green anti-glare screen, 18KHz).....	140
300A (12" amber anti-glare screen, 18KHz).....	155
Color I (40-column text/color graphics).....	289
NEC JB-1201/1205 (green/amber anti-glare screen, 20KHz) 159	
JB-1260 (12" green, 15KHz, best value for money)...	110
USI PI-2 (12" green anti-glare screen, 20 KHz).....	99
PI-3 (12" amber anti-glare screen, 20 KHz).....	99

INTERFACES & BUFFERS & CLOCKS---

Pkaso/U printer interface (superior graphics & more!!)...	129
ShuffleBuffer (32K-128K w/cut & paste/ser and par)..... (call)	
Grappler+ printer interface (parallel w/ graphics)....	120
Buffered Grappler+ (16K to 64K buffer plus graphics)...	169
CP5 Multifunction (serial, parallel, and clock).....	165
Wizard IPI (graphics, text dup, page formatting).....	69
CCS 7710A (RS-232 serial for printers & modems).....	109
Practical Peripherals ProClock (ProDos compatible)....	109

VIDEO & KEYBOARD---

Videx Ultratera (160 column/48 row display !!).....	259
Videoterm (80-column w/ softswitch & inverse).....	209
Wespercorp Wizard-80 (softswitch & inverse built-in)...	155
ALS Smarterm II (80 columns at a bargain price).....	129
MicroSci 80-col card w/64K RAM for JCe.....	125
Keytronic KB-200 low-profile detached keyboard.....	235

MEMORY EXPANSION---

Wespercorp Wizard 16K RAM card (2-yr warranty).....	63
Titan Systems 128K RAM card.....	359

--- SOFTWARE ---

WORD PROCESSING---

Wordstar 9.9 (including 6 Mhz Z-80 Applicard !!!)...	299
ScreenWriter II (70 col display, spooling, more!)...	85
Super-Text Professional.....	115
Bank Street Writer or Speller.....	49
pfs: Write JCe.....	85
Word Writer.....	99
Word Handler + List Handler + Spell Handler.....	109
HomeWord (easy-to-use icon-based system).....	39
Perfect Writer (edit/view multiple files in CP/M)...	175
Incredible Jack (word processing, data base, calc)...	119
Sensible Speller IV (checks ANY file type).....	89
The Word Plus (super spelling checker for CP/M)....	109

SPREADSHEETS & FORTUNE-TELLERS---

Multiplan (state-of-the-art spreadsheet).....	135
FlashCalc (VisiCalc gets a facelift).....	79
SuperCalc 2 (powerful CP/M spreadsheet).....	179

INFORMATION MANAGEMENT---

dBASE II (w/ ZIP screen generator).....	299
Quickcode (dBASE program generator).....	139
The General Manager 2.0.....	149
Thinktank (electronic thought organizer).....	99
pfs: File, Report, or Graph.....	85
Infostar (including 6 Mhz Z-80 Applicard !!!).....	299
Data Perfect.....	99
DB Master 4.0 (latest version).....	229

BUSINESS & ACCOUNTING---

BPI Accounting (AR/AP/PAYROLL/INVENTORY) ea module: 249	
Peachtree Peachpak (GL/AR/AP)..... all three: 229	
Dollars & Sense (home accounting + graphics).....	69
The Accountant (double-entry bookkeeping system)...	99
Home Accountant.....	55

COMMUNICATIONS---

Ascii Express Professional (for DOS 3.3).....	95
Z-term Professional (for CP/M).....	99
Data-Capture JCe.....	65
pfs:Access (basic communications for the JCe).....	49
CompuServe Starter Kit (password & 5 free hours)...	29

LANGUAGES---

Einstein Applesoft Compiler.....	85
Softech UC50 p-System.....	425
Digital Research Pascal/MT+.....	249
Microsoft Fortran-80.....	129
805 C compiler.....	115
Microstation FORTH-79.....	79
Terrapin Logo.....	75

ODDS & ENDS---

Kensington System Saver Fan (w/surge protector)....	66
Kraft Joystick / TG Joystick / Hayes III.....	35/35/40
Trace SoundTrap (silence your printer).....	99
Mockingboard (sound synthesis w/speech option)..... (call)	
Wildcard Plus (hardware-based copy unprotection)...	129
Locksmith 5.0 (... the best gets better!).....	85
KoalaPad Graphics Tablet (with graphics software)...	85
Maxell, Dysan, TDK, Memorex, Wabash disks.....	from 20

CALL FOR PRICES OF ITEMS NOT LISTED

--- Please Compare Our Prices ---
 If you find a lower price, give us a chance to beat it.
 Feel free to call for answers to technical questions.

TO ORDER: Call Jeff Dillon at (301) 434-0405
 or
 Write or visit:

OPERANT SYSTEMS, 7676 New Hampshire Ave, Suite 312
 Langley Park, Md 20783

Md. sales add 5% tax. UPS shipping is available.
 All items carry full manufacturer's warranties.

Apple-Cats and those now extremely rare computer centers that support 202-mode). It also can be used for "Deafnet" communications to connect with the so-called Weitbrecht modem used by the hearing-impaired community. The Apple-Cat comes with a very competent software package called Com-Ware.

Zoom Telephonics has placed on the market an inexpensive (\$129) single-board modem. It seems to be a good way to get started in communications, though the modem does not do the "auto" functions (dialing, answering) that the Hayes and Novation do. It comes with "Networker" software, though the firm encourages buyers to get the more sophisticated Netmaster package for \$50 additional. The advertising for this modem implies that it interfaces with the computer itself just like an Apple Communications Card. Therefore, any software which can be configured for that card can also be used with the Zoom modem. (I have not personally confirmed this to be true, however.)

MICROCOM has just placed on the market a 300/1200 baud single board modem, the ERA 2. Not only does this modem support both 300 and the popular 212-type full duplex 1200 baud, but it also operates using the Microcom Networking Protocol, a verified protocol that is becoming popular in a number of systems. There is some question, though, as to how flexible this modem is for software other than that supplied by Microcon; I was told, for example, that the ERA 2 will not work with CP/M equipped Apples. Still, the retail list of the ERA 2 is less than that of most 300/1200 baud modems plus interface cards.

DUMB MODEMS

Nobody actually calls their modem "dumb," but it's a good distinction to make relative to the "smart" modem. I'm covering here the external modems, connecting to the computer's serial (RS-232C) interface socket. First, there's a slew of simple acoustically coupled modems - the kind that you place your telephone handset into when connection has been made. A lot of criticisms have been leveled against acoustic couplers, but I happen to believe that unless you work in a boiler factory, couplers work pretty well. Some of them, in fact, were designed and built for commercial use, and have excellent circuit designs that perform very well. You can pick these up now surplus or used for under \$50 (sometimes, for under \$10!).

A popular inexpensive dumb 300 baud modem is the Anchor Automation Mark I, or its new successor the Volksmodem. They are going for about \$60.

Then there is a whole slew of what I would call "commercial grade" modems, built by Racal-Vadic, Anderson-Jacobson, UDS, Rixon, Prentice and of course Western Electric. You probably wouldn't want to go out and buy one of these for home use, but for some business applications they are better suited than the "consumer grade" modems, since they tend to be designed for 24-hour-a-day use, and have more sophisticated circuit designs in some cases.

"SMART" MODEMS

There is some controversy as to who invented this kind of modem; recently Hayes agreed to pay BIZCOMP a hefty royalty payment for the idea, but the term "Smartmodem" is copyrighted by Hayes. These modems have built-in microprocessors that interpret sequences of characters sent to them, and act accordingly. Thus, they can be commanded to dial a phone number, to answer a call, to hang up, etc. Hayes makes a Smartmodem (300 baud) and a Smartmodem 1200 (300/1200). No Apple][, //e owner would logically buy the 300 baud version; might as well get the Micromodem instead. A number of similar products have now appeared on the

market, including some with a multi-colored apple on them (actually made by U.S. Robotics, which also sells their own), and the vast majority are "Smartmodem compatible", meaning they respond to the exact same commands as the Hayes products. A big splash was caused by Anchor's announcement of the Mark XII, a 300/1200 modem billed as being functionally identical to the Hayes Smartmodem 1200, but at about half the price. This modem is becoming very popular locally, although some users have experienced inadequate performance. The jury is still out on whether Anchor's cost cutting and rush to introduce the product may have been a mistake.

B. INTERFACE CARDS

(Only Apple][, //e owners need to read this; the Apple][c's two serial interfaces are supposed to be the same as the Apple Super Serial card). For a long time, the demand for serial interface cards was pretty small. Printers used parallel interfaces most often, and almost all Apple owners who wanted to communicate used the Micromodem. That has changed, with the new series of Apple printers, and with lower cost 1200 baud modems. So there are a lot of new cards coming on the market. I can't say much about some of them.

The Apple Super Serial Card took the place of two older Apple products: the Serial card (meant for printers, NOT modems), and the Communications Card. The SSC is a nice product, and has recently been reduced in price from its previously exorbitant \$200 list.

The CCS 7710 continues to be sold (and bought). It is a good card, but comes with an interface wired for a printer; you need a special "crossover cable" to use it with a modem, and every modem is a bit different in exactly how this cable should be wired.

SSM (now Transend) made a serial card (the ASIO), a dual (serial and parallel) card (the AIO), and more recently the AIO-II (pretty much the same as the AIO but with some improvements). They are primarily selling their cards now as part of a package which includes the Transend software. They are much harder to find than the CCS, but are easier for a beginner to hook up to a modem. (Transend also makes both single board and external modems.)

The old Apple Communications card no longer exists in new production, but Taiwanese clones as well as refurbished genuine Apple cards are still available at bargain rates (\$59). They are set up for 300 baud; a wiring modification is necessary to use them at both 300 and 1200. They work very well with the Anchor Mark XII modem; they will not work with some older designs of 212-type modems, for example the Anderson-Jacobson 1233/1259 type.

The MPC AP-SIO has been commended to my attention. It is available at moderate cost (\$90), is very much like the CCS in its circuit design, and can be set up so its connector is correctly wired for a modem.

C. SOFTWARE

Well, without any question the most popular advanced communications software package for the Apple][family is ASCII Express - the Professional, now supplied by United Software Industries. There is very little this package cannot do. It supports the Christensen protocol, and has a built in editor. "AE - Pro" only works under DOS 3.3; comparable products are Z-Term for CP/M, and P-Term for Pascal.

SOFTERM II also supports the Christensen protocol. This is the one product that can deal with DOS, CP/M, and Pascal files. Its single biggest asset, though,

contd.

is that with it your Apple can be made to emulate any one of perhaps a dozen different specific CRT terminals. This is something you might need to communicate properly with a specific mainframe computer.

Data Capture had some popularity a while back, but seems to have lost its following more recently. (It's written in BASIC, so is not suited to 1200 baud).

The Transend series has some very nice features. Transend I is a very simple, basic communications package. Transend II is functionally similar to AE-Pro; its biggest disadvantage perhaps is that the protocol used is not Christensen's, so verified transfer is possible only to another Transend-equipped Apple.

If you have CP/M on your Apple, you really should get the MODEM/XMODEM programs running; the latest version, MODEM 7/30, is on WAP Disk #409. This will allow you to download programs from the various RCPM systems. Some members have a library of hundreds of public domain programs acquired in this way.

If your Apple is used commercially, and your communications involve both other (non-Apple) microcomputers and long distance transfer, you might want to evaluate BLAST (Comm. Research Group, Baton Rouge). The protocol this program uses is not Christensen, but is more efficient, and allows simultaneous transfer in both directions.

COMM-TERM is a very simple communications package that is in WAP Library Disk #44. It's enough to get you started, and does a bit more than the firmware on an interface card. For example, it will receive data and write it out to disk, or it will send out a DOS 3.3 text file.

4. WHAT'S IT ALL GOOD FOR ?; REFERENCES

Well, I said I wouldn't supply motivation here. But I'll list, "for the record," the five major categories of use as I see them:

1. Calling computer bulletin boards, including our own WAP ABBS. This is a great way to have questions answered ("help !"); buy/sell hardware/software; keep up on the latest Apple developments; and download software, text, pictures, etc.
2. Calling the data base services, such as The Source, CompuServe, DIALOG, Dow Jones Information Service. I can't even begin to list all the things you can do on these systems.
3. Communications with other Apples, other microcomputers, word processors, or type-setting services, to exchange programs or text.
4. Dialing in to specific main-frame computers. These computers are those provided by your employer or University, allowing you to work at home, for example.
5. Telecommunications per se. You can now use services such as MCI-Mail, Western Union Easy-Link, and others to send messages, including international telexes. The networks such as Telenet, Tymnet, UNINET, and Graphnet also provide a variety of electronic mail services (as do CompuServe and the SOURCE).

The best selling general reference on microcomputer communications is: "The Complete Handbook of Personal Computer Communications" by A. Glossbrenner, St. Martin's Press. On the other hand, due out shortly is "Joy of Telecommunication" by WAP's own Bill Cook; even if you already have the former book you'll probably want to get Bill's as well.

The following articles in previous WAP magazines may be of interest:

Automatic Dial for Data Capture 4.0	Dec 81
Communication with the Apple II	June 82
The New ABBS	July/Aug 82
Is your Communicating Apple Protected from Lightning Damage ?	Nov 82
Telecomm. SIG News	Dec 82
Electronic Mail with the Apple II	Feb 83
Inside the Micromodem Firmware	May 83
Two Communications Packages: A Review	July 83
Apple II <-> IBM PC Communications	Aug 83
COMM-TERM - A Communications Program	Jan 84
Anchor Mark 12 Modem: A Review	Jan 84
MCI Mail and the Apple II	Jan 84
Softronics Softerm 2: A Review	Feb 84
Interfaces for Anchor Mark 12	Mar 84
Modification of CP/M "Modem"	Mar 84
Transend 2 Review	Mar 84
Comparison of The Source and CompuServe	Mar 84
Further Notes on Serial Comm. Cards	Apr 84
MacIntosh <-> Apple II Transfer	May 84
Anchor Mark 12 Review Update	May 84
Auto Dial, Redial, and Log On	July 84

CAREER OPPORTUNITY

SOFTWARE EVALUATION

KOH SYSTEMS, INC. IS LOOKING FOR 5 EXPERIENCED MICROCOMPUTER PROFESSIONALS WE REQUIRE A MINIMUM OF 2 YEARS EXPERIENCE WORKING ON IBM, APPLE AND/OR TRS-80 OFF-THE-SHELF PACKAGES. IF YOU HAVE EXPERIENCE WITH SPREADSHEETS, DBMS WORD PROCESSORS, COMMUNICATIONS, AND/OR GRAPHICS PACKAGES YOU QUALIFY FOR AN INTERVIEW.

SEND RESUME TO: KOH SYSTEMS, INC.
164 ROLLINS AVENUE
SUITE 301
ROCKVILLE, MD 20852
ATTN: PERSONNEL #404

FEEDING AT THE TROUGH: New Releases from Apple and the PIG by Michael Hartman

I've been up to my ears in Lisa Pascal and the Mac, but I do still occasionally turn on my //e. This time I have news on a number of new Pascal software releases from Apple for both the][and the ///. Apple has introduced a truly phenomenal amount of hardware and software in the past nine months, and many people think the company's mettle will be tested by the effort required to market and support this great a number and diversity of products. Also, the PIG itself has two new library disks which will be available beginning this month. This represents something of a milestone for the PIG, but we cannot continue to expand the Pascal library without your contributions.

Apple Releases Pascal 1.2 for the //

Early this spring, Apple released Apple Pascal version 1.2 for the Apple // family (][,][+, //e, ///c). Since the new features are much as I've discussed here previously, I won't recap them now. But for those of you with 128K //e or ///c machines in need of more space, the final numbers are 39,300 bytes for Pascal code and 44,500 bytes for application program data and assembly language routines. Pascal 1.2 will also support the ProFile hard disk, direct I/O with ProDOS files, and the Apple Mouse. According to the announcement provided to dealers, all those who purchased version 1.1 on or after December 2, 1983 are entitled to a free upgrade. Purchasers of Pascal prior to this date can obtain an upgrade kit for \$75. (My reading of this announcement is that owners of 1.0 who did not upgrade to 1.1 are covered. Much to my surprise, I have recently come across some people in this category.) This special upgrade offer expires September 1, 1984, so act NOW.

Apple is handling the upgrade by mail-order, not through Apple dealers. (Both Apple and the dealers have reasons for doing it this way, but it certainly is an irritation for the customer.) To obtain the upgrade, you must mail the following items:

- (1) Your original APPLE1: disk (others NOT accepted)
- (2) One of the following, according to your Pascal purchase date:
 - (a) A photocopy of your sales slip, proving purchase of Apple Pascal on or after December 2, 1983
 - (b) A check for \$75.00, payable to Apple Computer, Inc.
- (3) Your name and address, including ZIP code

Mail these to this address:

Apple // Pascal Upgrade
P.O. Box 306
Half Moon Bay, CA 94019

Within four to six weeks Apple will mail the following items to you:

- (1) New versions of all four Apple Pascal disks; these will contain both a 64K and a 128K version of the 1.2 release.
- (2) A Pascal 1.2 Update Manual, which describes the new features of version 1.2 and lists the bugs in 1.1 which were fixed.

Shamefully, Apple has not yet produced a 1.2 manual

set, so even new Pascal purchasers will receive six (6!) separate manuals with their 1.2 system (the two main manuals plus four new-release pamphlets). I believe that Apple is finally working on new manuals.

I have spoken to a few people who have already received the upgrade, and they are very happy with the new release. All 1.1 code files execute under version 1.2, with the exception of system files (those named SYSTEM.xxx); these are version-checked to ensure compatibility. This is necessary, though it can cause problems with some current commercial software (but see the discussion on 1.2 and the Advanced System Editor below). Of course, future commercial software will assume you have 1.2, so even if you aren't excited about the many new features and the bug fixes, you should take advantage of the upgrade offer. Remember, it expires this September 1st.

Apple // Pascal and the ProFile

With the release of ProDOS and Pascal 1.2, Apple has made available both the hardware and the software to interface the Apple ProFile hard disk to the][,][+, and //e computers. The Apple // Pascal Profile Manager is supplied with the ProFile accessory kit for the Apple //. With this, you may create and manipulate multiple Pascal volumes on the ProFile (dividing the hard disk space between Pascal and ProDOS as you wish). Several volumes (I believe up to six) may be on-line at once, thus giving you immediate access to all of your utilities and data files. You may also store system files on a ProFile volume, which you can make the Pascal root volume after booting from a floppy disk. As discussed before, this will greatly speed up the operation of Pascal.

The Pascal Profile Manager includes the hard disk device driver and Attach utility, a Volume Manager, an Extended Filer, and a Pascal Backup program. The Volume Manager enables you to create and delete Pascal volumes on the ProFile, and to assign these volumes to specific unit numbers. Once this "mounting" is done, a ProFile volume is treated the same as a floppy disk. The Pascal Backup program allows you to backup and restore selected Pascal files, volumes, or areas on the hard disk. The Extended Filer, which can replace the standard SYSTEM.FILER, includes commands for invoking the Volume Manager and the Backup program.

The device driver on early copies of the ProFile Manager had a bug which prevented its use with the 128K flavor of Pascal 1.2. This has, however, been corrected, and new copies of the product should have the updated driver. If you have the faulty version, an update is available through your dealer. (Many thanks to John Stokes for sharing his knowledge of and experience with this product.)

The Apple Pascal Workbench Series

Apple has recently introduced a new software product line for the Apple // and /// computers, the Apple Workbench. These are software development tools for the DOS, ProDOS, and Pascal operating systems, and include some things which in the past were available only to Apple Certified Developers. The Workbench products are intended for "technically-oriented people", and it is Apple's hope that the products will

contd.

enable all serious software writers to create higher-quality programs. Interestingly, to cut the time and costs involved in issuing these products, they will have generic packaging. (Those fancy covers on your Pascal manuals apparently used quite a bit of both!) The manuals will share the same artwork and layout, and Apple will sell a Workbench loose-leaf binder in which you can organize the separate manuals as you like. Five products for the Apple // and /// Pascal environments have been released or are expected shortly. While your dealer probably won't have all of them in stock, he should be able to obtain them from Apple quickly. The products I am aware of are described below.

Apple // Pascal Device Support Tools:

This includes both the new version of SYSTEM.ATTACH required for Pascal 1.2 and the ProDOS I/O Units. While the SYSTEM.ATTACH used for 1.1 (and available on PIG0:) does not work with 1.2, all of your device drivers will (both your own and those things in the file ATTACH.DRIVERS with commercial add-on hardware). I don't know anything about the ProDOS I/O Units except that they'll make programs like Huffin and Puffin a thing of the past. You'll be able to write Pascal programs to process the data files created by the growing number of ProDOS software packages. (I do not think this product is available yet; but since ATTACH is included with the Profile Manager, I trust we don't have long to wait.)

Apple // Mouse Tool Kit:

This package is something I know very little about, other than that one of the reasons for the late release of 1.2 was difficulty in getting the 128K flavor to handle mouse interrupts. The tool kit is rumored to be fairly low-level routines, doing only things like obtaining the mouse position and button state.

Apple Pascal Numerics (SANE):

SANE is the Standard Apple Numeric Environment. It is available for all Apple computers: the interface remains the same while the implementation changes. (This latter is pure assembly language code, either 6502 or 68000.) SANE provides full support of the proposed IEEE floating-point arithmetic standard (P754), including 16-, 32-, and 64-bit integers; single-, double-, and extended precision floating-point numbers (32, 64, and 80 bits); and a wide range of arithmetic, comparison, trigonometric, exponential, and financial operations. Seventeen-digit accuracy is available. Apple has been a leader in the adoption of the IEEE standard. The Apple /// Pascal compiler (version 1.1) was the first microcomputer compiler to conform to it. SANE is provided as a Unit for the Apple // and ///, whose procedures and functions you call to perform all of your mathematical operations. If you need to do high-precision arithmetic, and find Long Integers inadequate or awkward, this is the package for you. SANE is available now.

Apple /// Pascal Tool Kit:

This is a comprehensive collection of tools, including an enhanced compiler and several powerful utilities. The compiler provides new language features conforming to the ISO standard, additional compiler directives, and much more extensive listing information. The utilities are a source file comparer, a full-featured cross-referencer, a procedure-structure lister, a customizable pretty-printer and syntax checker, a multi-field directory sorter, a user-interface unit, and a virtual-memory simulator for using arrays larger than memory. The compiler and many of the utilities can be used in developing Apple // programs on the ///

(an environment much-liked by those who use it). This tool kit is available both as a separate product and as an upgrade to current Apple /// Pascal owners.

Apple /// Pascal Debugger (Pronto):

Finally, a debugger for an Apple Pascal. It's not quite a symbolic debugger, but it's a start. Pronto allows you to set breakpoints, pause on command, trace execution, and examine variable values. This is accomplished without recompilation, but it is almost mandatory to have a compiler listing at hand. This debugger was developed by First Byte with cooperation from Apple; they have recently released a similar product, Bug-Off, for Apple // Pascal. If you have Bug-Off, you might track down your neighborhood Apple /// developer and look at his Pronto documentation. Bug-Off's is just abysmal.

The Advanced System Editor and Pascal 1.2

As mentioned above, there is a problem with executing Pascal 1.1 SYSTEM.xxx files under version 1.2. The root of this is that various operating system data structures (the SYSCOM and the Globals) have changed in the new release, so most of the old system files simply wouldn't work properly. However, many of us in the PIG own the Advanced System Editor (ASE) from Volition Systems, which is a wonderful replacement for the standard SYSTEM.EDITOR. We, of course, want to use this under 1.2; and it turns out that ASE doesn't reference any of the changed data structures. Thus, all we have to do is convince the new operating system to run it. There are two ways to go about this. The first, suggested by John Stokes, is to rename the ASE SYSTEM.EDITOR to EDITOR.CODE. Then write a small Pascal program (under 1.2) which simply uses the Chain-Stuff Unit to make the call SetChain('Editor'), and rename its code file SYSTEM.EDITOR. Selecting E(dit from the main command line runs this file, which in turn invokes EDITOR.CODE and ASE. This will, naturally enough, execute, since it is no longer regarded as a system file. Voila, a working ASE! The second way, worked out by both Mel Saffren and Arley Dealey of USUS, involves patching the system information contained in the first block of all code files. As documented in Appendix C of the Apple // Pascal Operating System Reference Manual, each code file contains a record SegInfo, which records the code type and system version number of each program segment present. This is where you must play "fool the operating system". Programs to do this are available on MUSUS, the USUS SIG on CompuServe, and further details will be available at the next PIG meeting. (For those of you anxious to do it yourself, the version number of Apple // 1.2 is 5.)

PIG13: The Guerilla Guide

The Guerilla Guide is an epic effort by Bart Thomas, a New Jersey member of USUS (and very recently, WAP). Bart wrote and assembled this material to cover the documentation gaps, "gotchas", and wise pointers he found while learning Pascal and the Apple Pascal system. He also includes some programs he wrote while learning how to use various features of the system. I can recommend this disk very highly to anyone who is starting out with Apple Pascal, and there are several things which might be of use to old-hands. Bart describes the disk as follows:

"The Guerilla Guide to Apple Pascal consists of three text files: Pasint, Pbooks, and Pas2e. The Pasint file is too long for the Apple Pascal Editor, so it is broken into three files Pasint1,2,3.Text so that it can be updated easily. If you have ASE or another editor that can handle the whole file, you can make a file

contd.

that can be printed out easily by copying the 3 files into a "blank" file. The ends of each file are marked with the marker "E" and the header, except for the first file, is skipped by beginning at the "B" marker. Thus into the new file, you would copy "F" and when prompted for the filename enter Pasi# [B,E]. It has been formatted within the Editor (ASE), so that all that is needed is to set up your printer to skip perforations.

"There is a file Printr.Doc.Text that discusses two Epson programs that are included on the disk. One of these, PS.Text, sets the Epson to skip perforations; the other, FF.Text, is handy if you are using a printer buffer to send a form feed before sending another file. If you do not have an Epson, simply use the Epson setup text files as a base to build your own. You will find it very worthwhile, as printing direct from the Filer is MUCH faster than printing through a text formatter. (Of course, we are talking about a Transfer of the file to #6.)

"The group of files at the end of the disk are a simple mailing list handler that will do short form letters that are made up in the p-System editor. Note that the key file is Mailer, and while it can run on the boot disk as System.Startup, it depends on all its textfiles coming from a disk named Mail:. This is designed more to show disk I/O, but it is enough faster than most word-processors so that we actually use it at the office!"

There are also several files which offer excellent examples of handling keyboard input, long integers, and calendar dates. KybdStuff and KybdDemo, which are by Ron De Groat, provide bullet-proofed and range-checked input of decimal and hex integers, real numbers, and characters. LongStuff and Long.Doc are a unit for reading, writing, and "normalizing" Long Integers. The unit supports the embedding of commas for readability and the use of fixed decimal points to produce high-precision real numbers. DateStuff, Dates.Doc, and Coupon form a package for entering calendar dates and computing the separation between them in the context of a bond interest payment issuer.

PIG14: Another Hodge-Podge

We have a real hodge-podge of programs here. Just to be different, almost all of them are from local PIG members. There are utilities for printers and PILOT, for disks and displays, and a small one to check up on your 6502. There is also a graphics program, and even the first game in ages (gasp!). Except where noted, all of these should run on the Apple][,][+, //e, and //c; they should also work under Apple Pascal 1.1 and 1.2, both 64K and 128K flavors. (This is definitely beginning to get complicated.)

PILOTLIST.TEXT - Robert Platt

Bob has donated another program for the computer-aided instruction field, and our first related to the PILOT language system. (The PILOT system is Pascal-based, so this is the appropriate environment for PILOT utilities.) PILOTLIST produces a listing of your lesson with assigned line numbers and generates a cross-reference of all statement labels. This latter capability is not included in the PILOT system. Also, it enables you to make use of PILOT with non-Apple-protocol printer interfaces, since Pascal can support these via ATTACH drivers (this is in fact Bob's situation).

SCREENINFO.TEXT
SCREENUNIT.TEXT
SCREENDemo.TEXT - Michael Hartman

This is a windowing unit for the Apple //e and its 80-column card. SCREENUNIT enables you to set scrolling windows of arbitrary height, width, and position on the text screen. It also provides cursor position reporting, type-ahead buffer stuffing, and inverse characters. The unit was inspired by BIOSSTUFF, which appeared on PIG3:. SCREENINFO is a set of short notes which should enable you to use the routines. SCREENUNIT is the unit itself. SCREENDemo is a not-very-fancy demo which uses all of the procedures in the unit. By transferring this unit to Modula-2 and adding a procedure to stash the current screen state out to disk, it might be possible to do a very nice overlapping-window applications package through the use of co-routines. (I do not know whether SCREENUNIT will work with the //c; it uses somewhat different ROM code for driving the 80-column text display.)

LORES.INFO.TEXT
LORES.UNIT.TEXT
LORES.ASM.TEXT
LORES.ASMI.TEXT
LORES.TEST.TEXT - Michael Hartman

These files compose a double-wide lo-res graphics unit for the Apple //e and //c. The results are a little disappointing when you use an RF modulator connected to a television set, but I bet it's real nice on a monitor. Personally, I've always felt that lo-res graphics were vastly underrated. LORES.INFO is the documentation for the unit. LORES.UNIT is the Pascal host. LORES.ASM and LORES.ASMI are the assembly language source which does all the work. LORES.TEST is another mundane demo which uses all the unit's procedures. (The BASIC double-wide demo in the July 1983 Call-A.P.P.L.E. is pretty nice; the line drawing routine at the end was taken from it.) For those of you with][s and][+s, there is a mostly call-compatible 40-column lo-res unit on PIG2:.

LIFE.INFO.TEXT
LIFE.LORES.TEXT
LIFE.LRASM.TEXT
MACRO.LIB.TEXT - Michael Hartman

Now here's a nice demo for the double-wide lo-res graphics, and it uses the windowing unit to boot! Since the first real program I ever wrote (back in 1971 on a CDC something-or-other) was a Life program, I've always had a soft-spot for the simulation. I don't claim the algorithm is the fastest in the world, but it is the most straightforward. (Now that I have a 68000-based machine...) LIFE.INFO is a short explanation of the program (not of Life itself). LIFE.LORES is the Pascal part of the program. LIFE.LRASM is the assembly language part. MACRO.LIB is my assembly-language macro library, which is used by LIFE.LRASM. As written, LIFE.LORES expects to find LORESGRAPHICS and SCREENUNIT in your SYSTEM.LIBRARY. (What do you mean you don't want to clutter your library up with my units?!)

PRINT.ART.TEXT
PRINT.TEXT - Jerry Crawford

This article and program for printing files on an Epson MX-80 or MX-100 printer appeared in the April 1984 WAP Journal. It allows you to set the number of lines per page, print size and emphasis, and a few other items. Note the sneaky method of telling you that your printer is turned off! To use this program with Graftrax-Plus ROMs, you'll have to add a line to turn off the automatic skip-over-perforation. PRINT will also work on an Apple /// (and /// Plus) as well as on the many varieties of //s.

REG.DUMP.TEXT - Michael Hartman

While I was working on the double-wide lo-res rou-
contd. on pg 39

SPECIALIZED DATA MANAGEMENT

PROGRAMS: Two Reviews

by Bob Oringel

(Food and Money)

The order of precedence in these two reviews is dictated solely by my regard for food over money, as both programs were found to be worthwhile.

The first program that we will examine is Magic Recipe File, by PCS (Peninsula Consulting and Software) of Mountain View, CA. Although I don't normally cook food, I have long felt guilty that my Apple works mostly for me and not for my spouse, who does the family cooking. What then could be better to salve my guilt feelings, than a program which could aid the family member who does the cooking?

Magic Recipe File (MRF) is on a non-copyprotected disk. It begins with a main menu which gives the user the options to: view a previously entered recipe; change that recipe; add or delete a recipe; list recipes by number (3 digit maximum), by name or title; construct, view on screen, or change an index of recipe numbers; reset the number of disk drives used in the system; or to use the print menu functions. The print options are: print one or more recipes by number or name; print listings of recipe names, numbers and titles; print the recipe numbers index.

The user encounters a minor bit of confusion at the outset, because the recipe can have both a name and a title, with the name limited to eight characters in length, while the title may be 30 characters long. Further, the title cannot be used in the program's sorting process, to find a recipe. That function is limited to name and number. The confusion wanes rapidly, however, as the user tries the system. Our family recipes are often more than 8 characters in length, but my spouse also files the name of the person who gave her the recipe, and that name fits the title space admirably.

MRF does indeed perform as advertised. I used the family recipe file to test the program successfully, and I particularly enjoyed salivating while constructing a sample index of foods. The documentation for Magic Recipe File is eight pages in length, plus two appendices. In my estimation, it is clear, concise and well written.

The second program is MEDCLAIMS, by Computerscope Inc. of Matawan, NJ. Its purpose is to control the flow of medical and dental insurance claims that one files with the insurer for collecting payment. A program of this type might be particularly useful to those of us in the metropolitan Washington area who through our connection with the federal government are FEHBA claimants.

MEDCLAIMS uses two disks, a copyprotected program disk, and a files disk, but it utilizes only one disk drive. On the files disk, the program keeps track of: which medical or dental claims are sent to each insurer; the claim amount; the date of medical service; the date that the claim was sent to the insurer; which claims were paid; which are still pending; the amount paid on each claim; the amount of the claim which is applied to a deductible; and whether the claim is to be paid directly, or to the provider of the service.

The program can summarize individual claims and total

family claim records. The main menu permits looking at files, entering claims, entering or deleting payments, and a handy save data and continue, or save data and stop option. Testing of the system using family data proved satisfactory. A print option is offered which permits printing of selected screens if hard copy is needed.

Computerscope Inc. supplies a 10-page documentation for MEDCLAIMS which, like the recipe program above, is also clear, concise and well written. One curious acknowledgement, which terminates the documentation, gives thanks to the author's wife and son, by name, for their help without at the same time naming the author of this excellent program. &

EXPAND YOUR APPLE POWER!!

ROBINS BRINGS THE SMALL USER SUPPLIES AND EQUIPMENT AT A REASONABLE COST.

MACDRIVE by Techmar.

Hard disk for MACINTOSH.
10 megabyte fixed disk and
5 megabyte removable disk
for only \$1675.

PANASONIC PRINTERS

KXP 1090 (80 cps)
KXP 1091 (120 cps)
KXP 1092 (180 cps)

MICRODRIVE II from TDS

FOR APPLE II
single \$219.
w/ controller \$259.
double \$470.
w/ controller \$509.

MAC 3.5" DISKS 4.25 ea.

MAC DISK BOXES 3.50 ea.

MAC DISK FLIP FILES 21.95 ea.
(holds 50)

EPSON Ribbons for MX,RX,FX 80
3.95 ea. reloads 1.95

MICRODRIVE IIC by TDS.

For APPLE IIC.
800% Faster.
100% Compatible.
140 kilobytes per disk.
Single unit only \$252.

Cartridge Ribbon for APPLE
IMAGEWRITER 3.95 reloads 1.95

9 1/2 x 11 Clean Edge Paper
18 and 20# (2700/3000 sheets)
only 28.95 box.

ROBINS



MICRO SUPPLIES
GREAT VOLUME DISCOUNTS!

8304 Hilltop Road
Fairfax, Virginia 22031
(Merrifield Area)
UPS Shipping
FOB Fairfax, VA



MasterCard

560-5900

SOFTVIEWS

by David Morganstein

GUTENBERG JUNIOR. Several months ago, P.K. Wong described the Gutenberg word processors in the WAP Journal. He focused primarily on the Senior version but mentioned the Junior as a low-cost alternative. I had the opportunity of trying out the Junior and I came away with mixed reactions. The Gutenberg is not quite a word processor; it is a typesetting package for use on the Apple. While it provides excellent word processing entry and edit of text, including an 80-column display on the Apple //e, it is aimed at a slightly different target.

My major criticism of the package is its complexity. Gutenberg has many options, most of which are activated by a seemingly never-ending list of embedded commands. To understand these command functions, you must examine demonstration files and compare them with the printed results. Since it is to be used for type-setting, Gutenberg has several built-in character sets. Alternate sets can be loaded into memory and selected using a single key stroke. You may translate one key into its alternate or switch the keyboard over to the entire alternate set for a longer text entry. The program comes with several character sets and includes a utility to create and save your own fonts.

Using keyboard macros, the Gutenberg makes it possible to use one or two keystrokes to enter up to 33 characters. There are three variations of macros. One choice is for use after a return command to be used with left-justified formats. The other two require that you strike the macro character once or twice. A set of macros can be saved to disk using a provided utility. The manual indicates that they can be reloaded for later use, but does not indicate if this is done automatically or manually.

Most word processing programs allow you to embed special commands, or macros, which cause printing to occur in special ways. The Gutenberg programs come with extensive format options to set the page layout, paragraph form, print style and other functions, such as print controls.

You can select from eight macros to set the page layout. Among the options are simple single column, double-spaced drafts; double column, single-spaced story or newsletter articles; and others. Alternatively, you can build your own macros and position titles and page numbers.

Paragraph formatting can be individualized by using blocked paragraphs with adjustable left margins, or by having the paragraphs automatically or manually numbered. Some of the options are useful for letters, form letters, and envelopes.

A novel feature of Gutenberg is that it does windows! It has the ability to move two windows into your text file, or to view two different files simultaneously. With this split screen feature, you can easily copy material from one window to another, just as the Word (from Microsoft) will do on the Macintosh.

The manual is unusual since it comes in machine-readable form; that is, in Gutenberg file format (which is, unfortunately, a non DOS 3.3 format). This no doubt keeps the cost down, but brings up a crucial problem. Since the program is configured to work with only one printer, you must buy the correct version or you can't print the manual. I hope Micromation

changes its policy and includes a copy of the manual with the program. I found the manual's writing style awkward. The documentation doesn't include a summary listing of the edit commands. Recognizing that the user must memorize the various codes for edit operations, other word processing packages provide a summary list or reference card. The manual does contain an extensive list of format and print commands. While they are grouped by function, they are not listed in any obvious order. If you try to perform one of the formatting functions, such as setting column formats or the method of initializing a page, be prepared to search the entire six-page listing.

The print command, list is similar to the format command list. The list is shorter, however, and contains only 36 formats that can be scanned more easily. Apparently, there are more print commands that are not described in the documentation. According to the manual, "It is not in the scope of the Gutenberg Junior Version to list all 115 commands. To obtain the full list of commands and user manual you will have to purchase the Gutenberg Senior Version."

The manual contains 39 pages describing how to use the program and an additional 60 pages of example print and format options and their effects. Unfortunately, there is no index.

If you own an Apple][Plus, you must make a simple hardware change which permits the shift key to function. The change is not necessary if you own a //e, since it has a working shift key. Gutenberg Junior users are told on the inside package that they must make the necessary connection to a][Plus, but the manual does not mention that this change must be made. It took me some time to realize how to get capital letters on my][Plus.

The second hardware requirement is a printer and interface card supported by the package. You must buy the package configured for your printer and select from among a list of interface cards. The Junior can work with any of the following interfaces: the Apple PIC, CPS, Dumpling, Epson-Prometheus, Grappler or Grappler Plus, Microbuffer II Plus, Microengineering, Pkaso, or Apple Super Serial. If you do not have one of these cards, you can expect to experience difficulty printing out your text, even in the unformatted DUMP mode.

Each time the program boots, you must identify your interface card and slot. The request is a serial pass through the list of nine supported cards. While the process is not time consuming, it is annoying. A preferable system, as used by the Senior version, would store this information on the disk and allow the user to modify it.

To get hard copy, while editing, you must issue a Control-P command to leave the editor and run a printing program. After printing, you must re-select the file and re-enter the editor. A more convenient approach would allow you to get a rough draft without leaving the editor.

Gutenberg uses its own disk operating system. While a disk can be copied with the standard Apple DOS 3.3 COPYA program, Gutenberg files cannot be read from DOS 3.3.

contd.

The Gutenberg Junior word processor possesses power for formatting graphical text. The manual contains most of the information a user needs, but is a bit difficult to follow. Regardless of its shortcomings, I must agree with P.K. Wong there is no other word processing package that provides the Gutenberg's unique capabilities. The potential user may want to examine the Senior before selecting one.

Micromation Limited, 1 Yorkdale Road, Suite 406, Toronto, Ontario M6A 3A1. Price: \$85

SARGON III (Dan & Kathe Spracklen). This is the third version of a popular and successful chess playing program. The first version, prepared for the Z-80 microprocessor, established itself in competition as a powerful player. The Spracklen's second effort, Sargon II, was written in 6502 machine code and was interfaced with the Apple, using excellent graphics to display the board and pieces. It also appeared in a stand-alone chess-playing machine using a 6502B chip and running at 2Mhz., twice the speed of the Apple. Sargon III is the most advanced of their efforts and is a truly formidable opponent.

Sargon III can suggest moves, and save games in mid-play for later completion. The package comes with 107 classic games for examination. These can be stepped through for study using a handy replay feature. Sargon III will display the moves it is considering; however, the display is changing so rapidly that only the first couple of moves it is considering can be seen. The screen will flip between one of two displays. You can view either the most recent moves of the game shown in text format or, by hitting the Escape key, you can see the board in high resolution. The program has the ability to give you a text print-out of the current position on the board or of the listing of game moves.

To enter a move, you use algebraic chess notation. The rows of the board are numbered from 1 to 8, starting at the bottom of the screen (usually White's side). The columns are lettered from left to right as A to H. Thus, an opening move advancing the Queen's pawn two squares is entered as D2-D4.

Rated chess players tell me that it is quite a challenge. You can select any of nine levels of play. These are time limited from five seconds per move (level 0) to ten minutes per move (level 8). There is an infinite time limit (level 9) if you want Sargon III to keep looking for the best move. This might be useful for those who play chess by mail. I tried it using a Saturn accelerator card and running it at level 8. I was no competition whatsoever. Both Chess 7.0 and Sargon III think while you think, a feature which dramatically improves playing "skill". Whenever you select a move the evaluation algorithm expected, the program is one step ahead of you!!

Since computers have good memories, you might suppose that a chess-playing program could "recall" a few good opening sequences. Sargon has an incredible "opening book" of 68,000 positions. If you remain "in the book", Sargon III will move automatically without having to reevaluate the position.

The 79 page manual begins with a review of Chess rules and describes the algebraic notation for entering moves. It then summarizes the special features of Sargon III. The last sections contain short descriptions of the Great Games and Chess problems included on the disk.

Sargon III is not particularly suited for teaching chess. By comparison, Chess 7.0 allows the novice learner to see all the possible moves a piece might

make, as well as display all pieces attacking or defending a square. These options would facilitate learning the game, but their lack in no way diminishes Sargon III. If you are familiar with the rules, you will find a good challenge in Sargon III. Hayden Software, 600 Suffolk St., Lowell, MA., 01853. Price: \$49.95

MICRO TSP (David Lillien). This package provides regression based tools for modeling and forecasting time series. The tools are four varieties of multiple linear regression (one dependent variable): ordinary least squares (OLSQ), first-order autoregressive correction of OLSQ (the Cochrane-Orcut method), and two-stage least squares with and without the autoregressive correction. Each of these four regression techniques is executed by a command which produces a table of the coefficients with their standard errors and t-statistics and some summary statistics such as the adjusted R-squared, standard error of the regression and the Durbin-Watson statistic. Micro-TSP remembers the coefficients from the most recent regression and uses them in the command which automatically generates forecasts over a user specified period. The only other statistical command provides summary statistics, including a covariance matrix, for a group of series.

Several time series can be plotted simultaneously versus time by typing the command PLOT followed by a list of series names. PLOT(N) produces normalized plots of time series (subtract mean and divide by standard deviation of the series). A plot of the residuals from the most recent regression can be obtained by simply typing PLOT(R). Scatterplots of one series versus another can be obtained from the GRAPH command. PLOT and GRAPH produce high resolution graphics on the Apple but require a color/graphics monitor adaptor for the IBM PC.

Micro-TSP is easy to use and well suited for handling time series of up to several hundred observations each. We have several minor criticisms which could be corrected in future versions. The requirement that the user describe the time dimension of data in a file before the file can be loaded is unforgivable, especially since there is no way to obtain the information from within the package, although it is stored at the beginning of the file itself. Next, although the workfile feature provides a quick way to save all time series currently in RAM under one file name (a handy method for interrupting your work), Micro-TSP has two sets of file handling commands: one for the time series in the workfile and one for the series on disks. Why not have just one set of commands with a consistent, single letter parameter to reference the disk?

The manual provides a good introduction on how to use two of the four regression types in three chapters featuring several case studies of actual problems and real data. The other two types are described briefly but not illustrated. The print and binding are not of the quality expected for the price from a major publisher of statistics textbooks. McGraw-Hill, Princeton Rd. Hightstown, NJ 08520 Phone: (609) 426-5000 Price: \$295.

A PERMUTATION GENERATOR IN LISP

by Bill Wurzel

First of all, it's not easy to write programs here in the Philippines. Oh, the physical environment is fine - plenty of reliable 110v/60Hz power and fine air conditioning. The problem is the many interesting places to see and things to do that compete with the Apple keyboard for your time. This really is a beautiful and fascinating part of the world...

Anyway, I was trying to figure out some anagrams the other day (you know, words with the letters all scrambled up) and decided it would be more fun to write a program to generate the solution. All you have to do is rearrange the letters in every possible configuration and the answer has to be in there somewhere.

Stated more formally, then, what I wanted to do is generate the set of all permutations of n objects, where, in this case, the n objects are letters of the alphabet. There is at least one straightforward way to do this. Consider a function PERMUTE(). If n=1, then

```
PERMUTE (A) = (A)
```

If n=2, then

```
PERMUTE (A B) = ((B A) (A B))
```

If n=3, then

```
PERMUTE (A B C) = ((C B A) (B C A) (B A C)
                  (C A B) (A C B) (A B C))
```

Notice that in the last case above, the set is formed by taking the third element (C) and "marching it through" each permutation of the n=2 case: take the first n=2 permutation (B A) and generate the first line of n=3 by placing the C in the first position - (C B A), then in the second position - (B C A), then in the third position - (B A C). Do the same thing for the second n=2 permutation and you've generated the n=3 set. To generate the n=4 set, take the fourth element (D) and "march it through" each of the n=3 permutations like this:

```
PERMUTE (A B C D) =
((D C B A) (C D B A) (C B D A) (C B A D)
 (D B C A) (B D C A) (B C D A) (B C A D)
 (D B A C) (B D A C) (B A D C) (B A C D)
 (D C A B) (C D A B) (C A D B) (C A B D)
 (D A C B) (A D C B) (A C D B) (A C B D)
 (D A B C) (A D B C) (A B D C) (A B C D))
```

We also see that, although somewhat trivial, the n=2 case can be generated in the same fashion from the single n=1 permutation.

Considering the recursive nature of the algorithm and the need for dynamic data structures, the programming language LISP is probably a good choice. I use the Microsoft CP/M version, muLISP, written by Rich and Stoutemeyer. The principal differences between muLISP and INTERLISP/MACLISP are:

1. The implied COND. Consider the body of a muLISP function to be composed of a list of tasks. Then if the CAAR of the task is atomic, then the CAR of the task is interpreted as a predicate, which is evaluated. If it evaluates to non-NIL, then the function body is replaced by the CDR of the task. Otherwise, the value of the task is NIL.

2. The LOOP construct. If a function body is enclosed within a LOOP construct, it is repeatedly evaluated until some predicate evaluates to non-NIL. The LOOP construct then returns the value of the function body which follows the non-NIL predicate.

3. Implicit local variables. If there are more arguments in a function's formal argument list than there are arguments in the call to the function, these extra arguments are bound to NIL and may be used as local variables.

Features 2 and 3, taken together, eliminate the need for the unaesthetic PROG construct, and it is not supported in muLISP.

Now, back to the problem. We will represent an individual permutation of n objects as a list of those objects. We wish to develop a function PERM which will accept a list of objects and return the list of all possible permutations of these objects. If the number of objects of the list input to PERM is one, it should return the list of that one object. Otherwise, it should return the list formed by "marching" the CAR of the input list through each permutation of the CDR of the input list. From this definition, we see that we need some way of generating a list by applying a function to each element of another list. This function should do it:

```
(DEFUN MAPLC (LAMBDA (LST FUN OBJ)
  ((NULL LST)NIL)
  (APPEND (FUN OBJ (CAR LST)) (MAPLC (CDR LST)
    FUN OBJ))))
```

Now we can write the function PERM from the definition:

```
(DEFUN PERM (LAMBDA (L1)
  ((EQ (LENGTH L1) 1) (LIST L1))
  (MAPLC (PERM (CDR L1)) DIST (CAR L1))))
```

All we need to do now is define the function DIST which takes some object OBJ and "marches it through" some list L1. For example,

```
(DIST D (A B C) ==
  ((D A B C) (A D B C) (A B D C) (A B C D))
```

One easy way to do this is CONS up a list of lists, each formed by sandwiching OBJ between two other lists, L2 and L1. Originally L2 is empty and L1 is the original list. Then we pop off the CAR of L1, APPEND it to L2 and sandwich again. This is repeated until there is nothing left in L1:

```
(DEFUN DIST (LAMBDA (OBJ L1 L2 L3)
  (LOOP
    (SETQ L3 (CONS (APPEND
      (APPEND (REVERSE L2) (LIST
        OBJ)) L1) L3))
    ((NULL L1) L3)
    (PUSH (POP L1) L2))))
```

Now all we need is a routine to print out the list of permutations. For ease of scanning, we'll print one permutation per line and pause after each 20, waiting for a carriage return to continue:

contd. on pg 39

UPDATE OF AUTO-REPEAT DIALING FOR THE MARK 12 by George Kinal

Well, old man Murphy must be maintaining his alliance with the ABBS, because shortly after my piece on how to set up an auto-dial macro in AE-Pro for the Mark 12 modem was printed (WAP May 1984), the WAP ABBS was revised, and the published macro ceased to work.

Here is a revised group of macros. Refer to the May article for explanation of the various symbols, etc. This new set beeps each time it redials, but is otherwise pretty much the same.

```
MACRO #1:
*\EH G**AT DT 9868085''YC2\LI
```

```
MACRO #2:
*TR1* G G G* G G G G**''*****WP9999.PSWD'\L3
```

```
MACRO #3:
*\EF
```

I had to use three linked macros, rather than only two, because the combined macro (#2 and #3 together in one string) gave incorrect results for some reason. As before, to begin auto-repeat dialing just enter Ctrl-W 1 from the terminal mode.

The sign-on sequence starting with *****WP9999.PSWD etc. can easily be modified for sign-on to any bulletin board or system. The third Macro simply restores the machine to full-duplex operation (half duplex is temporarily set by the \EH command in order that the Ctrl-Gs (G) create beeps from the Apple speaker).

Feeding at the Trough contd. from pg 34

times, I discovered a small bug in the Apple Pascal assembler. To help me to determine that it really wasn't my fault, I wrote this assembly language routine for printing the contents of the 6502 registers. Each time REG.DUMP is called, it prints a line with the values of the A, X, Y, and P (Status) registers in that order. Note that the register state is preserved. This routine directly accesses your printer interface card registers, but it will work with all parallel cards recognized by the Pascal BIOS. What I'd really like to see is someone find the table of device driver addresses so that I could do Unit I/O to all devices from assembly language. (Any takers?)

COPY.TEXT - Tren Ward

Do you have a one-drive system? Do you not back up as often as you should in order to avoid getting swapper's wrist? Well, this program is for you. COPY is a stand-alone utility to replace doing a T(ransfer in the Filer. The advantage is that only four disk swaps are required instead of twelve. Tren reports that the total copying time is also cut by a factor of three, from six minutes to two. The reduced number of swaps is possible because the Filer is a large program, while COPY is small and leaves most of memory free for buffering disk data.

LANDER.TEXT - Rosenthal

This is an all-text version of the early-classic lunar lander game. Use paddle 0 to control your vertical thrust, paddle 1 for your horizontal. Each game starts with random altitude and velocities. LANDER is not much more complicated than the version for my HP-25 calculator, but the status displays are handled very nicely. This would make a good starting point for a program including graphics, or you can just see how the text screen is updated. LANDER is from the San Antonio Appleseed User Group and reached PIG via an exchange with the Dallas Apple Corps/Fort Worth Apple User Group. (One of the first and best versions of lunar lander ran on a PDP-8 with a round display screen and a light pen. If you landed close to the target spot, you were able to get out and walk to the McDonald's there for a hamburger. If you landed ON the golden arches, you were reprimanded "You idiot, you just demolished the only McDonald's on the Moon!")

Permutation Generator contd. from pg 38

```
(DEFUN PRINP (LAMBDA (LST PERM1 LCTR)
  (SETQ LCTR 0)
  (LOOP
    ((NULL LST))
    ( ((EQ (REMAINDER LCTR 20) 0)
      (READCH)
      (SETQ LCTR 0) ) )
    (SETQ LCTR (PLUS LCTR 1))
    (SETQ PERM1 (POP LST))
    (LOOP
      ((NULL PERM1) (TERPRI))
      (PRIN1 (POP PERM1))))))
```

Finally, we pull it all together in the function PERMUTE:

```
(DEFUN PERMUTE (LAMBDA NIL
  (LOOP
    (SETQ INLIS (READ))
    ((NULL INLIS))
    (PRINP (REVERSE (PERM (UNPACK INLIS))))))
```

That's it! A permutation generator for sets of n objects where n is limited only by RAM size and your patience! It took about 42 seconds to generate all the permutations for a word of six letters. I can't wait to see how fast it will execute on a Mac!

And you Forth buffs out there! How about coding this routine in Forth? The easiest way to do recursion in Forth is to SMUDGE during compilation of the recursion word - make the SMUDGE immediate!

(Ed. Note: Please clean up your act!)

APPLE WRITER II PRINTER COMMANDS GLOSSARY

by A. R. Rumble

Apple Writer II users can use a shortcut way to imbed printer commands in text by having a glossary of such commands, each command beginning and ending with Control V. You can take a leaf from Apple Writer itself when you choose the single ("key") character (to follow Control G) for each different command. Choose this character so that it will be easy to associate with a particular printer command. Table 1 shows my own choice of "key" characters and the corresponding commands. Since 10, 12, and 17 (characters/in.) are two digits, they were shortened by dropping the 1. Likewise the .5 in 8.5. If your printer does not accept commands the same as those shown in Table 1, or if you prefer a different choice of key characters, then compile your own index of key characters in the format of Table 1. Once you have done this you are ready to create the glossary.

The glossary itself is created by following the instructions in the Apple Writer manual. After you type the first "key" letter, you type an initial Ctrl-V, then the command, and end with another Ctrl-V. What you put between the initial and final Ctrl-V will depend on your printer and interface card. I have Prowriter and a Pkaso NE12 card. My first three entries, in creating the glossary, would look like this, except that no spaces would be put in. I put them in here for readability.

```
A Ctrl V Ctrl I M$ Ctrl V
B Ctrl V Ctrl I M! Ctrl V
b Ctrl V Ctrl I 34M Ctrl V
```

After typing the whole glossary as above, you save it in the usual manner, using the name "prtr cmds glossary" or whatever you like. Whenever you may want to use it, you load it using Ctrl-Q5. A reference copy of Table 1 (or your own glossary index) printed on a 8 1/2 inch sheet is handy for your notebook. In the table, Def. (default) is what you get when printer power is turned on.

Another handy reference page, if you have a printer which has alternate character sets (additional to the standard ASCII set), is a table of Printer Alternate Character Sets. My Prowriter (and I believe the NEC PC-8023A and Apple DMP) has these. These characters are shown in Table 2. Suppose you desire to print a Greek pi. You first set the printer to the Greek character set as indicated in the NOTES below the table. Then a look at the table shows you that you must press the slash key to print pi. If you do not wish to print any other characters from the Greek character set, you get back into the ASCII character set as indicated in the NOTES. Bert Morris presented, in the January 1984 Apple PI, the data of Table 2 in a different form. The LISTING is for a program which, when RUN, will print Table 2, which is in columns, which I find easier to use. Or you can xerox Table 2. As Bert pointed out, there is no SPACE in either of these two alternate character sets, so if you need to make a space you have to shift back into ASCII to make one (or more).

If there are more characters you'd like to use than are available in your printer there are ways to make them available. Pkaso interface cards come with a demo disk containing what they call Superfont characters and a program for incorporating them into an Apple Writer II glossary, or you can expand your printer commands glossary to include them, calling it,

say, a master glossary. The superfont glossary has subscripts and more math symbols. There are means to make up your own characters, say a personal logo. I personally am not familiar with other interface cards but would expect that some have similar capabilities.

In composing the LISTING, which will print out Table 2, I hoped to make it more universal by using Prowriter CHR\$() commands rather than my Pkaso printer commands. I ran into one difficulty. The printer command CHR\$(9) for "move to next tab stop" is intercepted normally by Pkaso as its lead-in character. This was disabled as indicated in the note below the listing.

LISTING

```
10 PR# 1
12 PRINT
15 POKE 1145,255
20 C$ = CHR$(48):E$ = CHR$(27):T$ = CHR$(9):
   U$ = CHR$(88):V$ = CHR$(89)
30 PRINT E$; CHR$(78);E$; CHR$(76)"009";
40 PRINT "TABLE 2.": PRINT
50 PRINT E$; CHR$(69); CHR$(14);
60 PRINT E$; CHR$(76)"013";
70 PRINT "PROWRITER"
80 PRINT E$; CHR$(76)"005";
90 PRINT "ALTERNATE CHARACTER SETS": PRINT
   CHR$(15):: PRINT E$; CHR$(76)"000";
100 PRINT E$;C$:: PRINT
   E$;"(009,015,025,036,042,052."
110 FOR I = 1 TO 2
120 PRINT T$;E$;U$:: PRINT "TO          PRINT";:
   PRINT E$;V$;
130 PRINT T$;E$;U$:: PRINT " TYPE";: PRINT E$;V$;
140 NEXT I
150 PRINT : PRINT
160 FOR J = 1 TO 2
170 PRINT T$:: PRINT "GREEK";
180 PRINT T$:: PRINT " GRAPHICS";
190 PRINT T$:: PRINT "(ASCII)";
200 NEXT J
210 PRINT E$; CHR$(78)
220 PRINT E$;C$;E$;"(010,016,023,033,039,046.";
230 FOR D = 32 TO 61:E = D + 30
240 FOR K = 1 TO 2
250 PRINT T$;E$; CHR$(38):: ON K GOSUB 370,380
260 PRINT T$;E$; CHR$(35):: ON K GOSUB 370,380
270 PRINT T$;E$; CHR$(36):: ON K GOSUB 370,390
280 NEXT K
290 NEXT D
300 PRINT : PRINT E$;C$
310 PRINT E$; CHR$(76)"007";
320 PRINT "NOTES: TO USE THE ABOVE TABLE, FIRST SET "
322 PRINT "PRINTER TO DESIRED CHAR SET, GREEK OR"
324 PRINT "GRAPHICS, WITH CMD PRINT
   CHR$(27);CHR$(38)"
326 PRINT "OR CHR$(27);CHR$(35); .IF IN APPLEWRITER"
328 PRINT "II AND PRTR CMDS GLOSSARY IS LOADED, TYPE"
330 PRINT "CTRL GG OR CTRL G": PRINT CHR$(103)::
   PRINT " RESPECTIVELY. THE"
332 PRINT "FIRST ENTRY IN ASCII COLUMN IS A"
334 PRINT "SPACE, I.E. PRESS SPACE BAR. THE LAST"
336 PRINT "13 CHARS IN GREEK CHAR SET ARE"
338 PRINT "SUPERSCRIPTS. TO RETURN TO ASCII SET USE"
340 PRINT "CHR$(27);CHR$(36) OR (GLOSSARY) CTRL GA ."
350 PRINT E$; CHR$(76)"000";
360 END
370 PRINT CHR$(D):: RETURN
380 PRINT CHR$(E):: RETURN
```

390 PRINT CHR\$(E): RETURN
400 END

TABLE 2.

PROWRITER
ALTERNATE CHARACTER SETS

TO PRINT TYPE			TO PRINT TYPE		
GREEK	GRAPHICS (ASCII)		GREEK	GRAPHICS (ASCII)	
α	-	!	↓	∟	>
β	-	!"	∩	∩	?@
γ	-	!"#	↑	=	A
δ	■	!#"	↓	≠	B
ε	■	!#"%	+	≠	C
ς	■	!#"%	+	≠	D
η	■	!#"&	±	≠	E
θ	■	!#"’	*	≠	F
ι		(∫	≠	G
κ)	∫	≠	H
λ		*	≈	◆	I
μ		+	.	◆	J
ν	■	,	⊕	◆	K
ξ	■	-	⊕	◆	L
ο	■	.	∴	●	M
π	+	/	½	○	N
ρ	±	0	¼	∕	O
σ	τ	1	0	∕	P
τ	↓	2	1	X	Q
υ	↓	3	2	-	R
φ	-	4	3		S
χ	-	5	4	±	T
ψ		6	5	-	U
ω		7	6	↓	V
Δ	r	8	7	↓	W
Γ	r	9	8	+	X
Σ	L	:	9		Y
Λ	J		(Z
Ω	/	<)		[
ϕ	∩	=	+		

Table 1.

PRINTER COMMANDS GLOSSARY INDEX.

Key Prtr Cmd (Def: when prtr powered up)

- A ASCII Char Set. Def.
- B Bold Print. (or enhanced)
- b End bold print. Def.
- D Bidirectional printing. Def.
- d Unidirectional printing
- F Forward line feed direction. Def.
- f Reverse line feed direction.
- G Greek Char Set.
- g Graphics Char Set.
- I Incremental Print Mode.
- L Logic-Seek Print Mode. Def.
- l Line Feed (in incremental)
- T Tab to next stop.
- t Clear all tab stops. Def.
- U Begin Underlining.
- u End underlining. Def.
- V 6 Lines/in (vertically). Def.
- v 8 Lines/in (vertically)
- 5 5 Chars/in (horizontally).
- 6 6 Chars/in (horiz).
- 8 8.5 Chars/in (horiz)
- 0 10 Chars/in (horiz). Def.
- 2 12 Chars/in (horiz).
- 7 17 Chars/in (horiz).

NOTES: TO USE THE ABOVE TABLE, FIRST SET PRINTER TO DESIRED CHAR SET, GREEK OR GRAPHICS, WITH CMD PRINT CHR\$(27);CHR\$(38) OR CHR\$(27);CHR\$(35); .IF IN APPLEWRITER II AND PRTR CMDS GLOSSARY IS LOADED, TYPE CTRL GG OR CTRL Gg RESPECTIVELY. THE FIRST ENTRY IN ASCII COLUMN IS A SPACE, I.E. PRESS SPACE BAR. THE LAST 13 CHARS IN GREEK CHAR SET ARE SUPERSCRIPTS. TO RETURN TO ASCII SET USE CHR\$(27);CHR\$(36) OR (GLOSSARY) CTRL GA .

6

SOFTWARE FROM

ais

microsystems

Division of ADVANCED INVESTMENT STRATEGIES, Inc.

1007 Massachusetts Av. N.E. Washington, D.C. 20002

40% Tax Bracket / 14% Interest ??

Don't miss out on opportunities to improve your after-tax cash position. These packages help you analyze the long term after-tax effect of refinancing mortgages (home or investment) and of investing in so-called "tax shelters." If you own VisiCalc or Lotus 1-2-3, can you afford not to have them? TAX DEDUCTIBLE!

MORTGAGE SWITCH CALCULATOR (tm) use with Lotus 1-2-3 or VisiCalc
Save thousands! Compares true cost of substituting new mortgage for old!

[] Apple II+ or IIe [] IBM/PC or XT \$65.00 (Includes Audio Cassette Intro.)
[] Apple Macintosh - REQUIRES MultiPlan \$65.00

INVESTMENT TAX ANALYST (tm) use with VisiCalc/Lotus (specify which)
Analyze tax impact of tax shelters/investments for five years or more!

[] Apple II+ or IIe [] IBM/PC or XT \$150.00 [] Audio Cassette Intro. \$25.00

For orders and info:
800-345-8112 ext 200
(PA. 800-662-2444)

APPLE TRACKS

by Richard Langston | |

This month, I am presenting a program that is intended to make DOS 3.3 easier to use, by allowing users to customize it to meet their needs and desires. It allows users to choose several useful (and some use-less) modifications to DOS 3.3.

USING DOS DOCTOR

Using DOS DOCTOR is very simple. The first time it is run, it should be run using the D\$=CHR\$(4): GOTO 20 command. Then, use option five and enter the location of the disk drives in the system.

Select each of the options desired from the menu and then use option four and respond yes to the question prompt. If it is run on a one drive system, DOS Doctor will prompt the user to remove the DOS Doctor disk and insert the blank one. All the changes made using Dos Doctor are saved when a disk is initialized.

Increase Disk Space

This option increases the space on a disk by eleven sectors. It does this by moving the directory track from track \$11 (17) to track 2, filling the eleven sectors on track 2 which had been marked as used but were actually blank. The only drawback of this is that it reduces the number of files in the directory to a maximum of 77. It also does not work well with Diversi-DOS.

Increase Disk Speed

This option increases the speed of all disk I/O (input/output) by about one half. It works by changing the order in which sectors are stored on a diskette. Normally, DOS 3.3 offsets the sectors on a disk by a factor of three. This is done in order to decrease the time it takes for DOS to read and write data. However, the sectors are not quite far enough apart. As a result, DOS reads the data from the first requested sector, copies it into memory, moves it to the required place, and then goes back to read the next sector. By the time it does, however, the needed sector has passed under the head and must go all the way around again.

Using DOS Doctor, the sector offset is increased to 11. This allows DOS to perform all necessary work before the next sector is reached. The only fault of this offset lies in saving previously existing files. DOS must first read, and then write, data to the same sector. This process slows down I/O considerably. To avoid this problem, DOS Doctor checks for write operations, and then skips the unneeded read if one is found.

Additional Functions

This section contains a mixed bag of options. ESC/CATALOG causes DOS to check for an ESC character after displaying a page of the catalog. If ESC has been pressed, DOS exits to Applesoft. If it has not been pressed, DOS waits for a keypress and displays the next page of the catalog. Remove catalog pauses will do just that - display all of the files in the catalog without waiting for a keypress.

The avoid-reload-of-RAMcard routine cures one of DOS 3.3 greatest pains, that of having to reload Integer Basic onto the RAMcard every time DOS is rebooted with

the PR# command. This option stops DOS from erasing the first byte of the RAMcard, which is used as a marker to determine if Integer Basic is on the card.

The next two options, BRUN and EXEC Hello file, add the option of BRUNing or EXECing the Hello file of a disk. To use this option, just select it and then copy the machine language program or DOS text file from another disk.

Status

This selection will show the user the status of several of the program options. After displaying the status information, the program will prompt:

"Initilize disk ?"

This is the way changes in the operating system made by Dos Doctor are saved. Responding yes to this will cause Dos Doctor to ask for a file name, and then it will prompt the user to swap disks, if necessary.

Change System Set-up

This option will allow the user to enter the location in the system and the number of disk drives in the system. Just enter the information, and it will be saved to disk as a text file.

Change Catalog Format

This section allows the "Disk Volume" message to be changed to any text desired, and it also allows the user to change the characters used to show file type in the Catalog. The disk volume message can include linefeeds, bells, and carriage returns, and should be entered as shown in the program. For instance, entering a "@" will cause a carriage return to be displayed in the Disk Volume message.

This program has seen countless revisions, and it was originally written in two modules. These facts account for the disorganization and odd techniques used in this program.

For \$3.00, a diskette, and return postage, I would be happy to copy this program for you, thus eliminating the need for you to type it all in. Please send requests to: 602 Paradise Ct, Gaithersburg, MD 20877.

```
10 NORMAL : GOSUB 800
20 TEXT : HOME : VTAB 1: PRINT
   -----":
   VTAB 6: PRINT
   -----":
   VTAB 2: PRINT TAB( 13)" DOS DOCTOR ": VTAB 3:
   PRINT TAB( 19)"BY": VTAB 4: PRINT TAB
   ( 12)"RICHARD LANGSTON"
30 POKE 34,7
40 VTAB 8: PRINT TAB( 16)"MAIN MENU"
50 VTAB 10: PRINT " 1. INCREASE DISK SPACE "
60 VTAB 12: PRINT " 2. INCREASE DISK READ/WRITE
   SPEED
70 VTAB 14: PRINT " 3. ADDITIONAL FUNCTIONS
80 VTAB 16: PRINT " 4. STATUS/FORMAT DISK
90 VTAB 18: PRINT " 5. CHANGE SYSTEM
   CONFIGURATION
100 VTAB 20: PRINT " 6. CHANGE CATALOG FORMAT"
150 VTAB 23: INPUT "ENTER YOUR CHOICE--> ";A$
160 A = INT ( VAL ( A$))
```

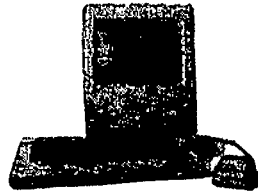
contd.

Computer Specials

APPLE IIe™

\$?????
ON SALE NOW
CALL FOR PRICE
LIMITED STOCK

APPLE MACINTOSH™



\$2,450
10 DAY BACKLOG ON MAC

APPLE IIc™

\$?????
ON SALE NOW
CALL FOR PRICE
LIMITED STOCK

COMPUTER HARDWARE

<p>• MODEMS</p> <p>H. Micromodem IIe, II+ \$269 Anchor — MK XII \$399 Hayes S/M — 300 \$225 Apple Cat II \$269 Smart Model 1200 — Hayes \$525</p>		<p>• PRINTERS</p> <p>Panasonic 1091 Call Epson FX 80 (160 cps) Call Epson RX80 Call Gemini 15 Call Okidata 92P \$429 Epson FX100 (160 cps) Call</p>		<p>• PRINTERS</p> <p>Gemini 15X — 120 cps Call Grappler + (No Buffer) \$130 Par. Interface \$79 Grappler + 16K Buffer \$199 Okidata 93P \$729</p>	
<p>• SOFTWARE</p> <p>Zaxon \$32 Master Type \$32 Multiplan \$189 One-On-One \$34 Sensible Speller \$99 Ascii Pro \$109 Koala Pad \$99 Flight Sim II \$43 Flip n' File — 5¼" \$19</p>		<p>• ACCESSORIES</p> <p>System Saver \$69 Applicard + Wordstar \$599 16K RAM Card (M/Soft) \$78 Computer Desk \$125 80 col. crd. (Videx) \$250 Micro-Buffer II — 16 K \$179 Comp. Paper (9½ x 11) \$19 Kraft Joystick \$49</p>		<p>• PRINTERS (Ltr. Qual.)</p> <p>Gemini Prototype Call Silver Reed — Exp 550 \$599 F-10 (35 cps) \$1,195</p>	
				<p>• MONITORS</p> <p>Monitor — Grn 12" \$99 Monitor — Amber 12" \$125 AMDEK 300G — Grn \$159 AMDEK 300A — Amber \$165 Color 1 13" (AMDEK) \$299</p>	

\$ **THE MICRO CONNECTION MONEY SAVING COUPON** \$

\$ 5.00 OFF ANY PURCHASE OVER \$ 50.00

\$10.00 OFF ANY PURCHASE OVER \$100.00

• Limit one coupon per person • Limit one coupon per sale
• Coupon valid thru 10-31-84

\$ **THE MICRO CONNECTION MONEY SAVING COUPON** \$

— CALL FOR OTHER SPECIALS —

4 FRIENDLY LOCATIONS TO SERVE YOU

Store Hours: 10 AM to 6 PM Monday thru Saturday

DON'T OVERPAY — CALL THE DISCOUNTERS AT:

THE MICRO CONNECTION, INC.

320-A MAPLE AVENUE, EAST
VIENNA, VA 22180
281-1866

6192 FRANCONIA RD.
ALEXANDRIA, VA 22310
971-5800

8228 FENTON STREET
SILVER SPRING, MD 20910
495-5960

11523 SUNRISE VALLEY DR.
RESTON, VA 22091
860-1702

```

170 IF A < 1 OR A > 6 THEN 150
180 ON A GOTO 200,300,400,500,600,700
200 HOME
202 PRINT : PRINT " THIS ROUTINE WILL ADD 15 SECTORS
TO ANAPPLE DISK BY MOVING THE CATALOG FROM TRACK
17 TO THE SPACE ON TRACK 2 THAT IS MARKED USED
BUT IS, IN FACT, EMPTY.": PRINT
210 INPUT "SURE YOU WANT TO INSTALL THIS ROUTINE?";A$
220 IF LEFT$(A$,1) < > "y" AND LEFT$(A$,1) < >
"Y" THEN 250
230 POKE X + 1,C
240 GOTO 20
250 POKE X + 1, ASC ("N"): GOTO 20
300 GOSUB 2000: GOTO 20
400 GOSUB 5000: GOTO 20
500 HOME
510 PRINT "BOOT SLOT--> ";BS;: PRINT TAB( 20)"BOOT
DRIVE--> ";BD
520 PRINT "OBJECT SLOT--> ";OS;: PRINT TAB
( 20)"OBJECT DRIVE--> ";OD
530 PRINT : PRINT "FREE SECTORS--> "; CHR$( PEEK
(X + 1))
535 PRINT "FAST DOS--> "; CHR$( PEEK (X))
540 PRINT "ESC/CATALOG--> "; CHR$( PEEK (X + 2))
545 PRINT "REMOVE CATALOG PAUSES--> "; CHR$( PEEK
(X + 3))
548 PRINT "AVOID RE-LOAD--> "; CHR$( PEEK (8196))
550 PRINT "BRUN 'HELLO' FILE--> "; CHR$( PEEK
(X + 5))
555 PRINT "EXEC 'HELLO' FILE--> "; CHR$( PEEK
(X + 6))
557 PRINT "'DISK VOLUME' MESSAGE--> ";DV$
570 VTAB 23: INPUT "INITILIZE DISK ?";A$
580 IF LEFT$(A$,1) < > "y" AND LEFT$(A$,1) < >
"Y" THEN 20
585 INPUT " 'HELLO' FILE NAME ?";A$
587 IF BD = OD AND BS = OS THEN INPUT "INSERT DISK,
PRESS 'RETURN'";XZ$
590 GOTO 3000
599 END
600 HOME
605 INPUT "
BOOT SLOT--> ";BS
610 INPUT "
BOOT DRIVE--> ";BD
620 INPUT "
OBJECT SLOT--> ";OS
630 INPUT "
OBJECT DRIVE--> ";OD
635 IF BS < 2 OR OS < 2 OR BD < 1 OR OD < 1 OR BD > 2
OR OD > 2 OR BS > 7 OR OS > 7 THEN 600
640 INPUT "
ANY CHANGES ?";A$
650 IF LEFT$(A$,1) = "y" OR LEFT$(A$,1) = "Y"
THEN 600
660 PRINT D$;"OPEN SETUP.DISK"
665 PRINT D$;"WRITE SETUP.DISK"
670 PRINT BS: PRINT BD: PRINT OS: PRINT OD
675 PRINT D$;"CLOSE SETUP.DISK"
680 GOTO 20
700 DV = 46011
710 HOME
720 PRINT : PRINT : INVERSE : PRINT " " ";: NORMAL :
PRINT "=" LINE FEED"
730 PRINT : INVERSE : PRINT " @ ";: NORMAL : PRINT "="
RETURN"
740 PRINT : INVERSE : PRINT " ] ";: NORMAL : PRINT "="
BELL"
750 VTAB 17: PRINT TAB( 21)"-----"
760 VTAB 17: INPUT "DISK VOLUME MESSAGE ?";DV$
765 IF DV$ = "" THEN DV$ = "DISK VOLUME"
770 IF LEN (DV$) < 11 THEN DV$ = DV$ + " ": GOTO 770
775 FOR DO = 1 TO 11
780 DC = ASC ( MID$( DV$,DO,1))
782 IF DC = ASC (" ") THEN DC = 10
784 IF DC = ASC ("0") THEN DC = 13
786 IF DC = ASC ("]") THEN DC = 7
790 POKE DV - DO,DC + 128
795 NEXT : GOTO 6000
800 X = 8192:C = ASC ("Y")
805 DV$ = "DISK VOLUME"
810 D$ = CHR$( 4)
815 REM POKE IN RWTS ROUTINE
820 POKE 16384,169: POKE 16385,64: POKE 16386,160:
POKE 16387,15: POKE 16388,32: POKE 16389,217:
POKE 16390,3: POKE 16391,169: POKE 16392,0:
POKE 16393,141: POKE 16394,72:
821 POKE 16395,0: POKE 16396,96: POKE 16397,0:
POKE 16398,0: POKE 16399,1: POKE 16400,96:
POKE 16401,1: POKE 16402,0: POKE 16403,17:
POKE 16404,0: POKE 16405,33:
822 POKE 16406,64: POKE 16407,0: POKE 16408,65:
POKE 16409,0: POKE 16410,0: POKE 16411,1:
POKE 16412,0: POKE 16413,254: POKE 16414,96:
POKE 16415,1: POKE 16416,0:
823 POKE 16417,1: POKE 16418,239: POKE 16419,216:
POKE 16420,255:
825 PRINT D$;"OPEN SETUP.DISK"
830 PRINT D$;"READ SETUP.DISK"
835 INPUT BS,BD,OS,OD
840 PRINT D$;"CLOSE SETUP.DRIVE"
845 IF PEEK (X + 10) = 254 THEN 899
850 FOR I = X TO X + 9: POKE.I, ASC ("N"): NEXT
899 RETURN
1000 REM **DOS CATALOG TRACK MOVER
1010 REM **BY RICHARD LANGSTON
1020 REM ** 2/12/82
1030 POKE 16400,OS * 16
1035 POKE 16401,OD
1040 POKE 16414,BS * 16
1045 POKE 16415,BD
1070 CALL 16384
1080 POKE 16641,2
1090 POKE 16764,255: POKE 16765,254
1100 POKE 16411,2: CALL 16384
1110 FOR I = 15 TO 6 STEP - 1
1120 POKE 16411,1
1130 POKE 16403,17
1140 POKE 16404,I
1150 CALL 16384
1160 POKE 16641,2
1170 POKE 16411,2: POKE 16403,2
1180 CALL 16384: NEXT
1200 RETURN
2000 HOME : PRINT : PRINT " THIS ROUTINE INCREASES
THE SPEED DOS READS AND WRITES DATA BY CHANGING
THE ORDER THE SECTORS ARE STORED ON THE DISK"
2020 INPUT "SURE YOU WANT TO SPEED-UP?";A$: IF LEFT$(
A$,1) < > "Y" AND LEFT$(A$,1) < > "y"
THEN 2070
2025 POKE 8192, ASC ("Y"): GOTO 20
2030 FOR I = 0 TO 7: READ A: POKE 48929 + I,A: NEXT
2040 FOR I = 0 TO 14: READ A: POKE 48351 + I,A: NEXT
2050 FOR I = 0 TO 17: READ A: POKE 48366 + I,A: NEXT
2060 RETURN
2070 POKE X, ASC ("N"): RETURN
2080 DATA 32,105,186
2090 DATA 173,95,170,201,48,240,7,201,4,240,3,32,220,
175,96
2100 DATA 164,63,185,240,188,76,223,188
2110 DATA 133,63,240,3,76,21,191,76,41,191,160,148,
136,150,145
2120 DATA 145,200,1,2,5,4,7,6,9,8,11,10,13,12,0,
14,15,3
2500 POKE 44601,32: REM POKE JMP
2510 POKE 44602,133
2520 POKE 44603,186
2530 POKE 47749,32: POKE 47750,27: POKE 47751,253:
POKE 47752,201: POKE 47753,155: POKE 47754,240:
POKE 47755,1: POKE 47756,96: POKE 47757,76:
POKE 47758,44: POKE 47759,174:
2540 POKE 47760,130: RETURN
3000 IF PEEK (X + 2) = C THEN GOSUB 2500
3006 IF PEEK (8192) = C THEN GOSUB 2030
3007 IF A$ = "" THEN 10
3008 HOME : VTAB 14: HTAB 14: INVERSE : PRINT
"INITIALIZING"
3010 PRINT D$;"INIT "A$","S"OS","D"OD","V"V

```

contd.

```

3020 IF PEEK (X + 1) = C THEN GOSUB 1000
3030 PRINT D$;"DELETE "A$
3035 IF BS = OS AND BD = OD THEN INPUT " INSERT DOS
DOCTOR DISK, PRESS 'RETURN'";Z$
3040 PRINT D$;"RUN DOS DOCTOR,D"BD
3050 NORMAL : GOTO 20
5000 POKE 8192 + 10,254
5010 HOME
5020 INPUT "ESC/CATALOG OPTION ?";A$
5030 IF LEFT$ (A$,1) = "Y" OR LEFT$ (A$,1) = "y"
THEN 5290
5040 POKE 8194, ASC ("N")
5050 INPUT "
REMOVE CATALOG PAUSES ?";A$
5060 IF LEFT$ (A$,1) < > "Y" AND LEFT$ (A$,1) < >
"y" THEN 5100
5070 POKE 44596,96
5080 POKE 8195, ASC ("Y")
5090 GOTO 5110
5100 POKE 44596,96: POKE 8195, ASC ("N")
5110 INPUT "
AVOID RE-LOAD OF RAM CARD ?";A$
5120 IF LEFT$ (A$,1) < > "Y" AND LEFT$ (A$,1) < >
"y" THEN 5160
5130 FOR I = 49107 TO 49109
5140 POKE I,234: NEXT
5150 POKE 8196, ASC ("Y"); GOTO 5170
5160 POKE 49107,141: POKE 49108,0: POKE 49109,224:
POKE 8196, ASC ("N")
5170 INPUT "
BRUN 'HELLO' PROGRAM ?";A$
5180 IF LEFT$ (A$,1) < > "Y" AND LEFT$ (A$,1) < >
"y" THEN 5210
5190 POKE 8197, ASC ("Y")
5200 POKE 40514,52: GOTO 5280
5210 POKE 40514,6: POKE 8197, ASC ("N")
5220 INPUT "
EXEC 'HELLO' FILE ?";A$
5230 IF LEFT$ (A$,1) = "Y" OR LEFT$ (A$,1) = "y"
THEN POKE 40514,20: POKE 8198, ASC ("Y"):
GOTO 5280
5240 POKE 40514,6: POKE 8198, ASC ("N")
5260 GOTO 5280
5270 POKE 42569,127: POKE 8199, ASC ("N")
5280 RETURN
5290 POKE 8194, ASC ("Y")
5300 GOTO 5110
6000 HOME : PRINT : INPUT "CHANGE FILE TYPE
CHARACTERS ?";CF$
6005 PRINT
6010 IF LEFT$ (CF$,1) < > "Y" AND LEFT$ (CF$,1)
< > "y" THEN 20
6020 HOME : PRINT : PRINT "1. TEXT
6030 PRINT "2. INTEGER
6040 PRINT "3. APPLESOFT
6045 PRINT "4. BINARY
6050 PRINT "5. 'S' TYPE
6060 PRINT "6. 'R' TYPE
6065 PRINT "7. 'A' TYPE
6070 PRINT "8. 'B' TYPE
6075 INPUT "TYPE TO CHANGE ?";TC$
6080 TC = VAL (TC$): IF TC$ = "" THEN 6100
6090 ON TC GOSUB
7000,7100,7200,7300,7400,7500,7600,7700
6095 GOTO 6020
6100 HOME : PRINT : INVERSE : PRINT " 0 ";: NORMAL :
PRINT "= OMIT"
6110 PRINT : INPUT "VOLUME NUMBER ?";VN$
6120 IF VN$ = "" THEN 20
6130 VN = VAL (VN$)
6140 IF VN = 0 THEN 6200
6150 V = VN
6160 POKE 44480,32: POKE 44481,66: POKE 44482,174
6170 GOTO 20
6200 POKE 44480,234: POKE 44481,234: POKE 44482,234
6210 GOTO 20
7000 GOSUB 7800: GOSUB 8000: GOSUB 8200
7010 POKE 45991,FT
7090 RETURN
7100 GOSUB 7800: GOSUB 8000: GOSUB 8200
7110 POKE 45992,FT: RETURN
7200 GOSUB 7800: GOSUB 8000: GOSUB 8200
7210 POKE 45993,FT: RETURN
7300 GOSUB 7800: GOSUB 8000: GOSUB 8200
7310 POKE 45994,FT: RETURN
7400 GOSUB 7800: GOSUB 8000: GOSUB 8200
7410 POKE 45995,FT: RETURN
7500 GOSUB 7800: GOSUB 8000: GOSUB 8200
7510 POKE 45996,FT: RETURN
7600 GOSUB 7800: GOSUB 8000: GOSUB 8200
7610 POKE 45997,FT: RETURN
7700 GOSUB 7800: GOSUB 8000: GOSUB 8200
7710 POKE 45998,FT: RETURN
7800 VTAB 20: PRINT " TYPE THE CHARACTER TO REPLACE
THE NORMAL ONE USED, DO NOT PRESS 'RETURN'."
7810 VTAB 23: PRINT "--> ";: GET FT$
7820 IF FT$ = "
" THEN 7810
7830 FT = ASC (FT$): IF FT = 0 THEN 7810
7840 RETURN
8000 PRINT : PRINT "<";: INVERSE : PRINT "I";:
NORMAL : PRINT ">NVERSE"
8010 PRINT : PRINT "<";: FLASH : PRINT "F";: NORMAL :
PRINT ">LASH"
8020 PRINT : PRINT "<N>ORMAL"
8030 PRINT "-->";: GET ZZ$
8040 IF ZZ$ = "F" THEN FL = 1: RETURN
8050 IF ZZ$ = "I" THEN IN = 1: RETURN
8060 IF ZZ$ = "N" THEN RETURN
8070 GOTO 8030
8200 IF (IN) THEN FT = FT - 64: GOTO 8230
8210 IF FL THEN GOTO 8230
8220 FT = FT + 128
8230 RETURN

```



Paragon Technologies, Inc.

offers classes in our IBM PC laboratory
and Apple IIe laboratory in McLean:

- Getting Started With The Micro Computer
- VISICALC, LOTUS 1, 2, 3
- d Base II
- WordStar
- Programming in BASIC
- Computer assisted SAT preparation

All classes are hands-on with one person
per computer.

Call
556-9659

or write to us:
**P.O. Box 6128
McLean, Virginia 22106**

APPLE TECH NOTES

by Richard Langston II

The first installment of this column will deal with Apple DOS 3.3.

DOS COMMANDS BEING IGNORED

The Control-D of a DOS command must be the first character on an output line. This means that it must be immediately preceded by a carriage return. If it isn't, the command will be printed out to the screen or the printer and be ignored by DOS.

The most common cause for this is having a GET statement or a PRINT statement that ends in a semi-colon (;), comma(,), TAB, or SPC as the last I/O operation before the command that gets ignored. An extra PRINT before the next DOS command will generate the carriage return required for it to be recognized.

Another solution to the problem is to define D\$ as D\$=CHR\$(13)+CHR\$(4).

Another cause of DOS commands being ignored is improper use of the IN# and PR# commands. IN# and PR# are DOS command, and must be preceded by a Control-D.

PROGRAM AND HI-RES MEMORY CONFLICTS

The easiest way to use hi-res graphics with a long Applesoft program is to relocate the program. This way, the problem of conflict between program text and variables and the hi-res pages is eliminated. The resulting program will initialize the Apple's memory and RUN a program. The program will load above the hi-res pages. DOS and CHAIN will continue to load programs there until the system is re-booted or an FP command is executed.

DOS AND THE IN# AND PR# COMMANDS

DOS uses the Apple I/O vectors to intercept commands from BASIC. The PR# and IN# statements modify these I/O vectors directly, which makes it impossible for DOS to see subsequent commands from BASIC. The usual symptom is that DOS doesn't work after the printer is turned off. (NOTE: Use CALL 1002 to correct this problem.)

BINARY FILE ADDRESS AND LENGTH PARAMETERS

The starting address and length of a binary file are loaded into two registers in memory when the file is loaded. Page 144 of the DOS Manual has the addresses to look at for this information. To find the starting address for a program, use the following program:
PRINT "ADDRESS="; PEEK(43634) + PEEK(43635) * 256 :
PRINT "LENGTH="; PEEK(43616) + PEEK(43617) * 256.

BRUN HELLO?

When DOS is booted it will "RUN" the program that was in memory when the diskette was initialized. DOS can be changed so that it will "BRUN" the HELLO file instead. In a 48K Apple, change the byte at \$9E42 from \$06 to \$34. The following commands will create a disk that will BRUN HELLO when it is next booted.

```
CALL -151
9E42: 34
3DOG (OR control-C)
INIT HELLO
DELETE HELLO
```

```
BLOAD BINARY PROGRAM
BSAVE BINARY PROGRAM
PR#6
```

DOS - NUMERIC STORAGE

Numeric data that is stored in a DOS text file is not stored in a packed format. The information is on the disk in the same ASCII format that a printer would receive. For example:

```
3.14159 will be stored as 7 bytes+ a carriage return
3 will be stored as 1 byte + a carriage return
```

There is no way under DOS to store packed variables. (NOTE: I remember an article in Byte about a year ago that did store packed variables.)

HIDING MACHINE LANGUAGE ROUTINES ABOVE THE DOS 3.3 FILE BUFFERS

It is possible to position machine language routines between DOS and its first file buffer. Routines hidden this way cannot be overwritten by Basic programs.

\$9D00 and \$9D01 (in a 48K or larger system) point to the first, highest, buffer. Add the number of pages (256 byte blocks) the routine needs to the contents of \$9D01. Then place a \$00 at the address now pointed at by the contents of \$9D00, \$9D01 plus \$25. Then JSR \$A7D4, which will rebuild the DOS file buffers and move the current Basic HIMEM down. The first available address for the routine will be the address pointed at by the contents of \$9D00, \$9D01 plus \$2D.

DOS AND HI-RES

DOS uses two memory locations (\$26,\$27) that are also used by Applesoft's hi-res routines during the HPLLOT TO X,Y statement. DOS commands between HPLLOT X,Y statements will cause HPLLOT TO to plot improperly. The pointer can be saved and restored to enable mixing DOS and hi-res. The two lines added to the program below demonstrate how to maintain the pointer values.

BAD EXAMPLE

```
10 D$=CHR$(4)
20 HPLLOT 1,2
30 PRINT D$;"CATALOG"
40 HPLLOT TO 33,44
```

WORKING VERSION

```
10 D$=CHR$(4)
20 HPLLOT 1,2
=>25 A=PEEK(38): B=PEEK(39)
30 PRINT D$;"CATALOG"
=>35 POKE 38,A: POKE 39,B
40 HPLLOT TO 33,44
```

TRACE AND DOS COMMANDS

TRACE won't work with DOS commands unless D\$ is defined as D\$=CHR\$(13)+CHR\$(4). This is because DOS expects the Control-D to be the first character on a line of output, and TRACE does not send a RETURN.

USER DEFINED FUNCTIONS AND CHAIN

User defined functions in Applesoft may cause problems if CHAIN is used. When a DEF FN statement is encountered in Applesoft, there is an entry made in the simple variable table that points to the rest of the function in the text of the program. Strange and perhaps fatal things can happen if a function defined in the previous program is used without having the same image of the function at the same memory location in

contd. on pg 48

LETTER TO THE EDITOR

by Ludwig Benner Jr.

Dear Bernie,

From my WAP number, you know I have been using the Apple][a while - since January 1980, but I am not a computer buff. About 70 to 80 percent of the use has involved word processors and the handling of word processor files. Lately, that handling has involved the telephone transfer of work files with greatly increasing frequency. I wanted to share a recent experience with you and some of the other WAP members.

I use WordStar and Supertext II Pro for all my word processing. Both WP's save files as text files. One uses CP/M and the other uses DOS 3.3/3.2.1. There are several nice transfer programs for both operating systems, and I have used or encountered most of the popular ones, I think. My problems occur when I have to initiate communications with someone who doesn't have my particular programs. For example, the other day I wanted to send a Supertext DOS text file (3.2.1) to a researcher for a quick review and comments, in connection with a business proposal. There was an Apple in each office but we had different (and incompatible) communications software. We solved the problem with a program called "Micromover." (I first saw it advertised in WAP about 1 1/2 years ago.) I haven't heard much about it since, but the program has one really GREAT feature: it enables you to send a receiving computer the transfer program that it then uses to do the file exchanges - in either direction! You just get your modems talking to each other, and then the program takes over.

If you have ever been stymied trying to move files over the phone between Apples, especially on short notice like I am, this program sure solves that problem. I had been using it for routine telephone file transfers between our offices, but this short-notice transfer really made me appreciate what the author had done for us! It is really a genius idea, and that one application made my acquisition of the program worthwhile. I am not aware of any other programs that let you boot-strap your exchange in the same way. And it's user friendly too. It doesn't have all the options of an ASCII Express or Z-Term or some of the other transfer programs, but that one feature - and its ease of use - put it in a class by itself. I recommend it very highly for anyone who may be faced with any short-notice transfers to or from strange Apples in unforeseen places.

I feel I can call up any Apple in the country now, and successfully complete an exchange of DOS files! Not just text files, but binary and other files too! I have sent 3.2 files to a 3.3 DOS system and vice versa. It takes about 15 minutes to transfer the "program" to the receiving computer, and then we move the DOS document files very quickly. I can deliver my work to most Apple][s now in an hour or less, even if our software is not compatible. And once they have the receiving program, they can send it right back to me then or later, edited, proofed or otherwise annotated. That's sure a good feeling.

As for the word processors themselves, I have used WordStar, Supertext I, Supertext II, Apple PIE, Apple Writer I and II, and EasyWriter enough to say I have experience with them. I presently use WordStar and Supertext II Pro for all my work. Since Muse brought out the ST Pro that writes text files to disks (3.2.1 format) I have used that very extensively, because it

has several features that really help me handle long documents, i.e., the automatic EASY linking of multiple files for globally checking, correcting, previewing and printing out book-length works, the ability to block out parts of papers or pages during printing, the easy entry of indented outline-type text and paragraphs, the formatting simplicity, word counts, etc. Unfortunately, Muse has yet to put out a printing program that produces printed documents comparable with WordStar's final printed products (after you finally figure out how to make them happen!) so I use WordStar with all its complexities, delays, bdos error problems and eccentricities when I have to have a micro-justified print job. Otherwise, I much prefer Supertext Pro; it's easy to teach new people, easy to use, full-featured, fast and doesn't bomb. I think it is one of the real underrated programs in the WP field in its price range. And I was able to install my 80-column card with one Supertext keystroke, and it worked flawlessly. Still can't say that about my WordStar after 4 months of trying.

I thought this info might be of interest to some of our members. I have the CP/M (cruel, punishing and masochistic?) SIG disks with the modem transfer programs, and I still haven't figured out how to make those work yet. Maybe it'll come to me if I find the right sentence in the 500-page Softcard manuals. CP/M sure isn't for us amateurs who want a tool, not a challenge. Please, Apple, don't succumb to CP/M!

You folks are doing a fantastic job with the magazine and everything. Thanks ever so much for your continuing dedication. A lot of us appreciate it, and probably don't let you know often enough. &

**After games, spreadsheets
and word processing ...**

+ MEDCLAIMS

**A new class of software
for your Apple II, II+, IIe, IIc**

If your family medical/dental claims have you overwhelmed and underpaid, MEDCLAIMS will help.

- How much have you used in deductibles?
- When do they stop deducting and start paying?
- When should you switch to the family deductible?
- Which claims were you paid for?
- Which are still open? For how long?

Claims, payments, medical, dental, different insurance companies, full menu & prompts. NOTHING TO STUDY OR LEARN. Guaranteed to run on Apple II, II+, IIe, IIc; 48K, 1 disk drive.

MEDCLAIMS, \$49... Pays for itself.

Prompt shipment. Send check to:

COMPUTERSCOPE INC. Box 529 Matawan, N.J. 07747

OR CALL TOLL FREE (24 hrs.) 1-800-551-8800
to order by VISA or MASTERCARD



Apple II, II+, IIe, IIc are registered trademarks of Apple Computer Inc

PREMIUM SOFTCARD //E: A Review

by Robert C. Platt

When prospective Apple purchasers ask whether to buy a //e or the new //c, accepted wisdom recommends the //e if the user "wants to add features." In my opinion, the best example of an addition to the Apple //e is Microsoft's Premium Softcard //e. This product adds a Z80 coprocessor to your Apple. As a result, your Apple can run a wide variety of programs written for the CP/M Operating System.

THE CP/M WORLD

CP/M was the first operating system to become popular on microcomputers. A number of popular programs, such as Wordstar, a word processor, and Multiplan, a spreadsheet, are available only on CP/M systems. Further, an incredibly large number of free public domain programs are available to run under CP/M. Because CP/M was the hacker's system of choice in the 8-bit microcomputer world, a variety of fascinating software has been written for it. CP/M will run only on an Intel 8008 chip or its descendants. Many popular computers such as the Radio Shack TRS-80 series, the Commodore 64 and the Epson use these chips. However, the Apple uses a 6502 microprocessor instead and cannot run CP/M without additional circuitry. The Softcard //e provides the necessary hardware and software.

THE PACKAGE

The hardware. A single printed-circuit board plugs into the auxiliary slot of the //e. This board includes 64K of RAM, and is the functional equivalent of an Apple extended 80-column card. But in addition, the board includes a Zilog Z80B microprocessor that features a clock rate three times faster than former Microsoft Z80 cards. The card includes a well-labeled jumper to enable double hi-res graphics.

The software. Version 2.2 of Digital Research's CP/M operating system has been configured to use the 64K of the auxiliary memory and the special 80-column screen controls of the Apple. Unlike earlier Microsoft CP/M systems, the //e version uses the Apple's 6502 as an input/output processor. It also uses the Apple's main RAM memory for a 256 character type-ahead buffer and a printer buffer.

Gee-Whiz BASIC. Version 5.27 of Microsoft's interpreted BASIC has been modified to include many of the Applesoft commands for using lo-res and hi-res graphics. This is a full BASIC with many useful debugging tools and a full set of disk file commands.

Assembler-debugger. Digital Research ASM assembler for the Z80 and its DDT debugger/monitor permit machine language programs to be executed alone or CALLED as BASIC subroutines. The standard CP/M utilities, including the ED text editor, and the PIP file manager are included.

INSTALLATION

Installation was extremely simple. The system is already configured for the Apple //e. The only change necessary was to adjust the jumper to enable double hi-res graphics. However, a CONFIGIO program is included should you attach external terminals or make other modifications. The installation instructions are excellent.

EVALUATION

If you have an Apple][+, you should consider purchasing an Applicard, Digital Research Gold Card or ALS's CP/M Plus System. The latter two can be purchased with version 3.0 of CP/M, and the Applicard is available as a free bonus when purchasing the Wordstar word processor for around \$300. The advantage to the Softcard //e is that it also serves the function of an extended 80-column card. Whatever coprocessor system you buy, check for the availability of CP/M and a programming language. (Some cards are sold without any languages. However, there is nothing special about Microsoft's BASIC, you can add Turbo Pascal to any of these packages for under \$50.)

I am very pleased with my Softcard //e. It includes good documentation from Microsoft on CP/M and G-W Basic. A copy of Thom Hogan's "Osborne CP/M User Guide" (1982 Osborne, 209 pages) is also included. However, if you have never used CP/M or the Z80 assembler before, additional texts will probably be necessary. An additional "Programmer's Guide," including a disk with a DOWNLOAD utility is sent to those users who return their warranty registration cards.

The price of Z80 boards has dropped about 30% in the last six months. In part this is due to the entry of a number of cheap boards that are sold without software. Also people are considering investing in coprocessor cards that feature faster versions of the 6502 or the 68000 chip instead of the Z80. (I was very pleased with the price that WAP's Group Purchase was able to get on the Softcard //e, which includes all necessary software.)

One annoying aspect of the package is the "license agreements" that Digital Research and Microsoft include in the package. One hopes that as the law surrounding the sale of software becomes more mature, users will not be burdened by such contracts of adhesion. Also out-of-warranty replacement fees are a bit steep.

Apple Tech Notes contd. from pg 46

the current program.

The easy way around this problem is not to use defined functions or redefine all of your defined function in each of the chained modules.

SYNTAX ERROR WHEN PROGRAM IS RUN

Applesoft requires that the first byte in the program storage area be zero. Some machine language programs don't leave a zero in that location, and Applesoft may respond strangely. To initialize that byte, use the command POKE PEEK(103) + PEEK(104) * 256,0. This will work even if the program memory pointer has been changed.

MONTHLY TUTORIAL OUTLINE

The following outlines are used in our four monthly beginning tutorials, which are given on Tuesday evenings at the office, from 7:30 to 9:00 PM. A registration form is in the back of this issue.

SESSION 1. Introduction to Apple Computer Hardware.

A. Welcome to the World of Apple

1. Hooking it up: disk drives, printers TVs & RF modulators, games paddles
2. Inserting & removing cards
3. The keyboard

B. Handling Floppy Disks

1. Reading a catalog
2. Running a program
3. Using the back of the disk

C. Handy Features

1. Added memory boards
2. Eighty columns
3. Lower Case
4. Fans

SESSION 2. How to Use Your Apple Software

A. Booting a Disk: PR#6 and Friends

1. The Autostart ROM
2. The Disk Drive
3. Run the "HELLO" Program
4. The Worst That Could Happen: There Goes \$2.90 Down the Drain

B. CATALOG: What's on This Disk?

1. The File Name (30 characters)
2. Locked or Unlocked?
3. File Types: A, I, B, T, R
4. File Size I: Sectors

C. Other Important DOS Commands

1. General DOS Syntax
 - a. The command word
 - b. The filename
 - c. Other information (e.g. new filename, loading/saving address)
 - d. Slot, drive, volume
 - e. Must start at the "left margin"
2. INIT filename: Initializing a Disk
3. LOAD filename: for Applesoft and Integer
4. RUN filename
5. SAVE filename
6. BRUN, BLOAD and BSAVE
7. DELETE filename
8. LOCK and UNLOCK
9. Text Files: a Very Brief Introduction

D. Useful Utilities

1. FID: File Developer
2. COPYA
3. BOOT 13 and MUFFIN
4. INTBASIC and INTEGER BASIC-DISK
5. The WAP New Member Disk
6. Disk Recovery Programs

E. For Further Reading

1. The DOS Manual(s)
2. Beneath Apple DOS
3. All About DOS

SESSION 3. Welcome to Applesoft Basic

- A. What is Programming?
- B. The PRINT Statement
- C. Variables
 1. \$ means string
 2. % means integer
- D. INPUT Statement
- E. Arrays
- F. Immediate Mode vs. Stored Program
 1. Line numbers
 2. LIST, NEW, DEL
- G. Changing a Program Line
- H. RUNning a Program
 1. RUN
 2. CONT
 3. CLEAR
 4. END
- I. Looping
- J. Branching
- K. Subroutines
- L. Limitations and Restrictions
 1. Precision
 2. Garbage collections
 3. PEEK, POKE, CALL & and USR
- M. Advanced Memory Usage

SESSION 4. Bits, Bytes, Nibbles

This tutorial is intended to describe what goes on in the machine underneath BASIC. Assembly language is not going to be taught but we will show how assembly/machine language programs can be entered from printed listings. Several commands of the Monitor program in the Apple will be explained.

A. Binary and Hexadecimal Number Systems

1. What is a bit, byte, or nibble?
2. Adding and subtracting binary and hex
3. Converting binary and hex to decimal
4. Using the Monitor to add hex numbers

B. The ASCII Character System

1. What is ASCII?
2. Converting control codes to decimal or hex

C. Using the Monitor Program

1. Examining and changing memory
2. Entering machine language programs
3. Listing machine language programs
4. The difference between assembly and machine language

D. Memory Map or Where Is It?

1. Text and Hires graphics pages
2. Free areas for machine language programs or shape tables
3. How a language card works; what it's good for

E. Using Applesoft Efficiently

1. How Applesoft is stored
2. How to use LOMEM and HIMEM
3. What an interpreter is and why it is so slow
4. How DOS works with Applesoft (or why you shouldn't use PR#1)

WAP TUTORIAL REGISTRATION

The following four WAP tutorials are being offered on Tuesday evenings from 7:30 to 9:00 PM, at the office, 8227 Woodmont Avenue, Room 202, Bethesda, MD. (The tutorials start promptly at 7:30; if you bring your computer please arrive 15 minutes early to set up.) You may sign up for any or all of the series. They are designed for the "beginner" and will be repeated monthly. A detailed outline of the tutorials is given elsewhere in this issue. The outline is undergoing some changes at the moment, particularly session 4, therefore, the outline may not be exactly as it will be presented.

- () September 4 - INTRODUCTION TO APPLE COMPUTER HARDWARE () October 2
() September 11 - HOW TO USE YOUR APPLE SOFTWARE () October 9
() September 18 - BEGINNING BASIC () October 16
() September 25 - BITS, BYTES, NIBBLES () October 23

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.

- ___ Tutorials at \$10.00 (with equipment)
___ Tutorials at \$15.00 (without equipment)

The following "non-regular" tutorials are being offered. They are at the WAP office unless otherwise indicated. Saturday tutorials are from 9:30 AM - 12:00 Noon. Monday and Wednesday tutorials begin at 7:30 PM. Please register in advance.

VISI PLOT & APPLE PLOT - Lee Raesly, Aug. 11 - 9:30 AM

- () \$10 with Apple, member () \$15 with, non-member
() \$15 w/o Apple, member () \$20 w/o, non-member

Please check the desired tutorials and return this form with fee(s) made payable to Washington Apple Pi, Ltd. to:

Washington Apple Pi, Ltd.
Attn. Tutorials
8227 Woodmont Avenue, Suite 201
Bethesda, MD 20814

Name _____
Daytime Phone _____ Evening Phone _____ Total Enclosed \$ _____

MEMBERSHIP DIRECTORY CHANGES

Use this form ONLY if you wish to CHANGE your instructions to the Club. See article elsewhere in this issue.

NAME (Please print) _____
MEMBERSHIP NO. (required) _____
ADDRESS: Street _____
CITY _____ STATE _____ ZIPCODE _____
PHONE: Home () _____ Work () _____

Please check one box only:

- () DO NOT include my name in the Membership Directory.
() I authorize the release of my name, zipcode and phone no. to other members through the Membership Directory.

Club policy prohibits releasing a member's personal information unless you release that information by checking one of the boxes above. If you do not release this information, you will not receive a copy of the Directory. Your response on this form will supersede any previous instructions to the Club.

SIGNATURE _____ DATE _____

Please return this form to:
Washington Apple Pi, Ltd.
Attn. Directory
8227 Woodmont Avenue, Suite 201
Bethesda, MD 20814

This form must be received in the WAP office by August 25, 1984 to be included in the next Directory printing.

WASHINGTON APPLE PI DISKETERIA MAIL ORDER FORM
Software for Creative Living

Disks from Washington Apple Pi's Disketeria are available for purchase. This form is only for ordering disks that you want mailed to you.

PROGRAM DISKETTES: (1st 5) - Members \$ 6.00 ea.; Non-members \$ 9.00 ea.
(remainder) - Members \$ 5.00 ea.; Non-members \$ 8.00 ea.

DOS 3.2

- () Volume 1 Utilities I
- () Volume 2 Utilities II
- () Volume 3 Games I
- () Volume 4 Games II
- () Volume 5 Games III
- () Volume 6 Games IV
- () Volume 7 Games V
- () Volume 8 Utilities III
- () Volume 9 Educational I
- () Volume 10 Math/Science
- () Volume 11 Graphics I
- () Volume 12 Games VI
- () Volume 13 Games
- () Volume 14 IAC Utilities IV
- () Volume 15 Games VII
- () Volume 16 Utilities V
- () Volume 17 Graphics II
- () Volume 18 Educational II
- () Volume 19 Communications
- () Volume 20 Music
- () Volume 21 Apple Orchard
- () Volume 22 Utilities VI
- () Volume 23 Games VIII
- () Volume 24 Games IX
- () Volume 25 Utilities VII
- () Volume 26 Stocks/Investments
- () Volume 27 Math
- () Volume 28 Planetfinder
- () Volume 29 Utilities VIII
- () Volume 30 Games X
- () Volume 31 Plot Utilities
- () Volume 32 Games XI
- () Volume 33 Accounting
- () Volume 34 Solar Tutor
- () Volume 35 Garden Management
- () Volume 36 Games XII
- () Volume 37 Utilities IX
- () Volume 38 Games XIII
- () Volume 39 IAC VII
- () Volume 40 IAC VIII

DOS 3.3

- () Volume 41 IAC 25 Mach. Lang. Util.
- () Volume 42 One Key DOS ***
- () Volume 43 IAC 29 Utilities H
- () Volume 44 Utilities I
- () Volume 70 Business/Math/Statistics
- () Volume 71 Music
- () Volume 72 Keyboard Games
- () Volume 73 Text Adventure Games
- () Volume 90 Spreadsheet C Genl. Bus.
- () Volume 91 Spreadsheet D Investment
- () Volume 92 Spreadsheet E Bus. Recd.
- () Volume 100 Utilities A
- () Volume 101 Utilities B
- () Volume 102 Games A
- () Volume 103 Merry Christmas
- () Volume 104 Business A
- () Volume 105 FIG-FORTH/Utilities

DOS 3.3 contd.

- () Volume 106 Science Engineering
- () Volume 107 Games B
- () Volume 108 IAC 10 (Graphics)
- () Volume 109 IAC 11 (Applesoft Tutorial)
- () Volume 110 Personal/Education
- () Volume 111 Games C
- () Volume 112 Utilities C
- () Volume 113 Business B
- () Volume 115 IAC 12/13 Misc.
- () Volume 116 IAC 14 MicromodemII
- () Volume 117 Picture Packer
- () Volume 118 Utilities D
- () Volume 119 IAC 15 Misc.
- () Volume 120 IAC 16 Misc.
- () Volume 121 WAPABBS 1.1 Doc. **
- () Volume 122 IAC 17 Misc.
- () Volume 123 French Vocabulary
- () Volume 124 Utilities E
- () Volume 125 IAC 18 Misc.
- () Volume 126 Sights and Sounds
- () Volume 127 Math/Science
- () Volume 128 Games D
- () Volume 129 GLAQ
- () Volume 130 Diversi-DOS ***
- () Volume 131 Personal/Educ. 2
- () Volume 132 IAC 19 - Utilities F
- () Volume 133 IAC 20 - Pascal & DOS 3.3
- () Volume 134 New Members Disk
- () Volume 135 WAPABBS 1.1 Disk 1 **
- () Volume 136 WAPABBS 1.1 Disk 2 **
- () Volume 137 IAC 21 Spreadsheet A
- () Volume 138 IAC 23 Utilities G
- () Volume 139 IAC 24 Education 3
- () Volume 140 Education 4
- () Volume 141 Special Data Bases
- () Volume 142 IAC 28 Pinball Games
- () Volume 143 Sports
- () Volume 144 IAC 27 Applesoft Prog.
- () Volume 145 Apple Logo Tool Kit
- () Volume 146 Apple Logo Sample Prog.
- () Volume 147 Logo Documentation
- () Volume 150 EDSIG1 (Elem. Math)
- () Volume 151 1983 Tax Template
- () Volume 152 IAC 31 Miscellaneous
- () Volume 153 Investments A
- () Volume 154 Investments B
- () Volume 155 IAC 33 Miscellaneous
- () Volume 156 IAC 35 Applesoft-AW/e
- () Volume 157 IAC 36 Arcade Games

Eamon Series

- () Volume 180 Dungeon Designer
- () Volume 181 Beginners Cave
- () *Volume 182 Lair of Minotaur
- () *Volume 183 Cave of the Mind
- () *Volume 184 Zypthur Riverventure
- () *Volume 185 Castle of Doom
- () *Volume 186 Death Star
- () *Volume 187 Devil's Tomb

Eamon contd.

- () *Volume 188 Caves of Treas. Isl.
- () *Volume 189 Furioso
- () *Volume 190 The Magic Kingdom
- () *Volume 191 The Tomb of Molinar
- () *Volume 192 Lost Isl. of Apple
- () *Volume 193 Abductor's Quarters
- () *Volume 194 Quest for Trezore
- () *Volume 195 Underground City
- () *Volume 196 Merlin's Castle
- () *Volume 197 Horgrath Castle
- () *Volume 198 Deathtrap
- () *Volume 199 The Black Death
- () *Volume 200 The Temple of Ngurct
- () *Volume 201 Black Mountain
- () *Volume 202 Nuclear Nightmare
- () *Volume 203 Feast of Carroll
- () *Volume 204 The Master's Dungeon
- () *Volume 205 The Crystal Mountain
- () *Volume 206 The Lost Adventure
- () *Volume 207 The Manxome Foe

Pascal

- () Volume 300 PIGO: ATTACH 1.1/BIOS
- () Volume 301 PIG1:
- () Volume 302 PIG2:
- () Volume 303 PIG3:
- () Volume 304 PIG4:
- () Volume 305 PIG5:
- () Volume 306 PIG6:
- () Volume 307 PIG7:
- () Volume 308 PIG8:
- () Volume 309 PIG9:
- () Volume 310 PIG10:
- () Volume 311 PIG11:
- () Volume 312 PIG12:
- () Volume 313 PIG13: Guerilla Guide
- () Volume 314 PIG14:

See also Volume 133

CP/M

- () Volume 401
- () Volume 402
- () Volume 403
- () Volume 404
- () Volume 405
- () Volume 406 ZCPR2 Install
- () Volume 407 ZCPR2 Documentation
- () Volume 408 ZCPR2 Utilities
- () Volume 490 Modem 730

Forth

- () Volume 700 Assembler/Disassembler
 - () Volume 701 Full Screen Editor
 - () Volume 702 GoForth
- See also Volume 105

Macintosh - @\$7.00 + \$1 postage ea
non-members add \$3 per.

- () SigMac Disk 1 MS Basic Pgms
- () SigMac Disk 2 Atkinson's Goodies
- () SigMac Disk 3 Fonts

* Volume 181 required with these disks. ** Vols. 121, 135, 136 must be purchased together.
*** Use of this disk requires sending money to the author (\$30 for Diversi-Dos and \$9 for One Key Dos.)

(NOTE: ALLOW 3 TO 4 WEEKS FOR MAILING.)

Total Order = _____ disks. \$ _____

NAME _____
ADDRESS _____
CITY, STATE ZIP _____
TELEPHONE _____ WAP MEMBERSHIP NO. _____

Make check payable and send to:

Washington Apple Pi, Ltd.
Attn. Disketeria
8227 Woodmont Avenue, Suite 201
Bethesda, MD 20814

DATE _____

Wap T-shirts for Sale



\$ 7.00

Support your club! Buy a WAP T-Shirt. Background color is "Apple" tan - lettering is in green and red. Available at the WAP office or by mail for \$7.00 each. If ordering by mail add \$1.50 postage and handling per order. State size: Adults Small, Medium or Large; Children's Small, Medium or Large (the sizes run a little on the small side). Send check or money order payable to Washington Apple Pi and mail to Washington Apple Pi, 8227 Woodmont Avenue, Suite 201, Bethesda MD 20814.

INDEX TO ADVERTISERS

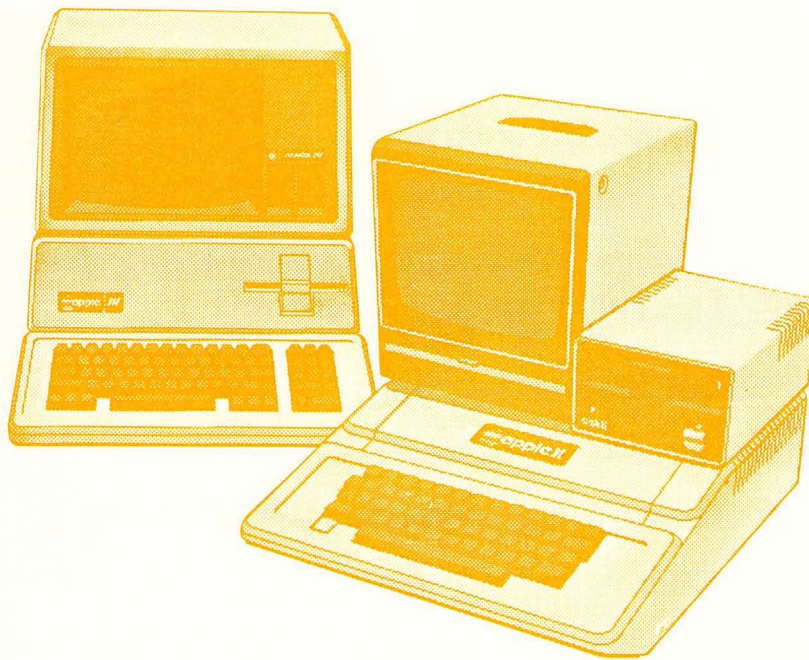
AIS Microsystems	41
Anderson Jacobson	Back Cover
Clinton Computer	Inside Front
Computer Den Ltd.	21
Computerscope Inc.	47
Computer Ware Unlimited	26
Frederick Computer Products	Inside Back
Future Furniture	17
KOH Systems, Inc.	31
Micro Connection	43
Micro Star Co	25
MinuteWare	1
Operant Systems	29
Paragon Technologies Inc	45
Ramada Computer Products	15
Robins Inc.	35
Software City	2
Tri-State Systems	7
Tysons Corner Center	25
VF Associates	27
Washington Appple Pi	52

There's only one place to buy apples.

AT FREDERICK COMPUTER PRODUCTS !!!

As an Authorized Apple Dealer we offer a full selection of both Apple Hardware and Software at low, low prices.

Also, as an Authorized Service Center we provide fast and efficient service on all Apple products.



FREDERICK COMPUTER PRODUCTS, INC.

Microcomputer Systems And Peripherals

5726 INDUSTRY LANE-FREDERICK, MD.- (301)694-8884

 **apple computer**
® Authorized Dealer

WASHINGTON APPLE PI, LTD.
8227 Woodmont Avenue, Suite 201
Bethesda, MD 20814

BULK RATE
U. S. POSTAGE
PAID
PERMIT # 5389
Silver Spring, MD
20910

ADDRESS CORRECTION REQUESTED



A REFURBISHED DAISY WHEEL TERMINAL
FOR PERSONAL COMPUTER USERS AND SMALL BUSINESSES.

Three-In-One Offer! Just \$598 (Includes On-Site Warranty)

- A 30 cps letter-quality printer
- A timesharing keyboard terminal (when modem equipped)
- A Selectric*-style keyboard typewriter

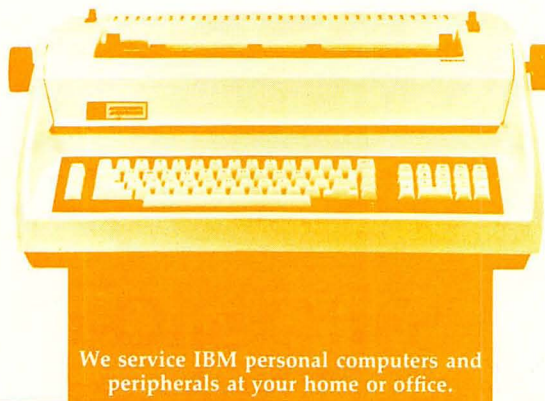
AJ daisy wheel printer terminals are renowned for exceptional performance, high reliability, and applications versatility. Now you can have all this for only \$598** in our special limited offer.

- 30 cps letter-quality printing
- Changeable type faces
- Full ASCII keyboard with numeric pad
- High resolution X-Y plotting
- Complete electronic forms control
- 128-character buffer
- Asynchronous RS-232 interface
- Printwheel, ribbon cartridge, and cable included
- 30-day parts/labor warranty

And you can choose from a list of options including forms tractor, pin-feed platen, paper trays, side shelves, extra printwheels, APL keyboard and 2K buffer.

For information telephone 301/840-5700

John Noble — DC, Sean Belanger
— MD, Jim Burrell — VA



We service IBM personal computers and peripherals at your home or office.

**Suggested selling price, excludes options and is subject to change without notice. Model shown includes certain options. Offer available only in the contiguous U.S.

*Selectric is a trademark of IBM.

A **ANDERSON
JACOBSON**
8653 Grovemont Circle
Gaithersburg, MD
20877-4191